Institute of Business Management

College of Computer Science and Information Science

Final Year Project Guidelines

Foreword:

This is the Final Year Project handbook of the College of Computer Science and Information Science. This handbook contains guidelines for the conception, preparation, implementation, completion and finally the assessment of Final Year Projects.

The intention of this handbook is to develop guidelines and a uniform structure and outline for undergraduate students. It serves as an instructional manual for the expected contents, deliverables, quality and the required quantity of the final projects for students and also provides evaluation rubrics for supervisors and evaluators.

Members:

- Dr. Asim Iftikhar
- Ms. Qurat ul Ain
- Ms. Kausar Shaheen
- Mr. Salman Akber

Reviewer:

- Dr. Sana Alam

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1.1 Introduction

The Final Year Project (FYP) is the culmination of students' degree program. The main purpose of this project is to encourage students to apply the knowledge acquired during their studies. It allows them to work on a substantial problem for an extended period of time, show how proficient they are in solving real world problems. It brings them a sound opportunity to demonstrate their competence as professionals and to apply what they have learnt in the other components of the degree. Besides, they get a chance to improve their technical skills, communication skills by integrating writing, presentation and learn how to work in teams. With a real-world problem at hand, they get to learn professional practice and a variety of non-technical issues such as management, finance, safety, reliability, environment and social impacts. Moreover, it provides an integrated assessment of the progress of the students toward the training they went through during their academic tenure at the college.

FYP course is different other courses because it demands independent objective formulation, planning, management and self-motivation. It is therefore essential to design fair and comprehensive guidelines for the students, supervisors and the evaluators. A structured manual and lifecycle process is therefore essential in order to help students conform to the required quality standards, outline general expectations from the supervisors and sketch assessment criteria for the evaluators. Hence, contribute as a fundamental underpinning to achieve high quality learning outcomes of the projects.

1.2 Degree Graduate Attributes (GAs)

Graduate Attributes (GAs) are the expected knowledge, skills and attitude must acquire while progressing through the program. By graduation, students should have attained a certain set of these attributes including Academic Education, Knowledge for solving computing problems, Problem analysis, Design/ Development of solutions, Modern tool usage, Individual and team work, Communication, Computing professionalism and society, Ethics and lifelong learning. Specifically, it is demonstrated that students must acquire:

(i) **Academice Education**: Completion of an accredited program of study designed to prepare graduates as computing professionals.

(ii) **Knowledge for Solving Computing Problems**: Apply knowledge of computing fundamentals, knowledge of a computing specialization, and mathematics, science, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.

(iii) **Problem Analysis**: Identify and solve complex computing problems reaching substantiated conclusions using fundamental principles of mathematics, computing sciences, and relevant domain disciplines

(iv) **Design/Development of Solutions**: Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs. GA-5 Modern Tool Usage: Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.

(v) **Modern Tool Usage**: Create, select, or adapt and then apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.

(vi) **Individual and Teamwork**: Function effectively as an individual and as a member or leader of a team in multidisciplinary settings.

(vii) **Communication**: Communicate effectively with the computing community about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.

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(viii) **Computing Professionalism and Society**: Understand and assess societal, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.

(ix) **Ethics**: Understand and commit to professional ethics, responsibilities, and norms of professional computing practice.

(x) **Life-long Learning**: Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional.

1.3 Overview of Final Year Project

A Final Year Project is a two-semester course in which students usually of 2-3 members select a project and are supervised by a faculty member. In this course, students choose a project subject and define the objectives of the project under the supervision of a faculty member, and prepare the project proposal including: defining the statement of the problem, defining system requirements, defining different candidate solutions for the problem of study, making feasibility study for different candidate solutions, defining the best candidate solution, defining time table schedule. Students present the final project report at the end of the semester to an evaluation a committee.

1.4 FYP milestones and evaluation stages

The FYP milestones, deliverables, evaluation stages along with their timelines is given the Table 1 and Table 2.

Table 1: Milestones & Marks Distribution

• Proposal Defense	Acceptance / Rejection
• Mid Evaluation FYP I (Internal Evaluators)	30%
• Final Evaluation FYP I (Internal Evaluators)	50%
• Supervisor	20%
• Mid Evaluation FYP II (Internal Evaluators)	10%
• Final Evaluation FYP II (External Evaluators Internal Evaluators)	70% (40% 30%)
• Supervisor	20%

Table 2: Detailed timeline of FYP phases

Phase	Calendar
Submission FYPD titles by students	12th Week of 6th Semester
Submission FYPD titles by Faculty	13th Week of 6th Semester
FYP committee meeting in which committee members finalize FYP topics and allocate supervisors	14th & 15th Week of 6th Semester
Synopsis Submission	1st Week of 7th Semester
Synopsis Defense	3rd Week of 7th Semester
FYPD-1 Mid-Term Evaluation + SRS Submission + Report Submission	8th Week of 7th Semester
Detail meeting with Supervisor, FYDP Convener 9th Week of 8th Semester and Chairman (on the flow of the FYDP project)	9th Week of 8th Semester
FYPD-1 Final Evaluation	17th Week of 7th Semester
FYPD-2 Mid-Term Evaluation	8th Week of 8th Semester
Detail meeting with Supervisor, FYDP Convener and Chairman (on the flow of the FYDP project)	9th Week of 8th Semester
FYPD-1 Final Evaluation + Final Report Submission	17th Week of 8th Semester

1.4.1 Synopsis Defense:

Synopsis defense is the main step of acceptance and rejection of proposal in which the student's group have to defense their proposal in the presence of the evaluator jury of FYPC and the evaluator form that specific domain of project then they thoroughly asses the working of the student and judge it as per HEC criteria and requirement of the market.

1.4.2 ACCEPTANCE OF FYP

Acceptance of FYP marks the start of working on the project. Students are formally informed about the acceptance of their project after the successful synopsis defense in front of FYPC and evaluators.

1.4.3 ACCEPTANCE WITH REVISION FYP

Acceptance with revision of FYP marks the start of working on the project after changes in the idea which suggested by FYPC and evaluators Students are formally informed about the acceptance with revision of their project after the successful synopsis defense in front of FYPC and evaluators.

1.4.4 REJECTION OF FYP

Rejection of FYP marks the complete rejection in the project. Students are formally informed about the rejection of their project after the unsuccessful synopsis defense in front of FYPC and evaluators. Now they have to come up with new project ideas or get the idea which were suggested by the FYPC.

1.5 Guidelines for Project Supervision

Following rules should be taken under considerations during project supervision.

a) Each group will work under the supervision of an assigned supervisor throughout the final year (term 7 & 8).

b) Students are recommended to meet with their supervisor at least once a week. The students are expected to discuss their progress with their supervisors in these weekly meetings. Depending on students' requirements and the supervisor's availability, supervisors may also arrange additional meetings (physical/online) as requested.

c) Supervisors might also arrange communication with student groups via email or other means for the purpose of advising project groups.

d) It is the responsibility of the supervisor to inform his students with this handbook and all the included instructions and regulations.

1.5.1 Tasks expected from supervisors

During these meetings supervisors are expected to:

To provide FYP Outlines / Objectives	Orientation
Discuss project expectations and the plan with the group	
To share previous practice experience, research, skills and expertise	
Assign /Recommend related literature	Provide Knowledge
Give training sessions on the respective research area and tell them what they need to know	
To clarify students queries effectively as needed	
To make students aware of professional ethics and standards	
To advise students on how to deal effectively as a team while working under pressure, remaining optimistic and persistent, and how to meet milestone deadlines	
To monitor the project progress on a weekly/fortnightly basis	Assess
To ensure students are completing outlined project deliverables	
To grade students, work (at individual/group level) at the end of each semester	

1.5.2 Project Development Life Cycle:

The supervisors will guide the group through different steps in the software engineering life cycle and describe, discuss, assign, receive and review the corresponding outcomes/artifacts at the end of each step as described in Figure 1.

