Project Title Here

CS162- Final Project Requirement Document



Project Supervisor

Mr. Samyan Qayyum Wahla

Project Members(Group Id Here)

|  |  |
| --- | --- |
| Member 1 Name | Member 1 Registration No. |
| Member 2 Name | Member 2 Registration No. |

Department of Computer Science

University of Engineering and Technology, Lahore

Pakistan

Table of Contents

[Project Description: 3](#_Toc71624246)

[Project Features: 4](#_Toc71624247)

[Technology Stack: 5](#_Toc71624248)

[Project Actors: 6](#_Toc71624249)

[Use Cases: 7](#_Toc71624250)

[Use Case 1(Write the name of the use case): 7](#_Toc71624251)

[User Interface Details 8](#_Toc71624252)

[Classes: 9](#_Toc71624253)

[Object Oriented Features: 10](#_Toc71624254)

[Composition: 10](#_Toc71624255)

[Inheritance: 10](#_Toc71624256)

[Multiple Inheritance: 10](#_Toc71624257)

[Multi-Level Inheritance: 10](#_Toc71624258)

[Polymorphism: 10](#_Toc71624259)

[Collections: 11](#_Toc71624260)

[Exceptions: 12](#_Toc71624261)

[Data Storage: 13](#_Toc71624262)

[Email Sending: 14](#_Toc71624263)

[Project Plan 15](#_Toc71624264)

# Project Description:

This section contains the comprehensive description of the project(minimum 800 words). The description should be written in your own words and should not be plagiarized from any source.

# Project Features:

In this section, write down the project features clearly. These are the features that will be available to the customer of your project directly.

# Technology Stack:

|  |  |
| --- | --- |
| Language(C#/Java) |  |
| Platform(Web/Desktop) |  |
| Frontend Technology(Simple HTML/Bootstrap/any other library) |  |
| IDEs | List the IDEs here that you will use for development |

# Project Actors:

In this sections, write the name of actors and brief description, who will be using the system.

# Use Cases:

All the use cases should be written in the following format. The name of use should be start with a word e.g. Add Student. It should not be as Student/ Student Add. Add Student is separate use case and Edit Student is separate use case:

## Use Case 1(Write the name of the use case):

|  |  |
| --- | --- |
| Use Case ID | U01 |
| Name |  |
| Actor |  |
| Description | Brief description of the use case. With at least 50 words. |
| Layout in pencil tool |  |
| Validators | Add here the name of validators that will be applied on this page |

# User Interface Details

In this section, fill the table for summary that which use case will have the required component. Inside each box, write the counts for each component. If component is not used, write zero.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Id | TextBox | DropDown | Password Box | Table | Date Field | Buttons | AutoComplete | Radio Button | CheckBox | Menu | Text Area | ProgressBar |
| U01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| U02 |  |  |  |  |  |  |  |  |  |  |  |  |

# Classes:

In this section, we do not require detailed design diagram. But identify the tentative classes with the requirement that you should have at least 10 domain classes and 5 software classes, 3 abstract classes, 2 singelton classes. Fill the following table for details. Note that class name should follow naming conventions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Class Name** | **Software/ Domain** | **Is Abstract (Yes/No)** | **Is Singleton (Yes/No)** | **Is the class will has parametrized constructor(Yes/No)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# Object Oriented Features:

## Composition:

In this section, Identify the at least three solid examples where composition can be perform. Add UML diagram of each example.

## Inheritance:

At least 2 examples where inheritance will take place with UML diagrams.

## Multiple Inheritance:

Two example with UML diagrams of multiple inheritance.

## Multi-Level Inheritance:

Two examples with UML diagrams of multi-level inheritance.

## Polymorphism:

At least 3 examples with UML diagram for polymorphism.

# Collections:

In this section, describe how and where you will use the following collections and why you are forced to use these collections.

ArrayList, LinkedList, Queue, Stack, HashSet and TreeSet

# Exceptions:

In this sections, identify at high level which type of exceptions you can face in your code and what are the solutions. Add more rows in the table as per requirements.

|  |  |  |
| --- | --- | --- |
| Type of Exception | Why this exception will occur | How you will handle the exception |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Data Storage:

In this sections, describe the five files with their format from where you will read or store data. In case of database table, write down the names of columns for tables. At least 5 files/ tables are required.

# Email Sending:

In this section, describe the points where you will be required to send the email from the code. Additionally, write down the sample subject and email content.

# Project Plan

This section should include the implementation plan and work division among the members. All the estimated dates should be before June 15, 2021

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case Id** | **Use Case Name** | **Member Name** | **Estimated Completion Date** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |