A PROJECT REPORT ON

BE PROJECT TITLE

SUBMITTED TOWARDS THE
PARTIAL FULFILMENT OF THE REQUIREMENTS OF

BACHELOR OF ENGINEERING (Computer Engineering)

BY

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CERTIFICATE

This is to certify that the Project Titled

BE PROJECT TITLE

Submitted by

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is a bonafide work carried out by Students under the supervision of Prof. Guide Name and it is submitted towards the partial fulfilment of the requirement of Bachelor of Engineering (Computer Engineering) Project during academic year 2020-21.

Prof. Guide Name   Prof. Dr. S. S. Sane
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Abstract

Please Write here One Page Abstract. It should mainly include introduction, motivation,outcome and innovation if any.

Acknowledgments

please enter text here.

Student Name1
Student Name2
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Student Name4
(B.E. Computer Engg.)

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CHAPTER 1

INTRODUCTION

1.1 PROJECT IDEA

- Project Idea

1.2 MOTIVATION OF THE PROJECT

- Motivation of the Project

1.3 LITERATURE SURVEY

- Review of the papers, Description , Mathematical Terms

CHAPTER 2

PROBLEM DEFINITION AND SCOPE

2.1 PROBLEM STATEMENT

Description of Problem

2.1.1 Goals and objectives

Goal and Objectives:

- Overall goals and objectives of software, input and output description with necessary syntax, format etc are described

2.1.2 Statement of scope

- A description of the software with Size of input, bounds on input, input validation, input dependency, i/o state diagram, Major inputs, and outputs are described without regard to implementation detail.

- The scope identifies what the product is and is not, what it will and won?t do, what it will and wont contain.

2.2 MAJOR CONSTRAINTS

- Any constraints that will impact the manner in which the software is to be specified, designed, implemented or tested are noted here.

2.3 METHODOLOGIES OF PROBLEM SOLVING AND EFFICIENCY ISSUES

- The single problem can be solved by different solutions. This considers the performance parameters for each approach. Thus considers the efficiency issues.

2.4 SCENARIO IN WHICH MULTI-CORE, EMBEDDED AND DISTRIBUTED COMPUTING USED

Explain the scenario in which multi-core, embedded and distributed computing methodology can be applied.

2.5   OUTCOME

- Outcome of the project

2.6   APPLICATIONS

- Applications of Project

2.7   HARDWARE RESOURCES REQUIRED

Sr. No.	Parameter	Minimum Requirement	Justification
1	CPU Speed	2 GHz	Remark Required
2	RAM	3 GB	Remark Required

Table 2.1: Hardware Requirements

2.8   SOFTWARE RESOURCES REQUIRED

Platform :

1. Operating System:

2. IDE:

3. Programming Language

CHAPTER 3

PROJECT PLAN

3.1 PROJECT ESTIMATES

Use Waterfall model and associated streams derived from assignments 1,2, 3, 4 and 5(Annex A and B) for estimation.

3.1.1 Reconciled Estimates

3.1.1.1 Cost Estimate

3.1.1.2 Time Estimates

3.1.2 Project Resources

Project resources [People, Hardware, Software, Tools and other resources] based on Memory Sharing, IPC, and Concurrency derived using appendices to be referred.

3.2 RISK MANAGEMENT

This section discusses Project risks and the approach to managing them.

3.2.1 Risk Identification

For risks identification, review of scope document, requirements specifications and schedule is done. Answers to questionnaire revealed some risks. Each risk is categorized as per the categories mentioned in [**?**]. Please refer table **??** for all the risks. You can refereed following risk identification questionnaire.

1. Have top software and customer managers formally committed to support the project?

2. Are end-users enthusiastically committed to the project and the system/product to be built?

3. Are requirements fully understood by the software engineering team and its customers?

4. Have customers been involved fully in the definition of requirements?

5. Do end-users have realistic expectations?

6. Does the software engineering team have the right mix of skills?

7. Are project requirements stable?

8. Is the number of people on the project team adequate to do the job?

9. Do all customer/user constituencies agree on the importance of the project and on the requirements for the system/product to be built?

3.2.2 Risk Analysis

The risks for the Project can be analyzed within the constraints of time and quality

ID	Risk Description	Probability	Impact		
			Schedule	Quality	Overall
1	Description 1	Low	Low	High	High
2	Description 2	Low	Low	High	High

Table 3.1: Risk Table

Probability	Value	Description
High	Probability of occurrence is	$> 75\%$
Medium	Probability of occurrence is	$26 - 75\%$
Low	Probability of occurrence is	$< 25\%$

Table 3.2: Risk Probability definitions [**?**]

Impact	Value	Description
Very high	$> 10\%$	Schedule impact or Unacceptable quality
High	$5 - 10\%$	Schedule impact or Some parts of the project have low quality
Medium	$< 5\%$	Schedule impact or Barely noticeable degradation in quality Low Impact on schedule or Quality can be incorporated

Table 3.3: Risk Impact definitions [**?**]

3.2.3 Overview of Risk Mitigation, Monitoring, Management

Following are the details for each risk.

Risk ID	1
Risk Description	Description 1
Category	Development Environment.
Source	Software requirement Specification document.
Probability	Low
Impact	High
Response	Mitigate
Strategy	Strategy
Risk Status	Occurred

Risk ID	2
Risk Description	Description 2
Category	Requirements
Source	Software Design Specification documentation review.
Probability	Low
Impact	High
Response	Mitigate
Strategy	Better testing will resolve this issue.
Risk Status	Identified

3.3 PROJECT SCHEDULE

3.3.1 Project task set

Major Tasks in the Project stages are:

- Task 1:

- Task 2:

- Task 3:

Risk ID	3
Risk Description	Description 3
Category	Technology
Source	This was identified during early development and testing.
Probability	Low
Impact	Very High
Response	Accept
Strategy	Example Running Service Registry behind proxy balancer
Risk Status	Identified

- Task 4:

- Task 5:

3.3.2 Task network

Project tasks and their dependencies are noted in this diagrammatic form.

3.3.3 Timeline Chart

A project timeline chart is presented. This may include a time line for the entire project. Above points should be covered in Project Planner as Annex C and you can mention here Please refer Annex C for the planner

3.4 TEAM ORGANIZATION

The manner in which staff is organized and the mechanisms for reporting are noted.

3.4.1 Team structure

The team structure for the project is identified. Roles are defined.

3.4.2 Management reporting and communication

Mechanisms for progress reporting and inter/intra team communication are identified as per assessment sheet and lab time table.

CHAPTER 4

SOFTWARE REQUIREMENT SPECIFICATION

4.1 INTRODUCTION

4.1.1 Purpose and Scope of Document

The purpose of SRS and what it covers is to be stated

4.1.2 Overview of responsibilities of Developer

What all activities carried out by developer?

4.2 USAGE SCENARIO

This section provides various usage scenarios for the system to be developed.

4.2.1 User profiles

The profiles of all user categories are described here.(Actors and their Description)

4.2.2 Use-cases

All use-cases for the software are presented. Description of all main Use cases using use case template is to be provided.

Sr No.	Use Case	Description	Actors	Assumptions
1	Use Case 1	Description	Actors	Assumption

Table 4.1: Use Cases

4.2.3 Use Case View

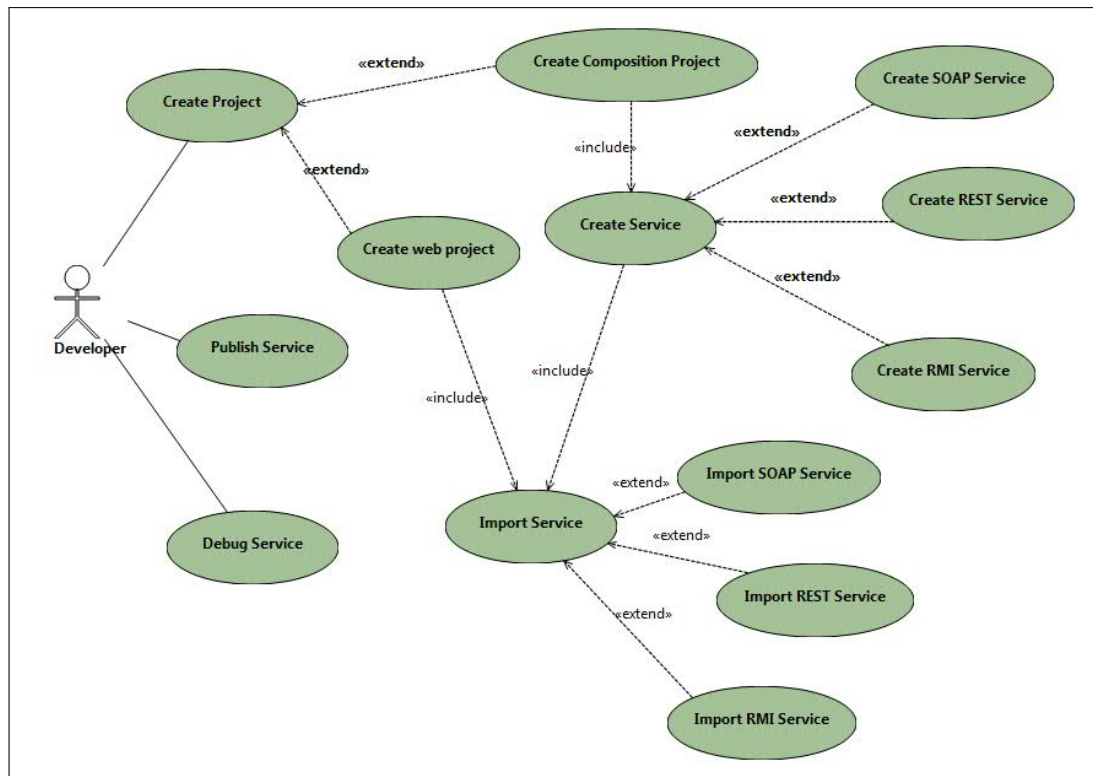Use Case Diagram. Example is given below

Figure 4.1: Use case diagram

4.3 DATA MODEL AND DESCRIPTION

4.3.1 Data Description

Data objects that will be managed/manipulated by the software are described in this section. The database entities or files or data structures required to be described. For data objects details can be given as below

4.3.2 Data objects and Relationships

Data objects and their major attributes and relationships among data objects are described using an ERD- like form.

4.4 FUNCTIONAL MODEL AND DESCRIPTION

A description of each major software function, along with data flow (structured analysis) or class hierarchy (Analysis Class diagram with class description for object oriented system) is presented.

4.4.1   Data Flow Diagram

4.4.1.1   Level 0 Data Flow Diagram

4.4.1.2   Level 1 Data Flow Diagram

4.4.2   Description of functions

A description of each software function is presented. A processing narrative for function n is presented.(Steps)/ Activity Diagrams. For Example Refer **??**
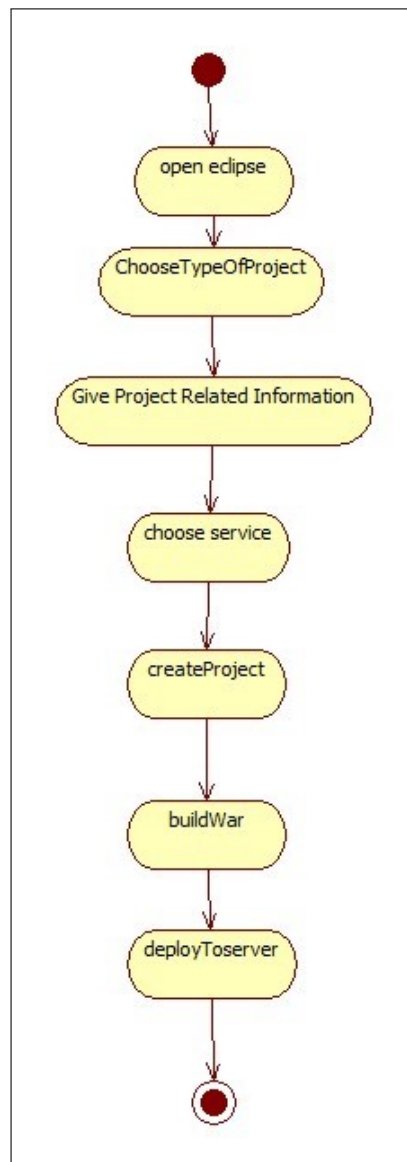

Figure 4.2: Activity diagram

4.4.3   Activity Diagram:

- The Activity diagram represents the steps taken.

4.4.4   Non Functional Requirements:

- Interface Requirements

- Performance Requirements

- Software quality attributes such as availability [related to Reliability], modi-fiability [includes portability, reusability, scalability] , performance, security, testability and usability[includes self adaptability and user adaptability]

4.4.5   State Diagram:

State Transition Diagram

Fig.**??** example shows the state transition diagram of Cloud SDK. The states are represented in ovals and state of system gets changed when certain events occur. The transitions from one state to the other are represented by arrows. The Figure shows important states and events that occur while creating new project.

4.4.6   Design Constraints

Any design constraints that will impact the subsystem are noted.

4.4.7   Software Interface Description

The software interface(s)to the outside world is(are) described. The requirements for interfaces to other devices/systems/networks/human are stated.
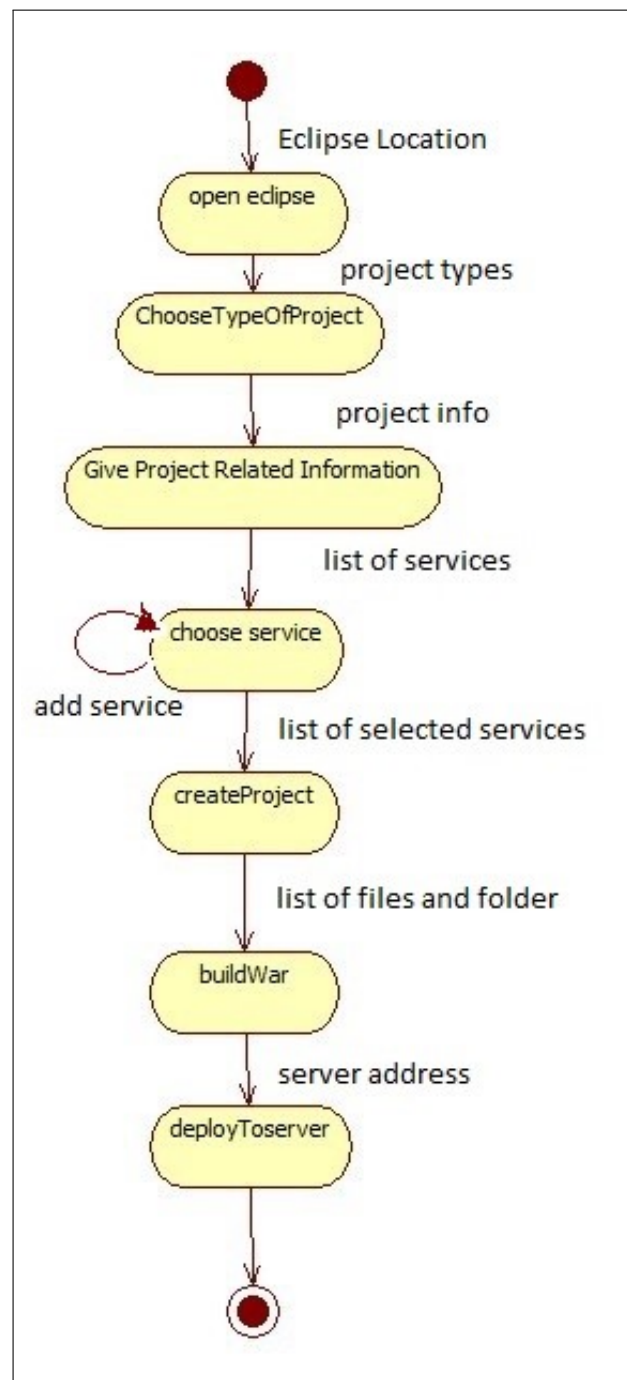
Figure 4.3: State transition diagram

CHAPTER 5

DETAILED DESIGN DOCUMENT

5.1   INTRODUCTION

This document specifies the design that is used to solve the problem of Product.