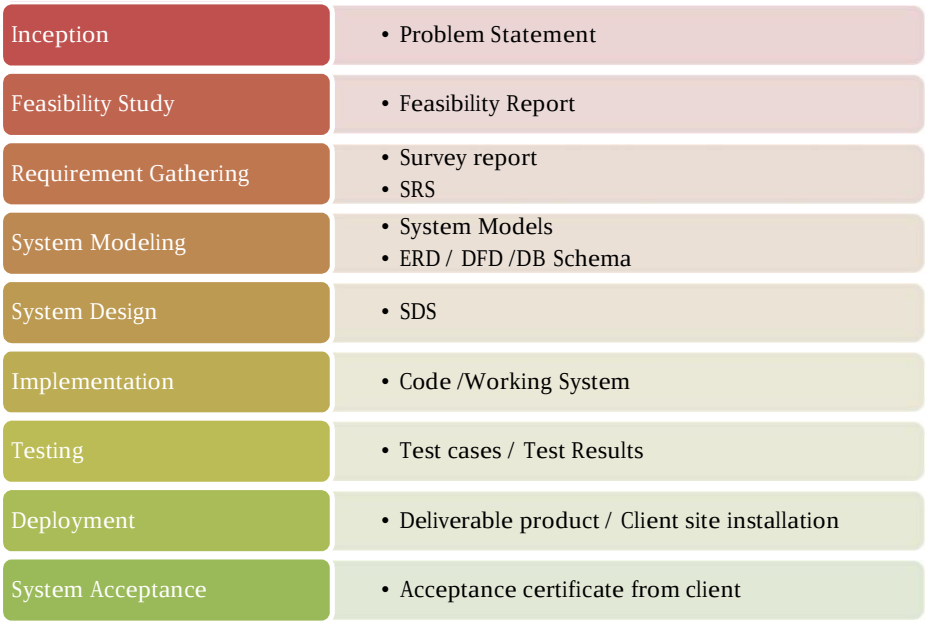

Figure 1: Software Engineering Lifecycle and Respective artifacts

During the Project Proposal, students undertake the initial phases of project planning, selection, analysis and designing phases. In the Project Implementation, students proceed with the implementation phase of their proposed project. As part of SDLC, the supervisors should guide the students to follow, but not limited to, the following best-practices:

a) Having a life cycle or system development methodology
b) Ensure proper research and background knowledge is acquainted
c) Feasibility study is conducted on the proposed project
d) Scope of the project is precise and crystal clear
e) Generating and comparing alternative designs to determine best match for the requirements
f) Roles & responsibilities of individual student working within the group is clear and accepted
g) Able to apply project resources as per the approved project plan
h) Track and report any issues and risks in completing assigned tasks
i) Both logical and physical design aspects are analyzed
j) Proper programming standards are maintained during the development of the project
k) Auto or Manual Test Cases are implemented and executed
l) Source control with versioning tools are used for developing as a team
m) Documenting required deliverables using industry standards
n) Participating in Seminars, Events, Publications and Workshops relevant to the project

1.6 Team Leadership:

Every graduation project group is assigned with a team leader who is essentially a cross-functional key player working within the project group. It is extremely important to get the right student within each group fit for the role of team leader which is crucial for the success of any project. Team leader should work very closely with the supervisor with the following, but not limited to, the primary tasks:

a) Provide input on the performance of team members
b) Resolve any conflicts within group members and maintain healthy group dynamics
c) Inform supervisor of any task delays and meeting hours change requests from students
d) Ensure rest of the group understands their roles and responsibilities on the assigned tasks;
e) Coordinate with internal or external project stakeholders on behalf of the team
f) Provide weekly status report – completed and signed by each team member as per the schedule

Note: During the course of the project, if the supervisor finds team leader is not performing as per the above expectations, the supervisors can request for the replacement of team leader with an alternative group member fit for this role.

1.7 Students Responsibility:

During the Final Year Project, students are responsible for the following:

a.	Agree with their assigned supervisors on the topic
b.	Perform weekly tasks, assigned by the supervisor (or distributed by the team leader)
c.	Discuss problems and seek advice from the supervisor in order to accomplish the assign tasks.
d.	Provide supervisor weekly status reports and get his/her feedback
e.	Apply recommendations to refine the previous task
f.	Finalize the project proposal and implementation, incorporating all the feedbacks and comments provided by the supervisor and evaluators.
g.	Conduct presentation at the end of each semester and defend project to the evaluation panel

1.8 Late submissions:

It is the responsibility of each group to ensure they complete the milestones of each semester and submit deliverables by the cutoff submission date. No project will be accepted after the cutoff date and necessary actions will be taken as per the supervisor and the evaluation committee decision policy.

1.9 Plagiarism:

Each project must be the original work of student groups. At the end of each semester, students will be required to present their project proposal and implementation outcomes as per the provided deliverables guidelines and the original work undertaken throughout each semester.

In the project report, for instance, if students have taken ideas or referencing other work as part of the proposed project, then, it must be cited and reference should be clearly specified. Same is the case while implementing the proposed solution. For instance, if students are developing project using 3rd party tools and libraries, it must be referenced and relevant comments and notes must be highlighted and will not be regarded as part of the original work of student groups. Hence, it is extremely important to note that it is the responsibility of students to ensure they are not plagiarizing knowingly or unknowingly.

In order to prevent plagiarism related issues, students are encouraged to get familiar with plagiarism specified in [1] and general referencing guidelines specified in [2].

In order to prevent plagiarism related issues during implementation, students are strongly encouraged to get familiar with software plagiarism specified in [3].

If students are found plagiarizing either in project proposal report or in the project implementation solution/code, immediate strict action will be taken as per the university policy.

Annex-A - (FYP Proposal Document Template)

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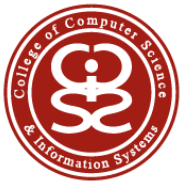
Final Year Project Title

Project Proposal



Supervisor

Supervisor Name

Submitted by

1st Student Name (Registration ID)

2nd Student Name (Registration ID)

3rd Student Name (Registration ID)

College of Computer Science and Information Systems

Institute of Business Management (IoBM)

[Date of Submission]

1. Introduction

Briefly introduce your project idea.

2. Project Objective and Scope

Write down your project objective in a very precise and concise manner.

3. Literature Review

A brief literature review is required. Download some research articles related to your topic from GOOGLE SCHOLAR and summarize. Also explore some related / existing systems and summarize them as well.

4. Methodology

In this section you have to put your project System Diagram / Project Framework with explanation.

5. Benefit to Industry

Which industry or application domain you are targeting? How that target domain may benefit from your solution?

6. Tools/Technology

Mention all the HW/SW tools/technologies required for the project.

7. Gantt Chart

A Gantt chart is required which is a graphical representation of project activities against time.

8. References

Mention all the literature or web references here. The references should be properly numbered and correctly used in the text. References should be in IEEE format.

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College of Computer Science and Information Systems (CCSIS)

Evaluation Form (Final year Project Proposal)

Project Title	
Supervisor	
Group Members (Name & ID)	1.
	2.
	3.
	4.

		YES	NO
GA-1	Understanding of the Proposal Idea		
GA-3,4	System Diagram		
GA-1,2	Existing Ideas + Gaps		
GA-5	Uniqueness + Innovation		
GA-9	Gantt Chart		
GA-6,7	Presentation / Level of Preparedness		
GA-7	References		

Comments / Suggestions:

1. _____
2. _____
3. _____
4. _____
5. _____

ACCEPTED ☐ **ACCEPTED WITH SUGGESTIONS** ☐ **REJECTED** ☐

Reason for rejection: _____

_____

_____ _____

Name of Evaluator **Signature**

Note: You can use the back page for providing more details.

Annex-B - (FYP SRS Template)

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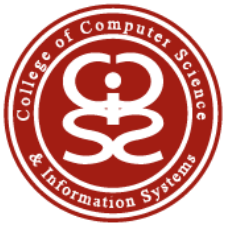
Final Year Project Title

Software Requirements Specification (SRS)



Submitted by

1st Student Name (Registration ID)

2nd Student Name (Registration ID)

3rd Student Name (Registration ID)

College of Computer Science and Information Systems
Institute of Business Management (IoBM)

[Date of Submission]

Contents

1. Introduction

1.1 Introduction

The purpose of this document is to define and describe the requirements of the project and to spell out the system's functionality and its constraints.

1.2 Scope of this Document

The customer and the user for the system are the employees of the IDANRV, including Mrs. Sheila Roop, and the developers of the system is the Shock Force Software Team. Our constraints for this section include our deadline for the document which is due 10/29/09

1.3 Overview

The product is an Access Database with import/export capabilities from Excel that will hold information on auctions, bid items and their bidders, including auction income, auction expenses, bid amount, bid increment, bid ID, item donor, item's original value, payment type, bidder name, and bidder email.

1.4 Business Context

As it applies to this project, The Intellectual Disabilities Agency of the New River Valley is a non-profit organization that supports people struggling with intellectual disabilities through holding fundraisers and silent auctions to raise aid as well as awareness

2. General Description

2.1 Product Functions

The product should make input of data and the entire checkout process easier and streamlined for the users (employees) and time efficient for the bidder.

2.2 Similar System Information

The product is being developed with Access, so there are a large number of similar databases or systems and they are used for a wide array of different purposes. The possible strength our system has over the majority is the Excel import/export feature of the program.

2.3 User Characteristics

The users include the employees of the IDA as they input data on bids and their bidders. For this system, the user is required to know the basic usability of Excel as well as a very base level understanding of access, which hopefully will be facilitated by the software team through training.

2.4 User Problem Statement

The user's system, currently, is slow and inefficient as it relates to the checkout process. Bidders must wait hours to check out the item they have won. Too many man hours have been needed to enter the wealth of information collected.

2.5 User Objectives

The user wants a database that will store information on a silent auction. The program must facilitate the speed and ease of input. It also must store the items the IDANRV needs to store.

2.6 General Constraints

Constraints include an easy to use interface for the program through forms, a Windows platform or, at bare minimum, a Mac with Access and Excel for Mac installed. Also, it must be constructed in Access, Excel, or another related program that is easily learnable.

3. Functional Requirements

1. **Items provided to the IDANRV shall be stored in the Access Database.**

1. Items shall be stored on the laptop machine and have complete fields.
2. Very high criticality
3. Limited network / wi-fi availability could present a technical challenge
4. The above stated factor is a risk we have encountered. Eliminate it by reducing the dependency of our program on these things.
5. This requirement is the basis of the project; all other aspects depend on it.

2. **The items shall be accessible via queries and reports.**
    1. Users of the database should be able to run reports on the data that has been put into the database. They should also be able to run queries.
    2. Very high criticality
    3. We do not foresee any technical issues preventing the implementation of this.
    4. Given the capabilities of Access, this requirement is able to be satisfied.
    5. This requirement depends on requirement number one.
3. **The data stored should be able to be manipulated through forms.**
    1. Items and other data should be able to be added and updated through the use of forms.
    2. Very high criticality
    3. We do not foresee any technical risks involved in this requirement.
    4. The only factor we can encounter here is the user of the system not being able to use it correctly. We will overcome this by training those who will be using it.
    5. This requirement is dependent on requirement one.

4. Interface Requirements

4.1 User Interfaces

4.1.1 GUI

The user interface for this program is the interface provided by Microsoft Access 2007. Access includes forms and reports for the users to query and organize data to suit their needs. Forms and reports both have builders that let the user specify which fields they want to use and which constraints they want to define.

4.1.2 CLI

There is no command line interface

4.1.3 API

There is no API for the product

4.1.4 Diagnostics or ROM

There is a troubleshooting and help section provided by Microsoft

4.2 Hardware Interfaces

The program (Access) uses the hard disk. Access to the hard drive and other hardware is managed by the operating system and Access.

4.3 Communications Interfaces

If we decide to implement an Ad Hoc network for a shared database, the operating system will handle those connections.

4.4 Software Interfaces

The Access system may be used to import and export data with Microsoft Excel. This functionality is built in to the user interface.

5. Performance Requirements

The database is designed to be operated through Microsoft Access 2007, thus no additional system requirements exist beyond those required to run Microsoft Office 2007, except for a negligible amount of hard drive space to store the database.
Microsoft lists the requirements for Access 2007 as follows:
500 MHz processor or higher
256MB RAM or higher
1.5GB Available Hard Drive Space
Windows XP SP2 or later operating system.
Windows Office Professional 2007 (Windows Access)
There is also Access Available for Mac OS X, the clients have not stated a need thus far.

6. Other non-functional attributes

.

6.1 Security

The system shall be designed with a level of security appropriate for the sensitivity of information enclosed in the database. More interaction is needed with client about the volatility of the information. Since there is no obvious information that is of a high security level such as credit card information, the only requirements that could be implemented are encrypting the database and/or making the database password-protected, by user's request.

6.2 Binary Compatibility

This system will be compatible with any computer that has Microsoft Office Professional 2007 or later installed (whether PC or Mac), and will be designed with more than one computer in mind.

6.3 Reliability

Reliability is one of the key attributes of the system. Back-ups will be made regularly so that restoration with minimal data loss is possible in the event of unforeseen events. The system will also be thoroughly tested by all team members to ensure reliability.

6.4 Maintainability

The system shall be maintained by Sheila Roop, of the IDA, or delegated to another employee.

6.5 Portability

The system shall be designed in a way that shall allow it to be run on multiple computers with Microsoft Office Professional 2007 or later installed.

6.6 Extensibility

The system shall be designed and documented in such a way that anybody with an understanding of Microsoft Access shall be able to extend the system to fit their needs with the team's basic instructions.

6.7 Reusability

The system should be designed in a way that allows the database to be re-used regularly for the various silent auctions that the organization shall hold.

6.8 Application Affinity/Compatibility

This system requires the Microsoft Office Professional 2007 suite or later, as it operates primarily through Microsoft Access, in conjunction with Microsoft Excel.

6.9 Resource Utilization

The resources used in the creation of this system include: Dr. Lewis, the client (Sheila Roop), the computers in Davis Hall, and the internet.

6.10 Serviceability

The maintenance of the system should be able to be sufficiently performed by any person with a basic understanding of Microsoft Access.

7. Operational Scenarios

Scenario A: Initial Item Definitions
The user shall enter the information about the items into the database for its initial construction and evolution. The fields will be completed via a form that will manipulate the data.

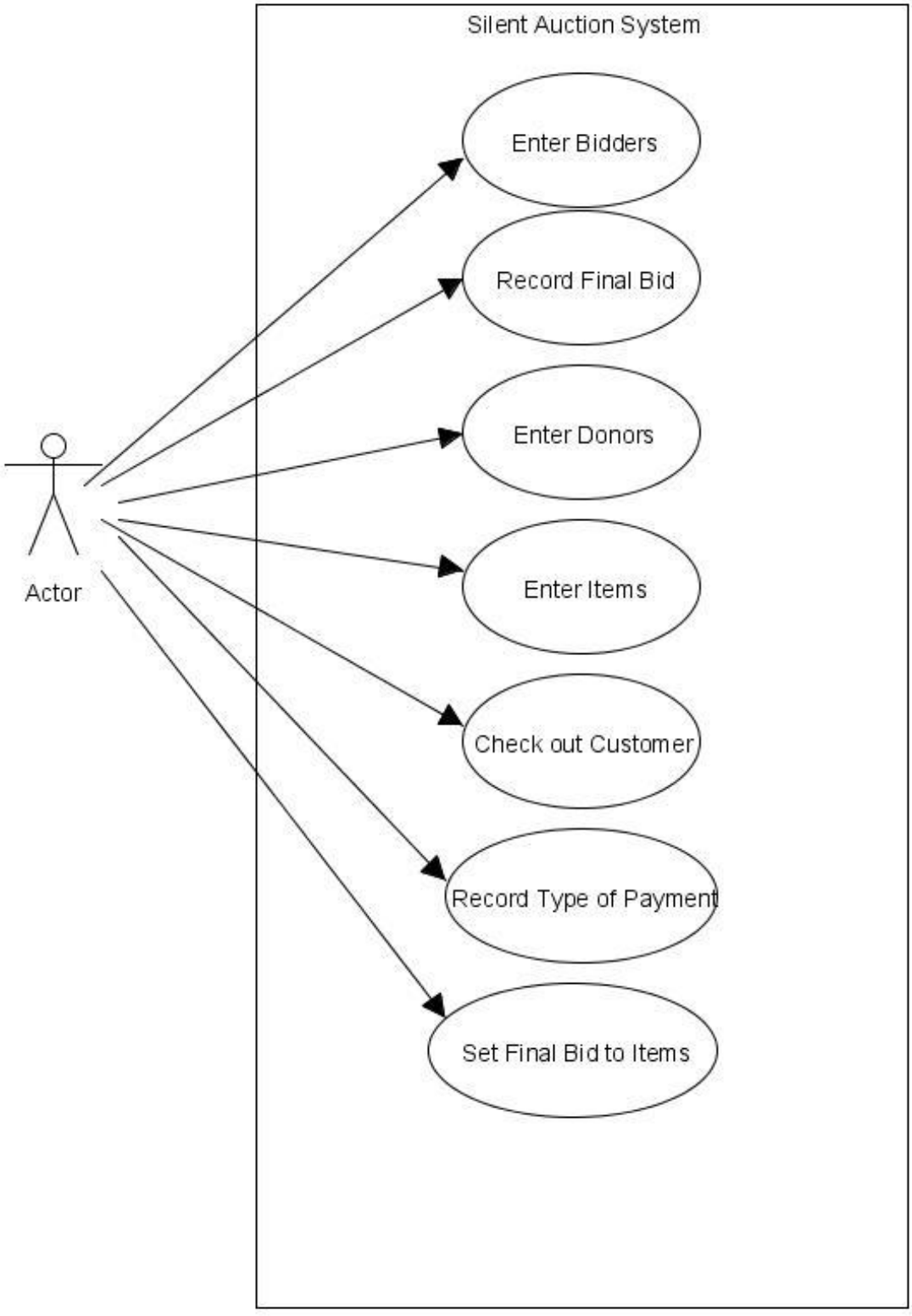
Scenario B: Customer Check-out
The user shall be able to enter information about the customer purchasing a particular item, and record their bid and other information. They will also enter the winning bid

Scenario C: Database Maintenance
The user may want to alter/delete information after the auction is over, In this case they will need to be able to remove the data that has been entered.

