<Project Name>
<Team Name>

Table of Contents

1.   Introduction

1.1 Purpose

To develop a fully functional and user interactive online tool which can enhance and help various project management users to manage and compile their work efficiently and productively

1.2 Scope

- ✓ Create different users with varied roles and scopes.
- ✓ Confirm each member by providing activation codes.
- ✓ Manage all project details like tasks, deadlines, team members and resources.
- ✓ Assign different tasks to different members.
- ✓ Provide documentation to the members about the tasks being added
- ✓ Update all members about new proceedings in the project.
- ✓ Bind all the information provided by the team members at one place and show it to all others.
- ✓ Maintain start date and end date of each task
- ✓ Maintain the overall timeline of the project.

1.3 Definitions, Acronyms and Abbreviation

OPM – Online Project Management.

Admin – Administrator.

PM – Project Manager.

HTML – Hyper Text Markup Language.

XHTML – extensible Hypertext Markup Language.

HTTP – Hypertext Transfer Protocol.

JSP – Java Server Pages.

EJB - Enterprise Java Beans.

WAS – Websphere Application Server.

J2EE – Java 2 Enterprise Edition.

DB2 - DB2 Database Management System.

Msg – Messag.

Doc – document.

1.4 References

IEEE SRS Format.

TGMC-2008 Sample Synopsis Format.
Problem Definition Provided By TGMC-2008

1.5 Technologies to be used

Application Architecture   -   J2EE

Database Application   -   DB2

Development tool   -   Rational System
Developer.

Web Deployment Server   -   WAS.

Designing tool   -   Rational

1.6 Overview

This project is a tool to help in managing projects. It is more useful in current market situation where an organization is not close to a door or a city or a nation. In this case sharing document & data related to project from one corner of the world to another by using internet makes our work for easy. But still it is unmanaged to manage this work we are making this tool Online Project Management System (OPM).

2. Overall Description

2.1 Use-Case Model Survey
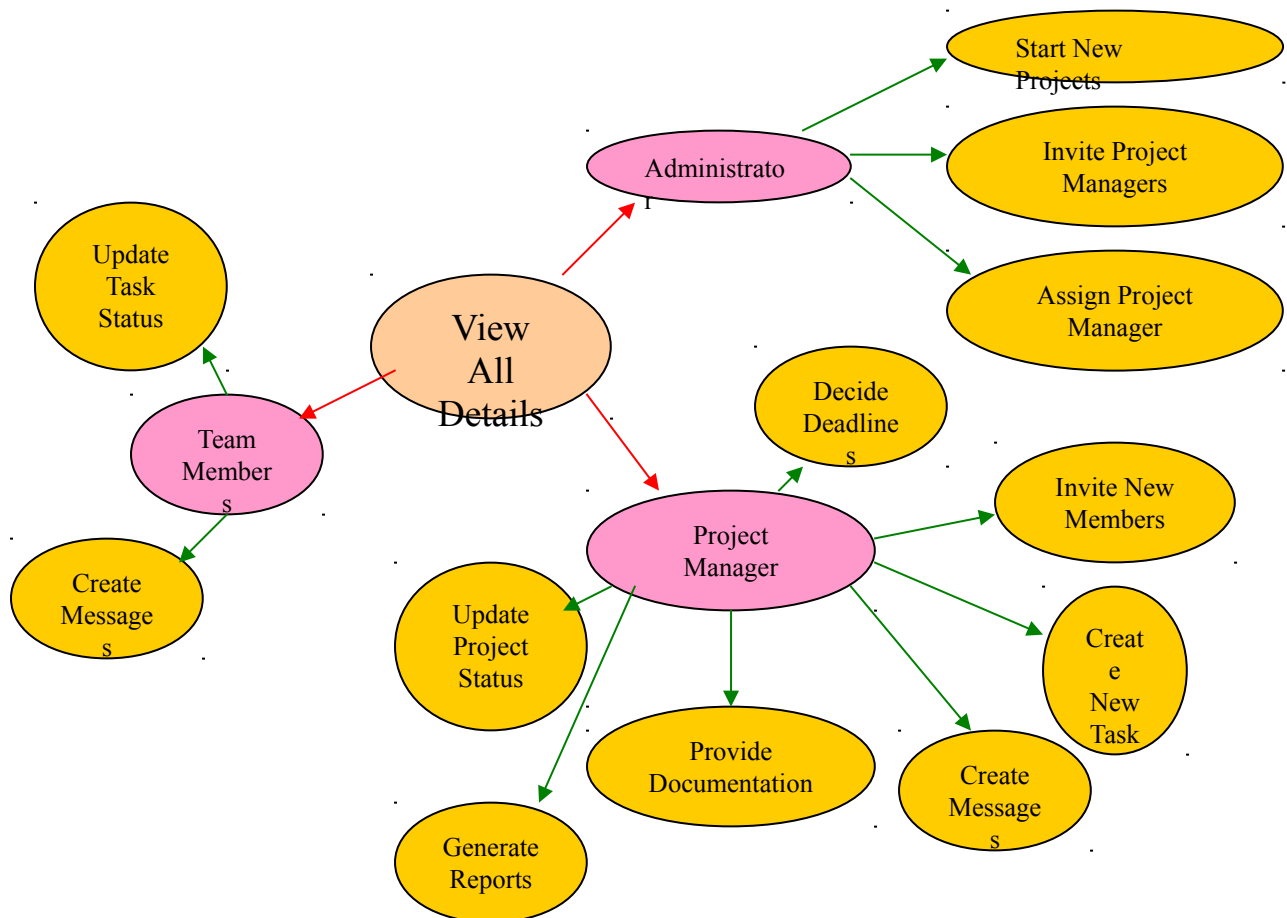
1. Administrator: - is responsible for registering with the tool and creating a profile with the company name.

   a. **Start New Project: -** Admin logs into the OPM and create a profile with his company name and initiates a project.

   b. **Invite Project Manager:-** After starting a project the Admin Invites a Project Manager.

   c. **Assign Project Manager**: - When the invited Project Manager agrees to the Admin he/she is being allotted the project initiated.

2. Project Manager: - is responsible for dealing with all the proceedings of the project.

   a. **Invite New Team Member**: - After the Project is being allotted a Manager, the PM invites various team members to work on the project as well and sends them invites.

   b. **Create New Task: -** The PM create new tasks and assigns them to the desired members.

   c. **Create Message: -** The PM can create Message for the other team members notifying them about project updates etc.

   d. **Provide Documentation: -** The PM gives documentation for the various tasks.

   e. **Generate Report: -** The PM can generate reports for the various task and project.

   f. **Decide Deadline: -** The PM can decide the time needed for the task to be completed.

   g. **Update Project Status: -** The PM can update the completion status of the project on time-to-time basis.