5.2   ARCHITECTURAL DESIGN

A description of the program architecture is presented. Subsystem design or Block diagram,Package Diagram,Deployment diagram with description is to be presented.
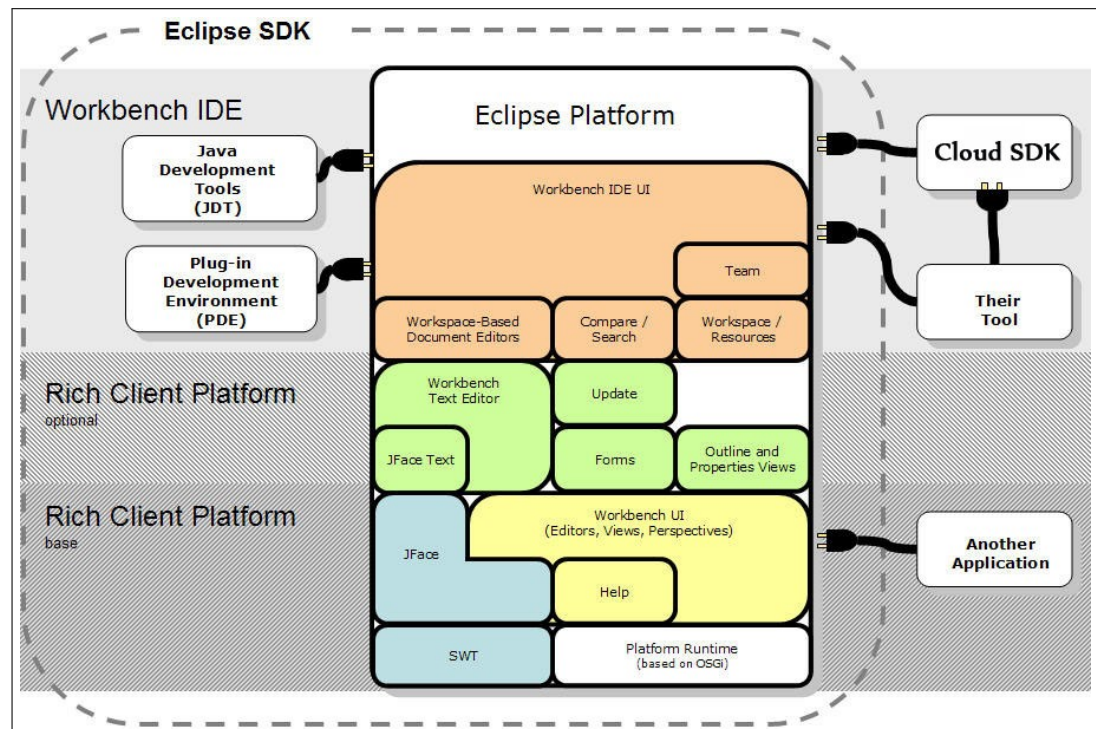

Figure 5.1: Architecture diagram

5.3   DATA DESIGN

A description of all data structures including internal, global, and temporary data structures, database design (tables), file formats.

5.3.1   Internal software data structure

Data structures that are passed among components the software are described.

5.3.2 Global data structure

Data structured that are available to major portions of the architecture are described.

5.3.3 Temporary data structure

Files created for interim use are described.

5.3.4 Database description

Database(s) / Files created/used as part of the application is(are) described.

CHAPTER 6

DATASET AND EXPERIMENTAL SETUP

CHAPTER 7

SUMMARY AND CONCLUSION

Write one page summary and conclusion

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ANNEXURE A

MATHEMATICAL MODEL

ANNEXURE B

PLAGIARISM REPORT

ANNEXURE C

PAPER PUBLISHED (IF ANY)

ANNEXURE D

SPONSORSHIP DETAIL (IF ANY)