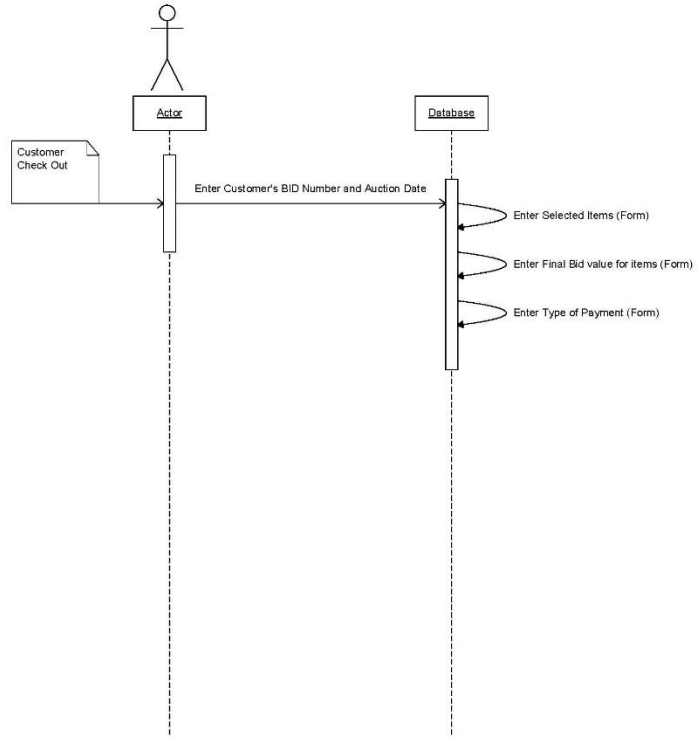
8. Preliminary Use Case Models and Sequence Diagrams

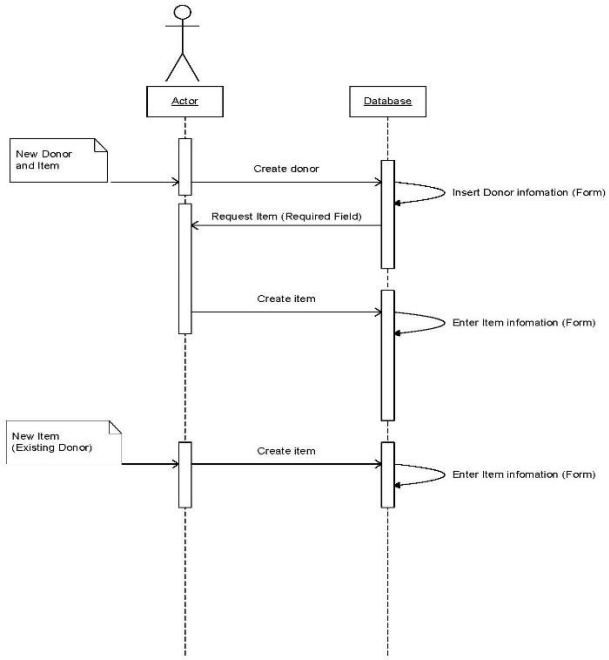
This section presents a list of the fundamental sequence diagrams and use cases that satisfy the system’s requirements. The purpose is to provide an alternative, "structural" view of the requirements stated above and how they might be satisfied in the system.

8.1 Use Case Model


Silent Auction System
Enter Bidders
Record Final Bid
Enter Donors
Enter Items
Check out Customer
Record Type of Payment
Set Final Bid to Items
Actor

8.2 Sequence Diagrams





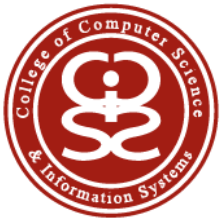
Annex-C - (FYP-I Report Template)

INSTITUTE OF BUSINESS MANAGEMENT

FINAL YEAR PROJECT - I

Session 20xx-20xx

Project Title



Supervisor

Supervisor Name

Submitted by

1st Student Name (Registration ID)

2nd Student Name (Registration ID)

3rd Student Name (Registration ID)

College of Computer Science and Information Systems

Institute of Business Management (IoBM)

[Date of Submission]

ACKNOWLEDGEMENT

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries. Themes and styles also help keep your document coordinated. When you click Design and choose a new Theme, the pictures, charts, and SmartArt graphics change to match your new theme. When you apply styles, your headings change to match the new theme. Save time in Word with new buttons that show up where you need them.

To change the way a picture fits in your document, click it and a button for layout options appears next to it. When you work on a table, click where you want to add a row or a column, and then click the plus sign. Reading is easier, too, in the new Reading view. You can collapse parts of the document and focus on the text you want. If you need to stop reading before you reach the end, Word remembers where you left off - even on another device. Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.

Yours Sincerely,

Student 1 (12345-6789)

Student 2 (12345-6789)

Student 3 (12345-6789)

ABSTRACT

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Keywords – *Keyword 1, Keyword 2…….Intrusion Detection System, Facial Features, Classified, Camera.*

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Chapter 1

Introduction

1.1 Background of the Project

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

1.2 Purpose of the Project

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

1.3 Scope and Objectives of the Project

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.

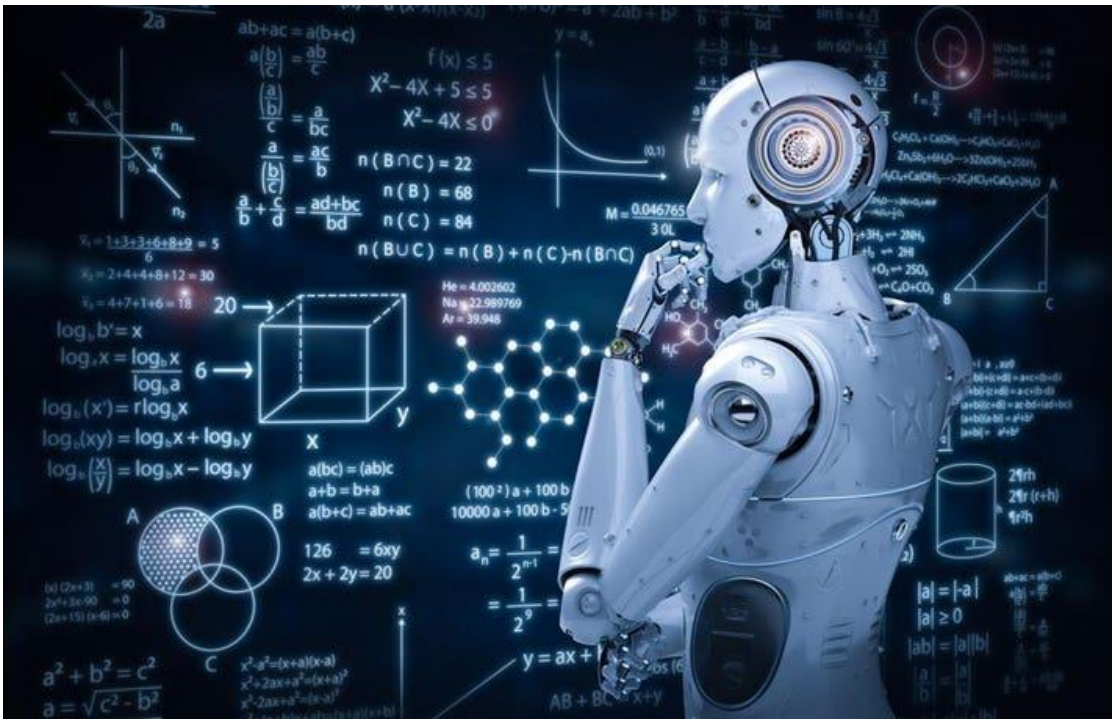

Fig 1.1: Caption [1]

1.4 Overview of the Project

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1.5 Project Gaps

- Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.
- Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.

- Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.

1.6 Problem Statement

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.

1.6 Chapter Summary

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

Chapter 2

Literature Review

2.1 Introduction

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2.2 Reviewed Research Articles Summary

In the context of risk classification used in software development projects, the authors [17] proposed an SVM based method and highlighted the importance discussing the factors affecting the risks associated with the classification. Based on the CAR and AUC, the methods of SVM and K-Means were compared with the method proposed in the study. The CAR and AUC in the proposed method are found to be superior as compared to the values of SVM and K-Means. It ultimately contributes to relatively higher precision and better performance of the method proposed for the classification of risk in the software development projects.

Researchers in [18] a solution was found to determine the effort required for a software project based on an organizations historical data for projects. The solution, based on a predictive model, is a result of research which includes two methods i.e., (a) correlation matrix and (b) decision tree. Tests were run using both methodologies, which generated the same results, eventually leading the researchers to identify three parameters that were be used as input for various predictive models. Evaluation from results of these predictive models led to the concluded "Evolutionary Support Vector Machine" as the best model. Therefore, it was determined that the effort required to complete a project can be predicted based on these three parameters (a) number of entities in a project, (b) transaction of the project and (c) project duration in months.