3. Team Members: -

a. **Update Task Status: -** the members working on the particular task can update the task completion status.

b. **Create Message: -** the members can also create messages to make aware other members about the task proceedings.

2.2 Web Architecture Diagram

Client Side   Application Side   DB Server Side
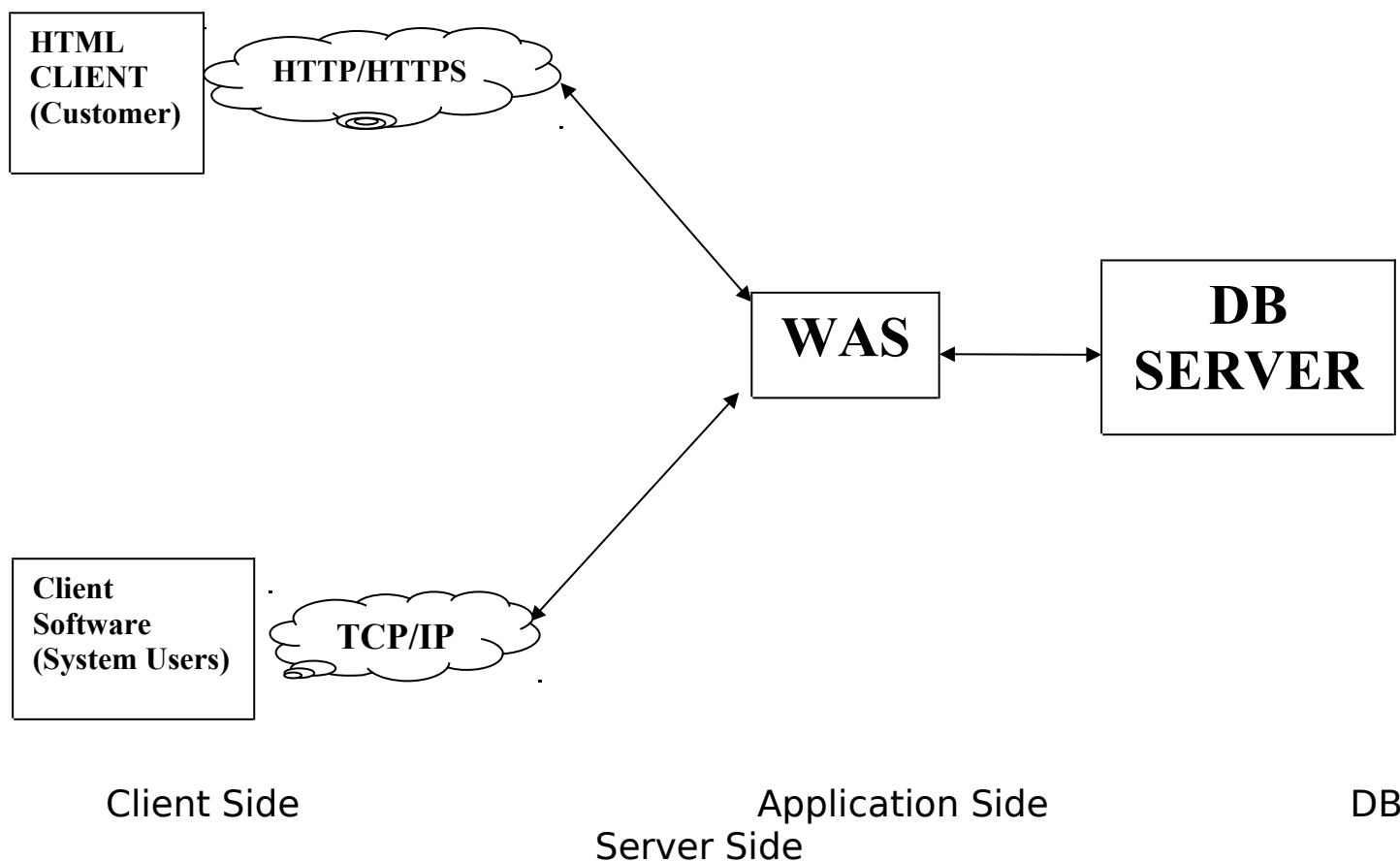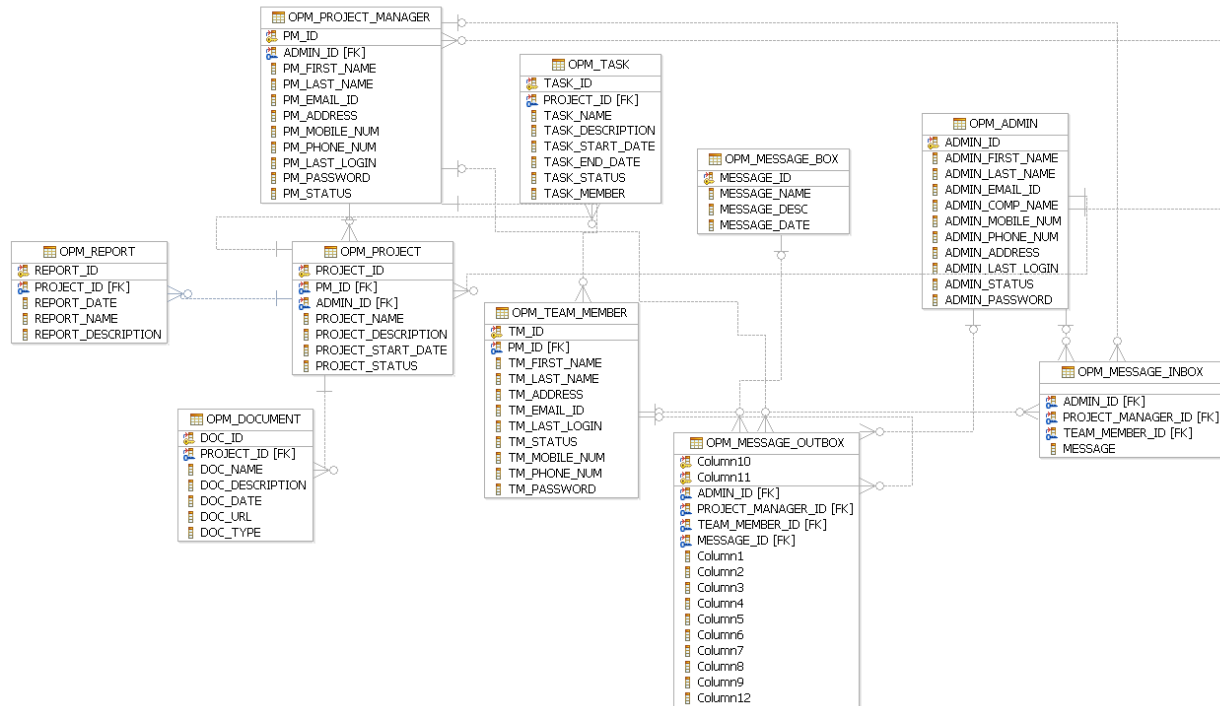
It uses three tier architecture dig where client side application side and DB server are three diff components that improve security in system.
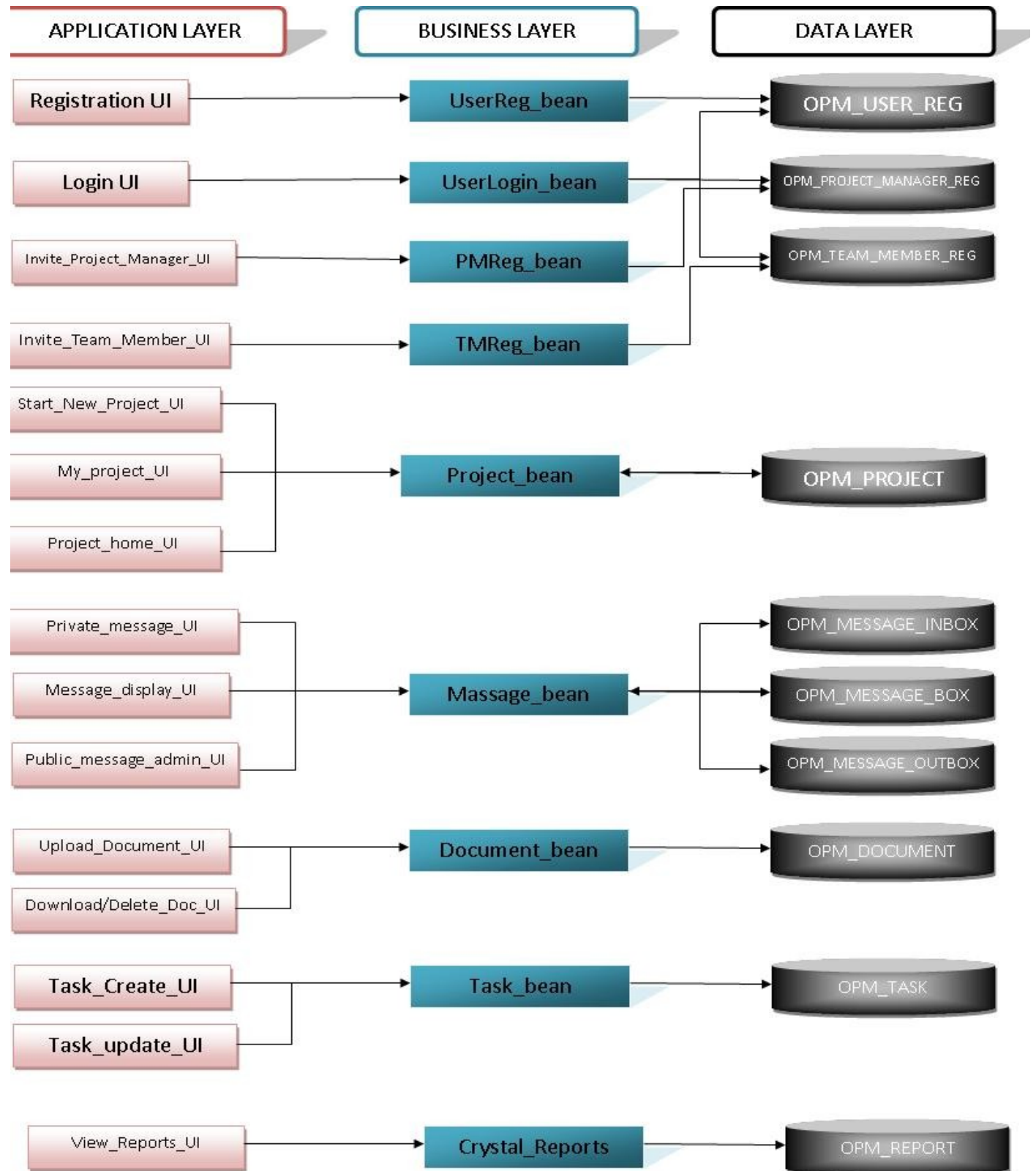
2.3 ER Diagram

2.4 Architecture Diagram

2.5 Data Dictionary

All tables used in project

Name	Schema	Table space
OPM_ADMIN	HB	USERSPACE1
OPM_DOCUMENT	HB	USERSPACE1
OPM_MESSAGE_BOX	HB	USERSPACE1
OPM_MESSAGE_INBOX	HB	USERSPACE1
OPM_MESSAGE_OUTBOX	HB	USERSPACE1
OPM_PROJECT	HB	USERSPACE1
OPM_PROJECT_MANAGER	HB	USERSPACE1
OPM_REPORT	HB	USERSPACE1
OPM_TASK	HB	USERSPACE1
OPM_TEAM_MEMBER	HB	USERSPACE1

3. OPM_ADMIN

Key	Name	Data type	Length	Nullable
🔑	ADMIN_ID	INTEGER	4	No
	ADMIN_FIRST_NAME	VARCHAR	40	No
	ADMIN_LAST_NAME	VARCHAR	40	No
	ADMIN_EMAIL_ID	VARCHAR	40	No
	ADMIN_COMP_NAME	VARCHAR	40	No
	ADMIN_MOBILE_NUM	DOUBLE	8	No
	ADMIN_PHONE_NUM	DOUBLE	8	No
	ADMIN_ADDRESS	VARCHAR	225	No
	ADMIN_LAST_LOGIN	VARCHAR	225	No
	ADMIN_STATUS	INTEGER	4	No
	ADMIN_PASSWORD	VARCHAR	225	No

Constraint name	Key Type	Columns
CC1223450537843	Primary	ADMIN_ID

4. OPM _ PROJECT_MANAGER

Constraint name	Key Type	Columns
CC1223450896421	Primary	PM_ID
CC1229249555765	Foreign	ADMIN_ID ON HB.OPM_ADMIN

Key	Name	Data type	Length	Nullable
	ADMIN_ID	INTEGER	4	No
🔑	PM_ID	INTEGER	4	No
	PM_FIRST_NAME	VARCHAR	40	No
	PM_LAST_NAME	VARCHAR	40	No
	PM_EMAIL_ID	VARCHAR	40	No
	PM_ADDRESS	VARCHAR	225	No
	PM_MOBILE_NUM	DOUBLE	8	No
	PM_PHONE_NUM	DOUBLE	8	No
	PM_LAST_LOGIN	VARCHAR	225	No
	PM_PASSWORD	VARCHAR	40	No
	PM_STATUS	INTEGER	4	No

1. OPM_TEAM_MEMBER

Key	Name	Data type	Length	Nullable
	PM_ID	INTEGER	4	No
🔑	TM_ID	INTEGER	4	No
	TM_FIRST_NAME	VARCHAR	40	No
	TM_LAST_NAME	VARCHAR	40	No
	TM_ADDRESS	VARCHAR	225	No
	TM_EMAIL_ID	VARCHAR	50	No
	TM_LAST_LOGIN	VARCHAR	225	No
	TM_STATUS	INTEGER	4	No
	TM_MOBILE_NUM	BIGINT	8	No
	TM_PHONE_NUM	BIGINT	8	No
	TM_PASSWORD	VARCHAR	40	No

Constraint name	Key Type	Columns
CC1223451529687	Primary	TM_ID
CC1229249673046	Foreign	PM_ID ON HB.OPM_PROJECT_MANAGER

2. OPM_PROJECT

Key	Name	Data type	Length	Nullable
	PM_ID	INTEGER	4	No
	ADMIN_ID	INTEGER	4	No
🔑	PROJECT_ID	INTEGER	4	No
	PROJECT_NAME	VARCHAR	40	No
	PROJECT_DESCRIPTION	"LONG VARCHA...	32700	No
	PROJECT_START_DATE	DATE	4	No
	PROJECT_STATUS	VARCHAR	30	No

Constraint name	Key Type	Columns
CC1223451299968	Primary	PROJECT_ID
CC1229249476437	Foreign	ADMIN_ID ON HB.OPM_ADMIN
CC1229249523218	Foreign	PM_ID ON HB.OPM_PROJECT_MANAGER

3. OPM_TASK

Key	Name	Data type	Length	Nullable
	PROJECT_ID	INTEGER	4	No
🔑*	TASK_ID	INTEGER	4	No
	TASK_NAME	VARCHAR	40	No
	TASK_DESCRIPTION	VARCHAR	225	No
	TASK_START_DATE	DATE	4	No
	TASK_END_DATE	DATE	4	No
	TASK_STATUS	VARCHAR	30	No
	TASK_MEMBER	VARCHAR	30	No

Constraint name	Key Type	Columns
CC1223452393531	Primary	TASK_ID
CC1228370470343	Foreign	PROJECT_ID ON HB.OPM_PROJECT

4. OPM_DOCUMENTS

Key	Name	Data type	Length	Nullable
	PROJECT_ID	INTEGER	4	No
🔑*	DOC_ID	BIGINT	8	No
	DOC_NAME	VARCHAR	40	No
	DOC_DESCRIPTION	VARCHAR	225	No
	DOC_DATE	VARCHAR	225	No
	DOC_URL	VARCHAR	225	No
	DOC_TYPE	VARCHAR	10	No

Constraint name	Key Type	Columns
CC1223454284468	Primary	DOC_ID
CC1229249128421	Foreign	PROJECT_ID ON HB.OPM_PROJECT

5. OPM_MESSAGE_BOX

Key	Name	Data type	Length	Nullable
🔑*	MESSAGE_ID	INTEGER	4	No
	MESSAGE_NAME	VARCHAR	100	No
	MESSAGE_DESC	VARCHAR	2000	No
	MESSAGE_DATE	DATE	4	No

Constraint name	Key Type	Columns
CC1224729429890	Primary	MESSAGE_ID

6. OPM_MESSAGE_INBOX

Key	Name	Data type	Length	Nullable
	ADMIN_ID	INTEGER	4	Yes
	PROJECT_MANAGER_ID	INTEGER	4	Yes
	TEAM_MEMBER_ID	INTEGER	4	Yes
	MESSAGE	VARCHAR	1000	Yes

Constraint name	Key T...	Columns
CC1229249200781	Foreign	ADMIN_ID ON HB.OPM_ADMIN
CC1229249208765	Foreign	PROJECT_MANAGER_ID ON HB.OPM_PROJECT_MANAGER
CC1229249240484	Foreign	TEAM_MEMBER_ID ON HB.OPM_TEAM_MEMBER

7. OPM_MESSAGE_OUTBOX

Key	Name	Data type	Length	Nullable
	ADMIN_ID	INTEGER	4	Yes
	PROJECT_MANAGER_ID	INTEGER	4	Yes
	TEAM_MEMBER_ID	INTEGER	4	Yes
	MESSAGE_ID	INTEGER	4	Yes

Constraint name	Key Type	Columns	Use during optimization
CC1229249362296	Foreign	ADMIN_ID ON...	Yes
CC1229249379500	Foreign	PROJECT_MA...	Yes
CC1229249401750	Foreign	MESSAGE_ID ...	Yes
CC1229249415125	Foreign	TEAM_MEMB...	Yes

8. OPM_REPORTS

Key	Name	Data type	Length	Nullable
	PROJECT_ID	INTEGER	4	No
🔑	REPORT_ID	INTEGER	4	No
	REPORT_DATE	VARCHAR	225	No
	REPORT_NAME	VARCHAR	40	No
	REPORT_DESCRIPTION	VARCHAR	225	No

Constraint name	Key Type	Columns
CC1223454392296	Primary	REPORT_ID
CC1229251419937	Foreign	PROJECT_ID ON HB.OPM_PROJECT

4.1 Assumptions and Dependencies

✓ The Project Manager from same company is not being

assigned to two projects.

- ✓ Administrator can also be a project manager for a project.

5.   Specific Requirements

5.1 Use-Case Reports

1. **Administrator**- is responsible for registering the company and initiating a project, sending invitation mails to the project manager.

    ✓ **Start New Project**- the admin starts the project which needs to be managed and supervised by the project manager. The Admin provides with the relevant information to the system and initiates a new project.
    ✓ **Invite Project Manager**- the Admin sends an invitation email to the desired project manager who will be responsible for managing the project so created.

    ✓ **Assign Project Manager**- the Admin assigns the project manager a particular project on which he/she needs to work.

Name of Use Case - Start New Project.

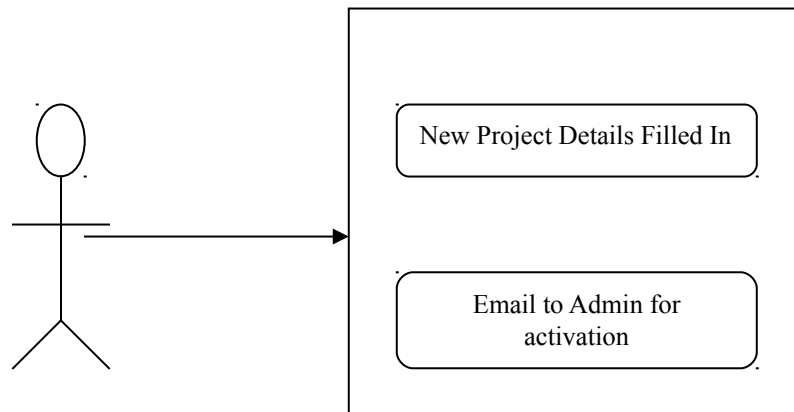**Description –** a new project will be created for the company.

Pre Condition –The Admin should be logged in the system.
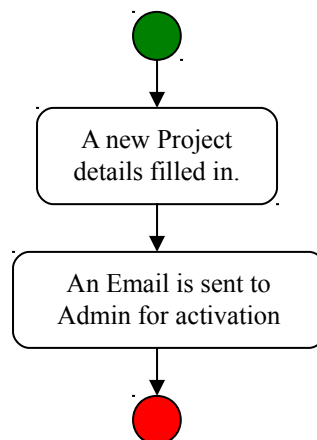
Normal Flow of Events –

    ✓ A form will open, necessary information will be entered

    ✓ A query will be fired to the database.

    ✓ An invitation email will be sent to the desired project manager

    ✓ Relevant output will be given to the user.

USE CASE DIAGRAM

Work Flow Diagram

Name of Use Case – Invite Project Manager.

Description – an invitation email will be sent to project manager for confirmation.

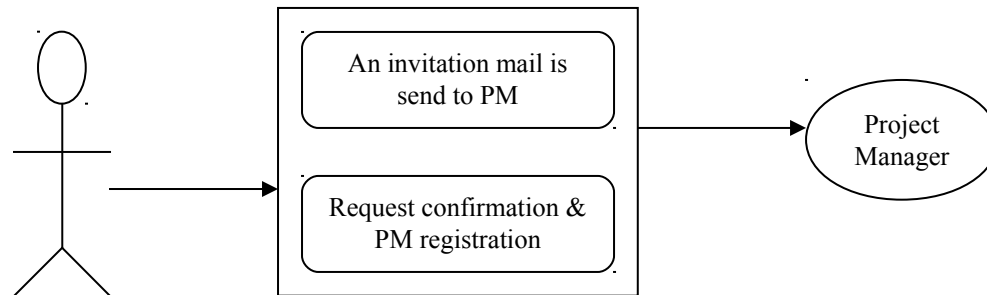**Pre Condition** The Admin should be logged in the system.

Normal Flow of Events –

     ✓ An invitation email will be sent to Project Manager

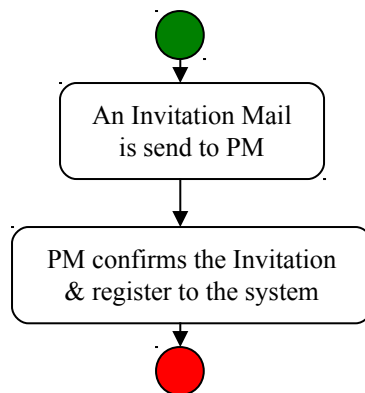   ✓ Project Manager will confirm the request.

✓ Project information will be completed and status will be updated to ready.

USE CASE DIAGRAM

WORK FLOW DIAGRAM

2. Project Manager – is responsible for managing the overall project, it's tasks, messages, reports, related deadlines and documents

✓ **Invite New Member** – the PM is authorized to invite new members for the project and he/she do so by sending them invitation.

✓ **Create New Task** – The PM is responsible for creating a new task and assign members to it

✓ **Create Messages** – PM can add messages to the project and these messages will be displayed to all the users.

✓ **Provide Documentation** - The PM is responsible for providing documentation for the various tasks involved.

✓ **Generate Reports** – The PM can generate various types of reports whenever he feels a requirement.

✓ **Update Project Status** – The PM can update the project completion status by analyzing the various task completion statuses.

✓ **Decide Deadlines** – The PM is responsible for setting project and task deadlines i.e. the start date and the end date.

Name of Use Case – Invite Team Member.

Description – an invitation email will be sent to team member for confirmation.
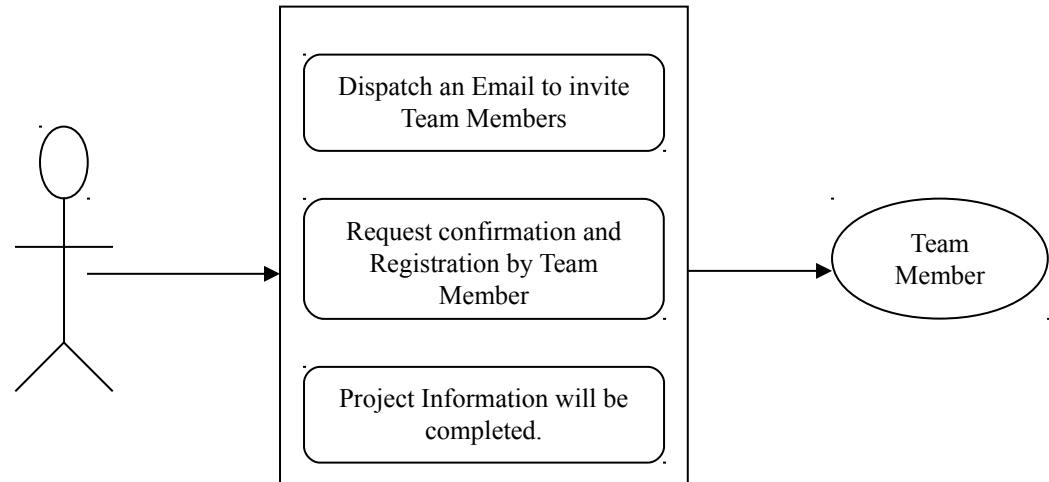
Pre Condition –

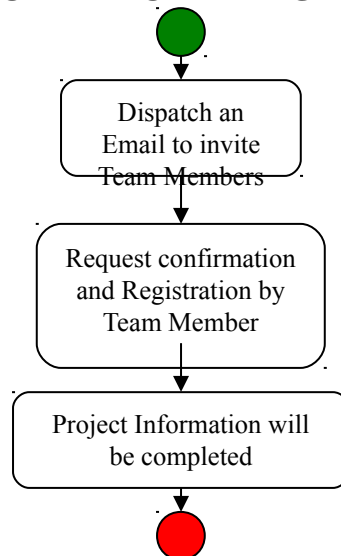✓ The Project Manager should be logged in the system.

Normal Flow of Events –

✓ An invitation email will be sent to Team Member.

✓ Team Member will confirm the request.

✓ Project information will be completed and status will be updated to ready.