2.3 Reviewed Existing Systems Summary

2.2.1 Existing System 1

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2.2.2 Existing System 2

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2.2.3 Existing System 3

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.

2.4 Comparison of Existing Systems with Proposed System

Table 1 Comparison

Features	Pixel point	LRS	Eric soft	Smart order system	Proposed System
Graphics	NO	NO	NO	NO	YES
ATM Sweeper	NO	NO	NO	NO	YES
Prices	NO	NO	NO	NO	YES
Group Orders	NO	NO	NO	YES	YES
Status of Ordering	NO	NO	NO	NO	YES
Wireless Network	YES	YES	YES	NO	YES
Touch Screen	YES	NO	YES	NO	YES

2.5 Chapter Summary

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Chapter 3

Requirement Analysis

3.1 Introduction

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3.2 Stakeholder Identification

Identify and describe all stakeholders involved in the project. This includes users, clients, customers, and any other parties affected by or influencing the project.

3.3 Requirement Gathering Techniques

Explain the methods used to gather requirements. This could involve interviews, surveys, workshops, or other techniques used to collect information from stakeholders.

3.4 Functional Requirement

This includes functional requirements (what the system should do)

3.5 Non-Functional Requirement

Non-functional requirements (constraints, performance, security, etc.).

3.6 Chapter Summary

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Chapter 4

System Design

4.1 Introduction

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4.2 Software Development Model

Explain the software development model you used in your project (waterfall, incremental, spiral, agile etc)

4.3 Hardware and Software Requirement

Hardware Requirements

- Processor: Minimum 1 GHz; Recommended 2GHz or more
- Hard Drive: Minimum 32 GB; Recommended 64 GB or more
- Memory (RAM): Minimum 1 GB; Recommended 4 GB or above
- Some classes require a camera and microphone

Software Requirements

- Windows: 7 or newer
- MAC: OS X v10.7 or higher
- Linux: Ubuntu

4.4 Architectural Design

Describe the overall architecture of the system. This includes high-level components, modules, and their interactions. Diagrams (such as UML diagrams) could be used to illustrate the architecture.

4.5 Database Design

Explain the structure and organization of the database. Include entity-relationship diagrams, tables, schemas, and any normalization techniques applied.

4.6 Chapter Summary

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Chapter 5

Methodology

5.1 Introduction

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5.2 Proposed System Framework / Architecture

Proposed system architecture diagram should be incorporated here with explanation step by step.

5.3 Data Collection Procedure

Detail the methods used to collect data (interviews, surveys, experiments, observations, etc.). Discuss the tools or instruments used and how they were developed or adapted.

5.4 Algorithm Used

Explain all algorithm used in this project with their block diagrams.

5.5 Chapter Summary

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that

complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

CONCLUSION

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APPENDICES

Project Schedule

Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text…..

Gantt Chart

Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text Text…..

Turnitin Plagiarism Report

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FYP-2 Final Report

ORIGINALITY REPORT

12%	6%	4%	11%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to The University of Manchester Student Paper	1%
2	us.norton.com Internet Source	1%
3	Submitted to University of Derby Student Paper	1%
4	Submitted to Altinbas University Student Paper	<1%
5	Blerim Rexha, Gresa Shala, Valon Xhafa. "Increasing Trustworthiness of Face Authentication in Mobile Devices by Modeling Gesture Behavior and Location Using Neural Networks", Future Internet, 2018 Publication	<1%
6	www.geeksforgeeks.org Internet Source	<1%
7	buildmedia.readthedocs.org Internet Source	<1%

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Rubrics for FYP-1 Mid-Term Assessment

Criteria	Excellent (>=90%)	Good (70-89%)	Fair (50-69%)	Poor (<50%)
C1 Understanding the Project Idea GA-3 *(3%)*	Project Idea is stated clearly and provides full justification of its potential impact.	Project Idea is stated clearly and provides insufficient justification of its potential impact	Project Idea is stated and provides justification of its potential impact	Project Idea is not stated clearly and lacks justification of its potential impact
C2 System Diagram GA-2 ***(3%)***	System Diagram is coherent and provides full justification of the specified requirements	System Diagram is coherent and provides insufficient justification of the specified requirements	System Diagram is coherent and provides justification of the specified requirements	System Diagram is not coherent and lacks in justification of the specified requirements
C3 Literature Review GA-2 ***(2%)***	Literature Review is Comprehensive to the relevant literature and provides sufficient analysis of key findings.	Literature Review is adequate to the relevant literature and provides insufficient analysis of key findings.	Literature Review is limited to the relevant literature and provides analysis of key findings.	Literature Review is minimal to the relevant literature and lacks in analysis of relevant literature.
C4 Gaps GA-2 ***(2%)***	Clearly identifies gaps in the existing literature.	Identifies gaps in the existing literature	Identifies some gaps in the existing literature.	Fails to identify gaps in the existing literature.
C5 Uniqueness and Innovation GA-10 ***(3%)***	Demonstrates exceptional originality and introduces the disruptive idea	Shows originality and introduces new ideas or concept	Presents original ideas but lack in significant innovation	Lacks originality and innovation
C6 SRS Document GA-7 ***(2%)***	All functional and non-functional requirements are clearly defined, leaving no ambiguity or gaps.	Most of the required functionality and system constraints are specified, but there are some minor omissions or ambiguities.	Several key requirements are missing or vaguely defined, requiring additional clarification.	Many essential requirements are omitted or poorly defined, making it difficult to understand the system's scope and functionality.
C7 Presentation / Level of preparedness GA-7 ***(5%)***	Present clearly with confidence while maintaining presentation flow. The student listens carefully and answers questions easily and directly.	Lacks in confidence while maintaining presentation flow. The student is able to answer questions about the project.	Lacks in confidence and presentation flow. The student attempts to answer questions about the project but clearly doesn't really understand	Lacks in confidence and presentation flow, and inefficient use of Visual aids. The student is unable to answer questions about the project.

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Rubrics for FYP-1 Mid-Term Assessment

Criteria	Description of Criteria	Graduate Attributes(s)	Performance Scale 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor							
			Roll #		Roll #		Roll #		Roll #	
C1	Understanding the Project Ideas	GA-3: Problem Analysis	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C2	System Diagram	GA-2: Knowledge for solving Computer Problems	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C3	Literature Review and Gaps	GA-2: Knowledge for solving Computer Problems	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C4	Gaps	GA-2: Knowledge for solving Computer Problems	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C5	Uniqueness and Innovation	GA-10: Life-long learning	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C6	SRS Document	GA-7: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C7	Presentation / Level of preparedness	GA-7: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐

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Rubrics for FYP-1 Final Assessment

Criteria	Excellent (>=90%)	Good (70-89%)	Fair (50-69%)	Poor (<50%)
C1 Presentation and Viva GA-07 (25%)	Present clearly with confidence while maintaining presentation flow. The student listens carefully and answers questions easily and directly.	Lacks in confidence while maintaining presentation flow. The student is able to answer questions about the project.	Lacks in confidence and presentation flow. The student attempts to answer questions about the project but clearly doesn't really understand	Lacks in confidence and presentation flow, and inefficient use of Visual aids. The student is unable to answer questions about the project.
C2 System Design GA-04 (25%)	System Design is coherent and provides full justification of the specified requirements	System Design is coherent and provides insufficient justification of the specified requirements	System Design is coherent and provides justification of the specified requirements	System Design is not coherent and lacks in justification of the specified requirements
C3 SRS Submission GA-07 (10%)	All functional and non-functional requirements are clearly defined, leaving no ambiguity or gaps.	Most of the required functionality and system constraints are specified, but there are some minor omissions or ambiguities.	Several key requirements are missing or vaguely defined, requiring additional clarification.	Many essential requirements are omitted or poorly defined, making it difficult to understand the system's scope and functionality.

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Rubrics for FYP-1 Final Assessment

Criteria	**Description of Criteria**	**G**raduate Attributes**(s)**	**Performance Scale** **1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor**							
			Roll #		**Roll #**		**Roll #**		**Roll #**	
C1	Presentation and Viva	GA-07: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C2	System Design	GA-04 Design / Development of Solutions	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C3	SRS Submission	GA-07: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐

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Rubrics for FYP Report Assessment

Criteria	Excellent (>=90%)	Good (70-89%)	Fair (50-69%)	Poor (<50%)
C1 Abstract GA-07 (*5%*)	The abstract provides an excellent overview of the project	The abstract provides a good overview of the project	Abstract provides a reasonable description of the project but needs improvement	Abstract is poorly written.
C2 Literature & References GA-03 (*5%*)	Literature is well-written and structured as per standards and covered all relevant material to the project. References are cited properly using a standard format	Literature is well-written but not properly structured as per standards and covered most of the material relevant to the project. References are cited using a standard format	Literature is not properly written and structured as per standards, but covered most of the material relevant to the project. References are cited using a standard format	Literature is poorly written, poorly structured and does not covered the relevant material to the project. References are cited using a standard format.
C3 Problem Statement GA-03 (*5%*)	Problem statement is stated and covered sufficient justification. New reader can clearly understand its value and context	Problem statement is stated and covered necessary justification with reference.	Problem statement is stated but lacks necessary justification.	Problem statement is vaguely stated without any justification
C4 Methodology GA-4 (*5%*)	The methods, approaches, tools, techniques, algorithms, or other aspects of the solution are well-described with sufficient details and supporting diagrams.	The methods, approaches, tools, techniques, algorithms, or other aspects of the solution are well-described. However further explanation is required.	The methods, approaches, tools, techniques, algorithms, or other aspects of the solution are described but not in a convincing manner.	Some aspects of the solution are described briefly but much of the description is left out.

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Rubrics for FYP-1 Report Assessment

Criteria	**Description of Criteria**	**Graduate Attributes(s)**	**Performance Scale 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor**							
			Roll #		**Roll #**		**Roll #**		**Roll #**	
C1	Abstract	GA-07: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C2	Literature & References	GA-03: Problem Analysis	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C3	Problem Statement	GA-03: Problem Analysis	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C4	Methodology	GA-04: Design / Development of Solutions	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐

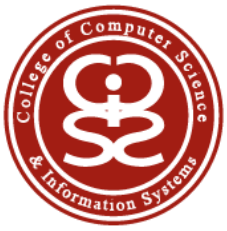
Annex-D - (FYP-II Report Template)

INSTITUTE OF BUSINESS MANAGEMENT

FINAL YEAR PROJECT

Session 20xx-20xx

Project Title



Supervisor

Supervisor Name

Submitted by

1st Student Name (Registration ID)

2nd Student Name (Registration ID)

3rd Student Name (Registration ID)

College of Computer Science and Information Systems

Institute of Business Management (IoBM)

[Date of Submission]

ACKNOWLEDGEMENT

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To change the way a picture fits in your document, click it and a button for layout options appears next to it. When you work on a table, click where you want to add a row or a column, and then click the plus sign. Reading is easier, too, in the new Reading view. You can collapse parts of the document and focus on the text you want. If you need to stop reading before you reach the end, Word remembers where you left off - even on another device. Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.

Yours Sincerely,

Student 1 (12345-6789)

Student 2 (12345-6789)

Student 3 (12345-6789)

ABSTRACT

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries. Themes and styles also help keep your document coordinated. When you click Design and choose a new Theme, the pictures, charts, and SmartArt graphics change to match your new theme. When you apply styles, your headings change to match the new theme. Save time in Word with new buttons that show up where you need them.

Keywords – *Keyword 1, Keyword 2……..Intrusion Detection System, Facial Features, Classified, Camera.*

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

Introduction

1.1 Background of the Project

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

1.2 Purpose of the Project

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

1.3 Scope and Objectives of the Project

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

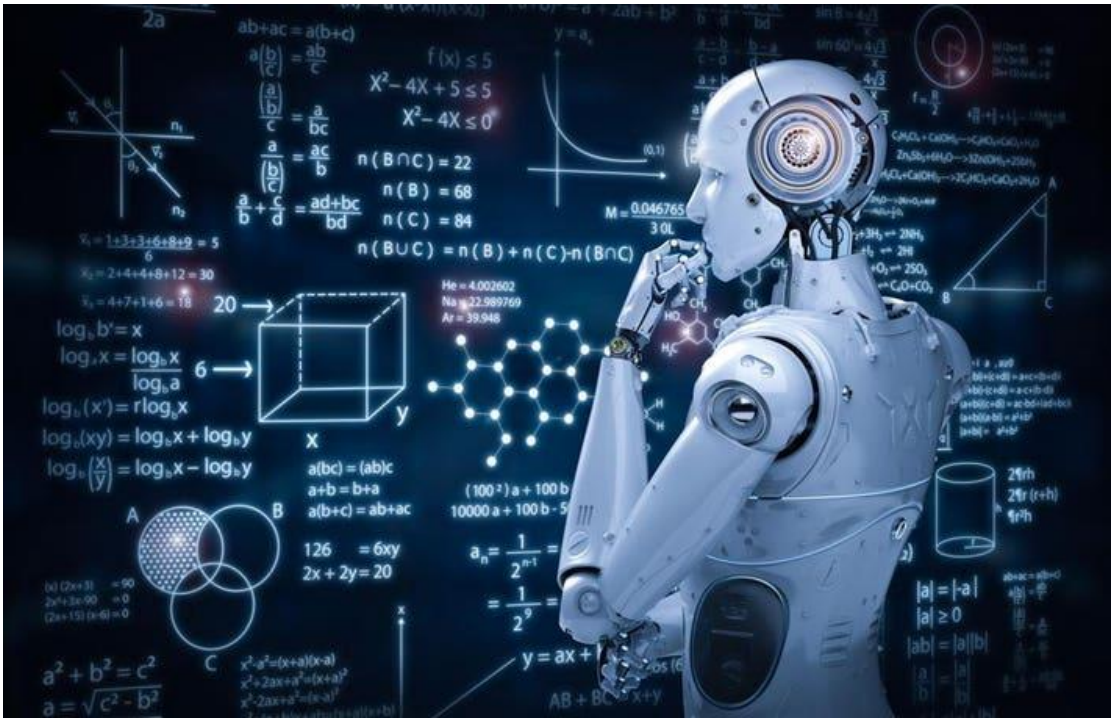

Fig 1.1: Caption [1]

1.4 Overview of the Project

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1.5 Project Gaps

- Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.
- Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.

- Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.

1.6 Problem Statement

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1.6 Chapter Summary

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Chapter 2

2.1 Introduction

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2.2 Reviewed Research Articles Summary

In the context of risk classification used in software development projects, the authors [17] proposed an SVM based method and highlighted the importance discussing the factors affecting the risks associated with the classification. Based on the CAR and AUC, the methods of SVM and K-Means were compared with the method proposed in the study. The CAR and AUC in the proposed method are found to be superior as compared to the values of SVM and K-Means. It ultimately contributes to relatively higher precision and better performance of the method proposed for the classification of risk in the software development projects.

Researchers in [18] a solution was found to determine the effort required for a software project based on an organizations historical data for projects. The solution, based on a predictive model, is a result of research which includes two methods i.e., (a) correlation matrix and (b) decision tree. Tests were run using both methodologies, which generated the same results, eventually leading the researchers to identify three parameters that were be used as input for various predictive models. Evaluation from results of these predictive models led to the concluded “Evolutionary Support Vector Machine” as the best model. Therefore, it was determined that the effort required to complete a project can be predicted based on these three parameters (a) number of entities in a project, (b) transaction of the project and (c) project duration in months.

2.3 Reviewed Existing Systems Summary

2.2.1 Existing System 1

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2.2.2 Existing System 2

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2.2.3 Existing System 3

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2.4 Comparison of Existing Systems with Proposed System

Features	Pixel point	LRS	Eric soft	Smart order system	Proposed System
Graphics	NO	NO	NO	NO	YES
ATM Sweeper	NO	NO	NO	NO	YES
Prices	NO	NO	NO	NO	YES
Group Orders	NO	NO	NO	YES	YES
Status of Ordering	NO	NO	NO	NO	YES
Wireless Network	YES	YES	YES	NO	YES
Touch Screen	YES	NO	YES	NO	YES

2.5 Chapter Summary

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Chapter 3

Requirement Analysis

3.1 Introduction

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3.2 Stakeholder Identification

Identify and describe all stakeholders involved in the project. This includes users, clients, customers, and any other parties affected by or influencing the project.

3.3 Requirement Gathering Techniques

Explain the methods used to gather requirements. This could involve interviews, surveys, workshops, or other techniques used to collect information from stakeholders.

3.4 Functional Requirement

This includes functional requirements (what the system should do)

3.5 Non-Functional Requirement

non-functional requirements (constraints, performance, security, etc.).

3.6 Chapter Summary

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Chapter 4

System Design

4.1 Introduction

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4.2 Software Development Model

Explain the software development model you used in your project (waterfall, incremental, spiral, agile etc)

4.3 Hardware and Software Requirement

Hardware Requirements

- Processor: Minimum 1 GHz; Recommended 2GHz or more
- Hard Drive: Minimum 32 GB; Recommended 64 GB or more
- Memory (RAM): Minimum 1 GB; Recommended 4 GB or above
- Some classes require a camera and microphone
- etc

Software Requirements

- Windows: 7 or newer
- MAC: OS X v10.7 or higher
- Linux: Ubuntu
- Etc.