USE CASE DIAGRAM

WORK FLOW DIAGRAM

Name of Use Case – Create New Task

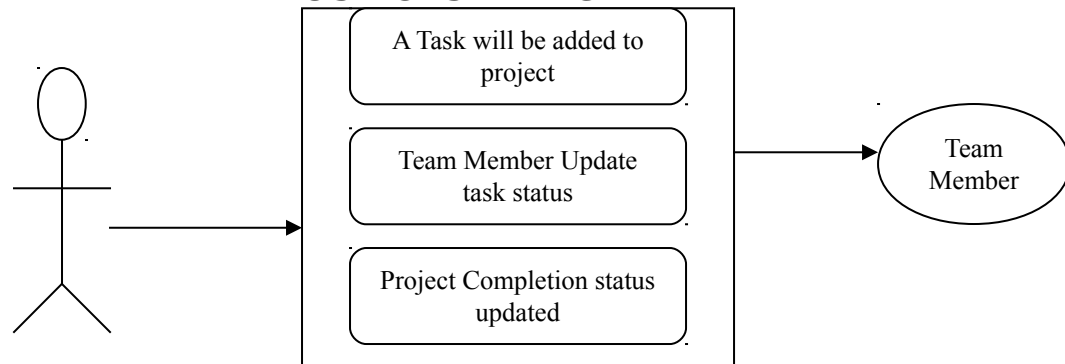**Description –** PM starts new task and assign team members to it.

Pre Condition –

✓ The PM should be logged in the system.

Normal Flow of Events –

✓ A task will be added to the project and timelines will be displayed.

✓ Team Members will update the task status.

✓ The Project completion status will also be updated.

USE CASE DIAGRAM

A Task will be added to project

Team Member Update task status

Project Completion status updated

Team Member

WORK FLOW DIAGRAM

Task Is Added to the Project

Team Member updates task status

Project Completion status updated
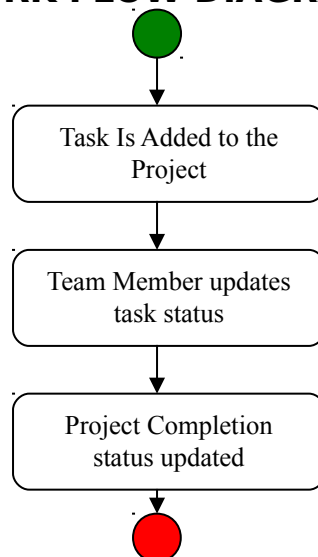
Name of Use Case – Create New Message.

Description – a new message will be created which will be displayed to all the users.

Pre Condition –

✓ The PM should be logged in the system.

Normal Flow of Events –

✓ A Msg will be created by filling in details of the msg.
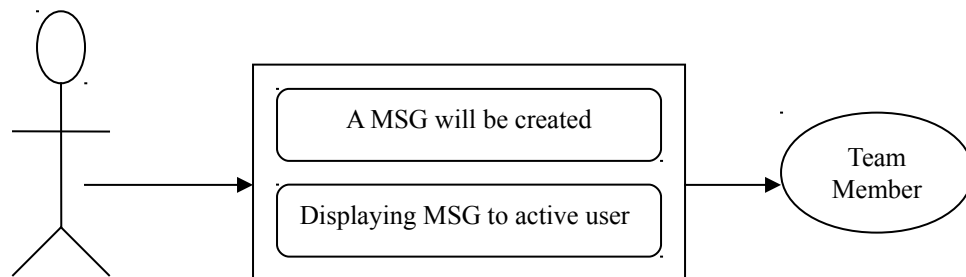
✓ This msg will be displayed to all the active users of the project.

USE CASE DIAGRAM

WORK FLOW DIAGRAM
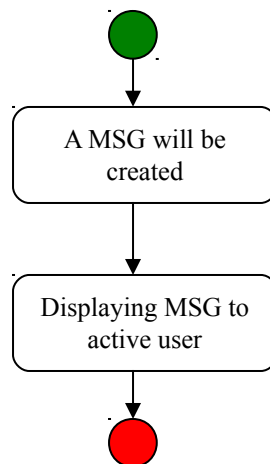
Name of Use Case – Provide documentation.

Description – a task or project related document will be given to

the team members for their guidance

Pre Condition –

✓ The PM should be logged in the system.

Normal Flow of Events –

✓ A document will be uploaded to the system.

✓ Other team members can read the doc.

USE CASE DIAGRAM
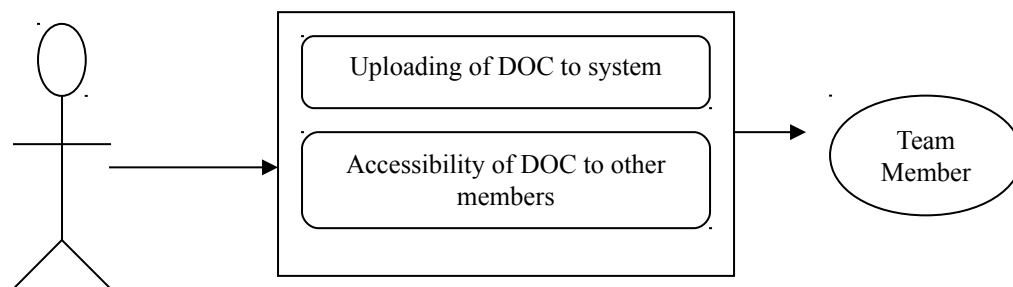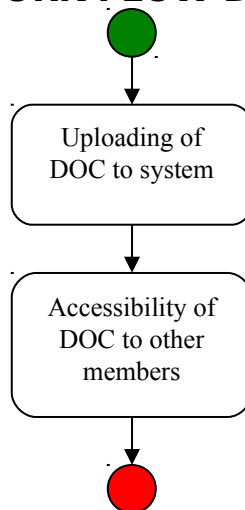
WORK FLOW DIAGRAM

Name of Use Case – Generate Reports.

Description – a report can be generated by the PM at any instance of time to view the project completion status

Pre Condition –

  ✓ The PM should be logged in the system.

Normal Flow of Events –

  ✓ A project report will be generated

  ✓ A database entry would be made.
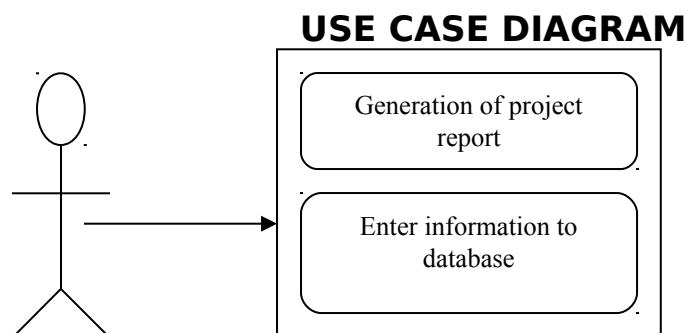
USE CASE DIAGRAM

WORK FLOW DIAGRAM
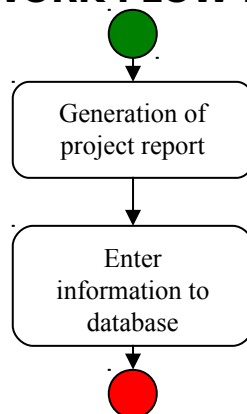
Name of Use Case – Update Project Status.