4.4 Architectural Design

Describe the overall architecture of the system. This includes high-level components, modules, and their interactions. Diagrams (such as UML diagrams) could be used to illustrate the architecture.

4.5 Database Design

Explain the structure and organization of the database. Include entity-relationship diagrams, tables, schemas, and any normalization techniques applied.

4.6 Chapter Summary

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Chapter 5

Methodology

5.1 Introduction

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5.2 Proposed System Framework / Architecture

Proposed system architecture diagram should be incorporated here with explanation step by step.

5.3 Data Collection Procedure

Detail the methods used to collect data (interviews, surveys, experiments, observations, etc.). Discuss the tools or instruments used and how they were developed or adapted.

5.4 Algorithm Used

Explain all algorithm used in this project with their block diagrams.

5.5 Chapter Summary

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Chapter 6

Results and Discussion

6.1 Introduction

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6.2 Algorithm 1 Results

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No. of Images	kNN				Decision tree			
	Precision	Recall	Accuracy	F score	Precision	Recall	Accuracy	F score
1	0.80	1.00	0.97	0.89	0.75	0.75	0.93	0.75
2	1.00	1.00	1.00	1.00	0.90	1.00	0.96	0.95
3	1.00	0.95	0.98	0.97	0.86	0.95	0.92	0.90
4	1.00	1.00	1.00	1.00	0.84	1.00	0.95	0.91
5	0.96	0.96	0.96	0.96	0.92	1.00	0.98	0.94
6	1.00	1.00	1.00	1.00	0.93	0.96	0.94	0.95
7	1.00	0.93	0.98	0.96	0.93	0.93	0.95	0.93
8	1.00	0.84	0.92	0.91	0.96	0.83	0.90	0.89
9	1.00	0.95	0.98	0.97	0.95	0.95	0.97	0.95
10	0.96	1.00	0.98	0.98	0.82	0.88	0.85	0.85
Average	0.97	0.96	0.98	0.96	0.87	0.93	0.94	0.90

6.3 Algorithm 2 Results

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No. of Images	kNN				Decision tree			
	Precision	Recall	Accuracy	F score	Precision	Recall	Accuracy	F score
1	0.80	1.00	0.97	0.89	0.75	0.75	0.93	0.75
2	1.00	1.00	1.00	1.00	0.90	1.00	0.96	0.95
3	1.00	0.95	0.98	0.97	0.86	0.95	0.92	0.90
4	1.00	1.00	1.00	1.00	0.84	1.00	0.95	0.91
5	0.96	0.96	0.96	0.96	0.92	1.00	0.98	0.94
6	1.00	1.00	1.00	1.00	0.93	0.96	0.94	0.95
7	1.00	0.93	0.98	0.96	0.93	0.93	0.95	0.93
8	1.00	0.84	0.92	0.91	0.96	0.83	0.90	0.89
9	1.00	0.95	0.98	0.97	0.95	0.95	0.97	0.95
10	0.96	1.00	0.98	0.98	0.82	0.88	0.85	0.85
Average	0.97	0.96	0.98	0.96	0.87	0.93	0.94	0.90

6.4 Comparative Analysis

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

No. of Images	kNN				Decision tree			
	Precision	Recall	Accuracy	F score	Precision	Recall	Accuracy	F score
1	0.80	1.00	0.97	0.89	0.75	0.75	0.93	0.75
2	1.00	1.00	1.00	1.00	0.90	1.00	0.96	0.95
3	1.00	0.95	0.98	0.97	0.86	0.95	0.92	0.90
4	1.00	1.00	1.00	1.00	0.84	1.00	0.95	0.91
5	0.96	0.96	0.96	0.96	0.92	1.00	0.98	0.94
6	1.00	1.00	1.00	1.00	0.93	0.96	0.94	0.95
7	1.00	0.93	0.98	0.96	0.93	0.93	0.95	0.93
8	1.00	0.84	0.92	0.91	0.96	0.83	0.90	0.89
9	1.00	0.95	0.98	0.97	0.95	0.95	0.97	0.95
10	0.96	1.00	0.98	0.98	0.82	0.88	0.85	0.85
Average	0.97	0.96	0.98	0.96	0.87	0.93	0.94	0.90

6.5 Chapter Summary

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

Chapter 7

Implementation

7.1 Introduction

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7.2 User Interface (UI) Design

Explain here the following user interface

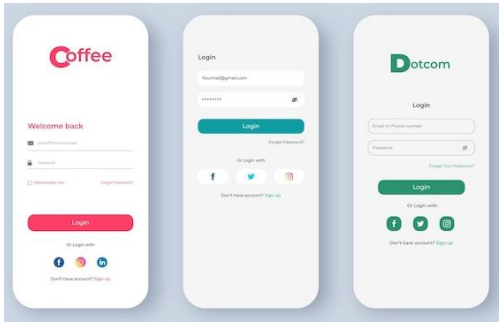

Figure 1 sign up and sign in interface

Explain here the following user interface

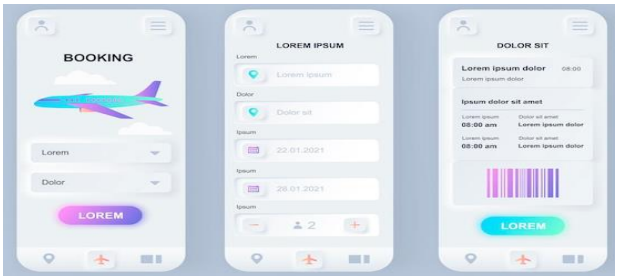

Figure 2 Booking Interface

7.3 Security Considerations

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7.4 Integration of External Systems

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7.4 Chapter Summary

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Chapter 8

Conclusion

8.1 Introduction

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8.2 Conclusion

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8.3 Contribution / Novelty

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8.4 Contribution towards Industry

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8.5 Future Directions

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8.6 Chapter Summary

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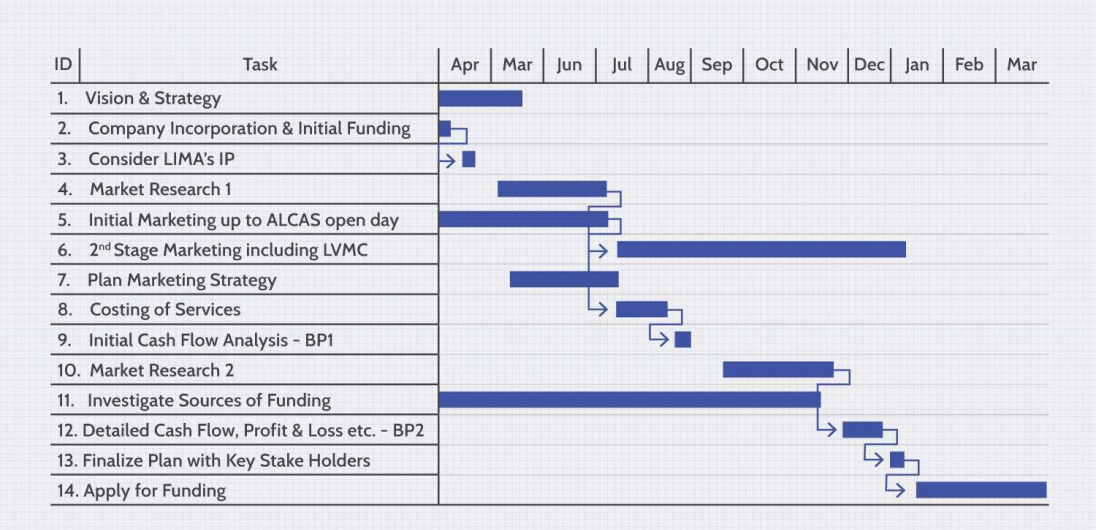
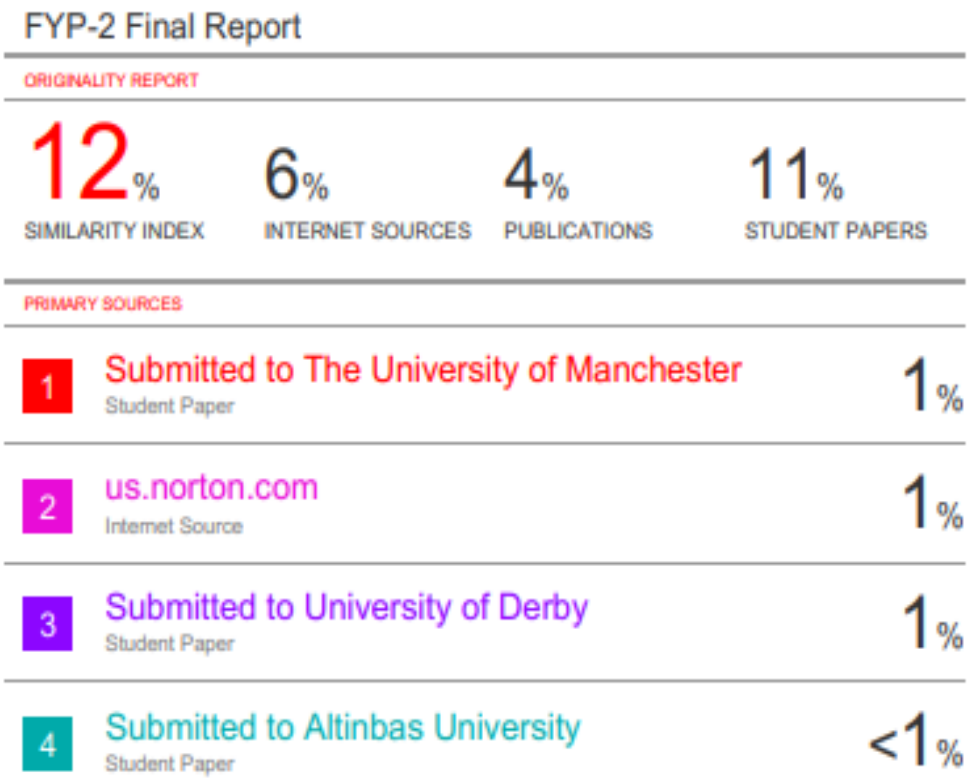
APPENDICES