Description – a PM can update the project status by looking at the task completion status.

Pre Condition –

✓ The PM should be logged in the system.

Normal Flow of Events –

✓ Analyze project tasks.

✓ Update project completion status.
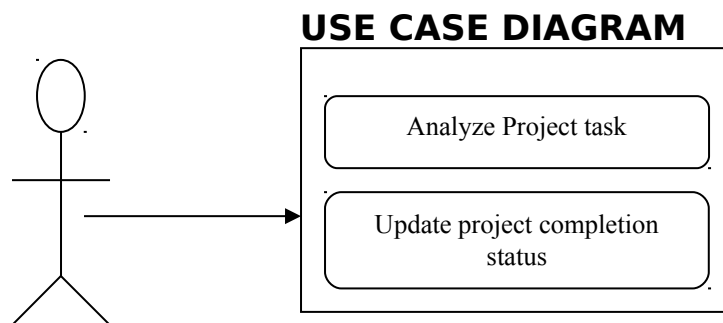
USE CASE DIAGRAM

WORK FLOW DIAGRAM

Name of Use Case – decide deadlines.

Description – a time line i.e. a start date and an end date would

be set for every task.

Pre Condition –

    ✓ The PM should be logged in the system.

Normal Flow of Events –

    ✓ Set a start date and an end date.

USE CASE DIAGRAM
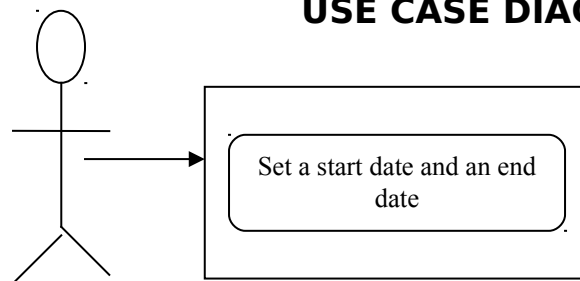
WORK FLOW DIAGRAM
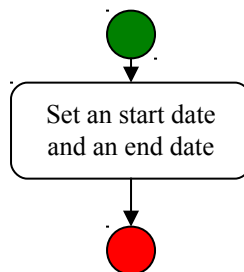
3. Team Member – is responsible for updating task status and completing the task so that the project may not get delayed.

    ✓ **Update Task Status** – the team member is responsible for updating the completion status of

the project.

✓ **Create/ update MSG** – the team member can create and update the msgs.

Name of Use Case – update task status.

Description – completion status of the task could be updated.

Pre Condition –

✓ The Team Member should be logged in the system.

Normal Flow of Events –

✓ Sets the percentage completion status.

USE CASE DIAGRAM

Set the percentage completion status

WORK FLOW DIAGRAM

Set the percentage completion status
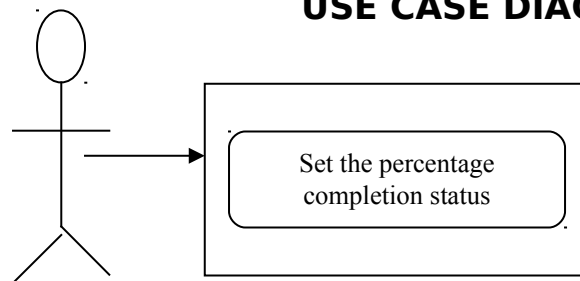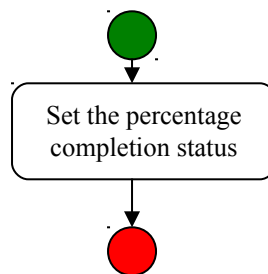
Name of Use Case – create/ update MSG.

Description – a new MSG will be created or an already existing MSG will be updated.

Pre Condition –

✓ The Team Member should be logged in the system.

Normal Flow of Events –

✓ Create a new msg

✓ Edit an already existing msg.

USE CASE DIAGRAM

WORK FLOW DIAGRAM

5.2 Class Diagram

«Java Package»
⊞ opm.resources.bean

⊕⊕⊕⊕ ⊕

«Java Class»
ⓖ **PMReg_bean**

- ▫ con : Connection
- ▫ ps : PreparedStatement
- ▫ ps2 : PreparedStatement
- ▫ rs : ResultSet
- ▫ pm_id : int
- ▫ pm_password : String
- ▫ n_password : String
- ▫ admin_id : int
- ▫ pm_email_id : String
- ▫ pm_first_name : String
- ▫ pm_last_name : String
- ▫ pm_address : String
- ▫ pm_mob_num : double
- ▫ pm_ph_num : double
- ▫ pm_status : int
- ▫ pm_last_login : String
- ● PMReg_bean ( )
- ● CheckPM_User ( )
- ● RegisterPM_User ( )
- ● generateId ( )
- ● getPM ( )
- ● getPM_proj ( )
- ● getPM ( )
- ● updatePM ( )
- ● updatePM ( )
- ● setPm_address ( )
- ● setPm_id ( )
- ● setPm_email_id ( )
- ● setPm_first_name ( )
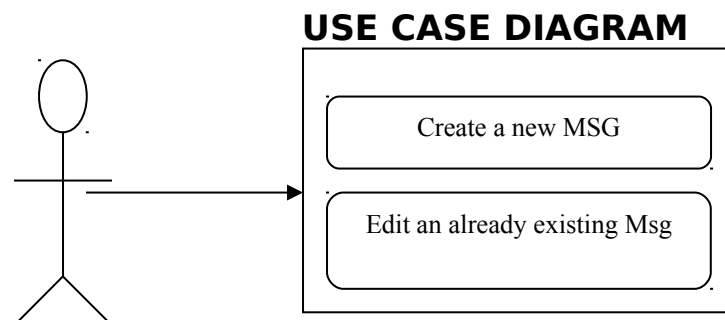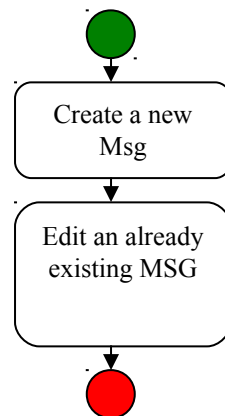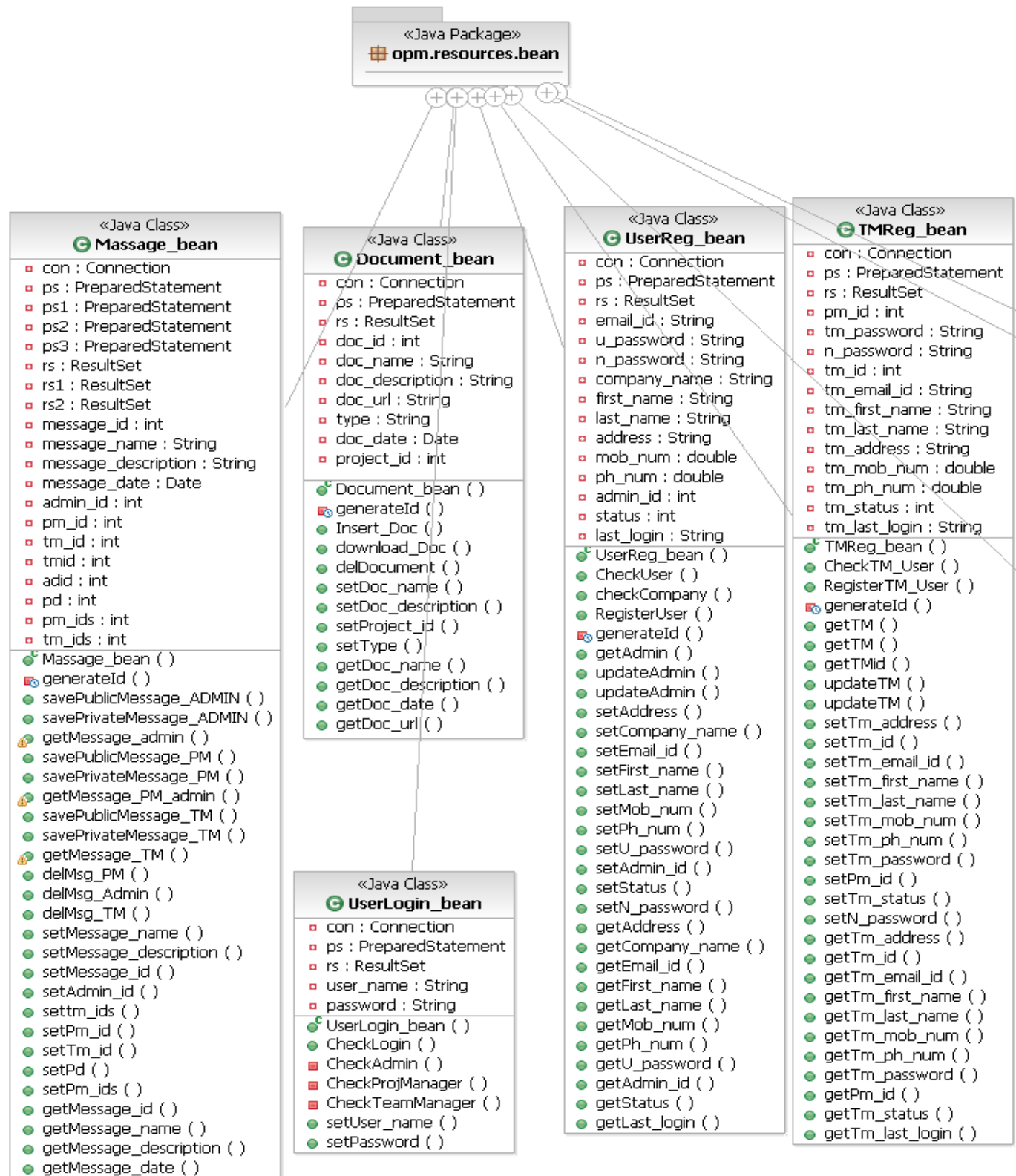- ● setPm_last_name ( )
- ● setPm_mob_num ( )
- ● setPm_ph_num ( )
- ● setPm_password ( )
- ● setAdmin_id ( )
- ● setPm_status ( )
- ● setN_password ( )
- ● getPm_address ( )
- ● getPm_id ( )
- ● getPm_email_id ( )
- ● getPm_first_name ( )
- ● getPm_last_name ( )
- ● getPm_mob_num ( )
- ● getPm_ph_num ( )
- ● getPm_password ( )
- ● getAdmin_id ( )
- ● getPm_status ( )
- ● getPm_last_login ( )

«Java Class»
ⓖ **Task_bean**

- ▫ con : Connection
- ▫ ps : PreparedStatement
- ▫ rs : ResultSet
- ▫ task_id : int
- ▫ task_name : String
- ▫ task_description : String
- ▫ task_status : String
- ▫ task_members : String
- ▫ task_start_date : Date
- ▫ task_end_date : Date
- ▫ project_id : int
- ▫ tm_ids : int
- ● Task_bean ( )
- ● generateId ( )
- ● create_Task ( )
- ● gettask_PM ( )
- ● gettask_TM ( )
- ● gettask_members ( )
- ● updateTaskMembers ( )
- ● updateTask_status ( )
- ● delTask ( )
- ● setTask_name ( )
- ● setTask_description ( )
- ● setProject_id ( )
- ● setTask_start_date ( )
- ● setTask_end_date ( )
- ● setTask_status ( )
- ● setTm_ids ( )
- ● getTask_name ( )
- ● getTask_description ( )
- ● getTask_start_date ( )

«Java Class»
ⓖ **Project_bean**

- ▫ con : Connection
- ▫ ps : PreparedStatement
- ▫ rs : ResultSet
- ▫ project_id : int
- ▫ project_name : String
- ▫ project_description : String
- ▫ project_manager : int
- ▫ project_status : String
- ▫ start_date : Date
- ▫ admin_id : int
- ▫ pid : int
- ▫ tid : int
- ▫ pj_id : int
- ▫ tas_id : int
- △ tm_id : int
- △ task_members : String
- ● Project_bean ( )
- ● generateId ( )
- ● startProject ( )
- ● CheckProject ( )
- ● getProject ( )
- ● getProject_des ( )
- ● getProject_pm ( )
- ● updateProject ( )
- ● getProject_tm ( )
- ● getTask_tm ( )
- ● setProject_name ( )
- ● setProject_description ( )
- ● setProject_manager ( )
- ● setProject_id ( )
- ● setStart_date ( )
- ● setAdmin_id ( )
- ● setTm_id ( )
- ● getProject_status ( )
- ● getProject_id ( )
- ● getProject_name ( )
- ● getProject_description ( )
- ● getStart_date ( )

5.3 Supplementary Requirements

✓ Since this a tool which can be used from anywhere and anytime in the world, so the server should be well managed for such kind of requirement.

✓ The users using this and importing the reports from this tool should have supporting software to run them.

✓ To use the application in the best possible way please read the tips displayed while using the tool.