Appendix A: Gantt Chart



Appendix B: Turnitin Plagiarism Report



FYP-2 Final Report

ORIGINALITY REPORT

12%	6%	4%	11%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to The University of Manchester Student Paper	1%
2	us.norton.com Internet Source	1%
3	Submitted to University of Derby Student Paper	1%
4	Submitted to Altinbas University Student Paper	<1%

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Rubrics for FYP-2 Mid-Term Assessment

Criteria	Excellent (>=90%)	Good (70-89%)	Fair (50-69%)	Poor (<50%)
C1 Methodology GA-5 *(5%)*	Requirements included in SRS and the tasks identified and listed in Gantt chart is sufficient	Requirements included in SRS and the tasks identified and listed in Gantt chart is insufficient	Requirements included in SRS and the tasks identified and listed in Gantt chart is limited	Requirements included in SRS and the tasks identified and listed in Gantt chart lacks
C2 System Development Progress / Results GA-4 *(5%)*	The project is in execution phase with complete achievement of the objectives approved till mid.	The project is in development phase with achievement of the objectives approved till mid.	The project is in design phase with moderate achievement of the objectives approved till mid.	The project is in initial phase and student fail to achieve the objectives approved till mid.
C3 References GA-7 *(2%)*	The source directly addresses the topic and provides valuable insights or information.	The source is relevant to the topic but may contain some tangential information.	The source has limited relevance to the topic and may only partially address the subject matter.	The source is irrelevant to the topic or does not contribute any meaningful information.
C4 Work Division GA-6 *(3%)*	Clear work division among group members is shown.	Work division is shown.	Work division is shown but more clarity is needed	Work Division among group members is not appropriate.
C5 Presentation and Viva GA-7 *(5%)*	Present clearly with confidence while maintaining presentation flow. The student listens carefully and answers questions easily and directly.	Lacks in confidence while maintaining presentation flow. The student is able to answer questions about the project.	Lacks in confidence and presentation flow. The student attempts to answer questions about the project but clearly doesn't really understand	Lacks in confidence and presentation flow, and inefficient use of Visual aids. The student is unable to answer questions about the project.

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Rubrics for FYP-2 Mid-Term Assessment

Criteria	**Description of Criteria**	**Graduate Attributes(s)**	**Performance Scale 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor**							
			Roll #		**Roll #**		**Roll #**		**Roll #**	
C1	Methodology	GA-5: Modern Tool Usage	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C2	System Development Progress/ Result	GA-4: Design/ Development of Solutions	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C3	References	GA-7: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C4	Work Division	GA-6: Individual and Team Work	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C5	Presentation and Viva	GA-7: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐

INSTITUTE OF BUSINESS MANAGEMENT (IoBM), KARACHI

Rubrics for FYP-2 Final Assessment

Criteria	Excellent (>=90%)	Good (70-89%)	Fair (50-69%)	Poor (<50%)
C1 Presentation and Viva GA-07 (25%)	Present clearly with confidence while maintaining presentation flow. The student listens carefully and answers questions easily and directly.	Lacks in confidence while maintaining presentation flow. The student is able to answer questions about the project.	Lacks in confidence and presentation flow. The student attempts to answer questions about the project but clearly doesn't really understand	Lacks in confidence and presentation flow, and inefficient use of Visual aids. The student is unable to answer questions about the project.
C2 Project Demonstration GA-05 (25%)	Able to demonstrate the project with achievement of required objectives having clear understanding of project limitations and future enhancements. Hardware and/or Software modules are fully functional, if applicable.	Able to demonstrate the project with achievement of required objectives but understanding of project limitations and future enhancements is insufficient. Hardware and/or Software modules are functional, if applicable.	Able to demonstrate the project with achievement of at least 50% required objectives and insufficient understanding of project limitations and future enhancements. Hardware and/or Software modules are partially functional, if applicable.	Able to demonstrate the project with achievement of less than 50% required objectives and lacks in understanding of project limitations and future enhancements. Hardware and/or Software modules are not functional, if applicable.
C3 Project Impact GA-08 (10%)	Project complies all the standards of respective field and fulfills all requirements including safety, conservation and environment	Project complies partial standards of respective field and fulfills all requirements including safety, conservation and environment	Project complies partial standards of respective field and fulfills at least 50% requirements including safety, conservation and environment	Project complies partial standards of respective field and fulfills less then 50% requirements including safety, conservation and environment

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Rubrics for FYP-2 Final Assessment

Criteria	**Description of Criteria**	**Graduate Attributes(s)**	**Performance Scale 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor**							
			Roll #		**Roll #**		**Roll #**		**Roll #**	
C1	Presentation and Viva	GA-07: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C2	Project Demonstration	GA-05 Modern Tool Usage	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C3	Project Impact	GA-08: Computing Professionalism and Society	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐

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Rubrics for FYP-2 Report Assessment

Criteria	Excellent (>=90%)	Good (70-89%)	Fair (50-69%)	Poor (<50%)
C1 Implementation and Testing GA-05 *(5%)*	Both implementation and testing of a system, are precisely performed with accuracy and provide all necessary details for the reader.	Both implementation and testing of a system, are performed with the necessary details for the reader.	Implementation of a system, are performed with the necessary details for the reader. But testing of a system is not properly performed.	Both implementation and testing of a system, are not properly performed with lack of details.
C2 Results GA-04 *(5%)*	Includes all key results of the project. Appropriate graphs, figures and tables are included for effective interpretation and explanation of the results.	Includes most of the key results of the project. Graphs, figures and tables are included for effective interpretation and explanation of the results.	Includes few key results of the project. Graphs, figures and tables are included with limited interpretation and explanation of the results.	Key results of the project are missing. Graphs, figures and tables are not included.
C3 Conclusion GA-04 *(5%)*	All important aspects of the project are well-summarized with the sense of closure and demonstrates the major outcome(s) of the project.	Most of the important aspects of the project are well-summarized with the sense of closure and demonstrates the outcome(s) of the project.	Few aspects of the project are summarized with the sense of closure and demonstrates the outcome(s) of the project.	Important aspects of the project are not clearly summarized with.

C4 **Language and Grammar, Formatting Style GA-09 & 07** *(5%)*	Almost no spelling or grammatical mistake with an acceptable similarity index. Formatting style of chapters, table of contents, title page, references and appendices are proper and relevant.	Occasional spellings and grammatical errors that have only minor impact on flow of reading with acceptable similarity index Formatting style of chapters, table of contents, title page, references and appendices are proper.	Occasional spellings and grammatical errors with high but acceptable similarity index Formatting style is proper but figures and tables don't follow standard practice (caption figure number etc.)	Frequent spellings and grammatical errors that impede the reading flow with very high similarity index. The formatting of the chapters may need improvement.

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Rubrics for FYP-2 Report Assessment

Criteria	**Description of Criteria**	**Graduate Attributes(s)**	**Performance Scale** **1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor**							
			Roll #		**Roll #**		**Roll #**		**Roll #**	
C1	Implementation and Testing	GA-05: Modern Tool Usage	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C2	Results	GA-04: Design/ Development of Solutions	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C3	Conclusion	GA-04: Design/ Development of Solutions	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐
C4	Language and Grammar, Formatting Style, Originality	GA-09: Ethics GA-07: Communication	1	☐	1	☐	1	☐	1	☐
			2	☐	2	☐	2	☐	2	☐
			3	☐	3	☐	3	☐	3	☐
			4	☐	4	☐	4	☐	4	☐