

# PROJECT PLANNING

## 3.1 INTRODUCTION:

Our main objective is to improvise the existing manual system of Academic Schedule by making it more effective and faster within limited budget and time. We also consider about providing a user friendly environment, providing accuracy and ease of access. The report is about project planning which is a part of project management that relates to the use of schedule such as 'Gantt Chart' to plan and subsequently report progress within the project environment. It is defined as a management summary document that describes the essentials of a project in terms of its objectives, justification and how the objectives are to be achieved. The objective of this report is to plan, estimate cost, break the whole project tasks into smaller activities, schedule the project development and analyze different types of risks. We have to complete this project with the budget constraints of around 6 lakhs. And we have the time constraints of approximately 4 months.

This report consists of some sections i.e. the second section is about the Project Organization, the third is about the Risk Analysis, the fourth is about the Hardware & Software Resource Requirement, the fifth is the Work Breakdown, sixth section is about the Schedule Representation, seventh is about the Monitoring & Reporting Mechanism and eighth and the last section is the Conclusion.

## 3.2 PROJECT PLANNING:

As the whole project task will be divided into some activities, our project team will have to be divided into some specific groups. Our project team consists of -

**PROJECT MANAGER:** Leading and managing the project team, recruiting project staffs and consultants, managing co-ordination of the partners and working groups engaged in project team, developing and maintaining a detailed project plan and managing project deliveries in line with the project plan within the specified time constraint, managing project training within the defined budget, monitoring project progress and performance, providing status report to the sponsor; all the tasks are done by the project manager. And our Project Manager is-

1. Tabassum Subah

& Assistant Project Manager is-

1. Tanvir

**ANALYSTS:** To analyze all the requirements of this system and system design and to create the SRS (Software Requirement Specification), project managers recruit some analysts and here they are:

2. Zannatul Ferdous
3. Md Sohag Miah

**DESIGNERS:** For the purpose of designing the system layout, we need some designers and our designers are:

1. Zannatul Ferdous
2. Nur Meharuma Chowdhury
3. Oishe Talukder

**PROGRAMMERS:** Coding and testing of each unit of task will be done by the programmer group and also the maintenance and the security of the whole software will be provided by this group. The personnels' of this group are:

1. Nur Meharuma Chowdhury
2. Zannatul Ferdous
3. Tabassume Subah
4. Oishe Talukder
5. Md. Sohag Miah
6. Tanvir

### 3.3 Risk Analysis

Risk is something that a developer would prefer not to have happened. It threatens the project, the software or the organization. The possible risks of our project are the following:

**PEOPLE RISKS** - We have 6 members in our team. Hence, the percentage of absence of any team member will be  $(100/6) = 16.666\%$  which is almost 17%. So, the people risk of our project is 17%.

**ORGANIZATIONAL RISKS** - We will not change our management system, so the probability of the organizational risk is 0%.

**REQUIREMENT RISKS** - Our project is designed very carefully so that it meets the changing requirements of the customer.

**ESTIMATION RISKS** - The risk is small because we will try to make a whole system design at first place so that small changes or modifications (as requirements) can be made easily.

**TECHNOLOGICAL RISKS** – Technological risks are basically software and hardware based technological risk.

The risks and their measurement in percentage are tabulated in table (i):

Table (i): Risk Identification and Analysis

	<b>Name of the Risks</b>	<b>Description</b>	<b>Likelihood</b>	<b>Prevention</b>
1.	Technological Risk	It is derived from the software and hardware tools that we will use to develop our system. For example, hardware component may have defects during the time of developing this project. We need basically 2 hardware components (Server PC & Client PC).	<5%	Providing professional software
2.	Requirement Risk	These risks are derived from changes to the customer requirements or if the developers cannot understand the customer requirement. The changes that are made in the requirement may cause a major design rework. Our project is designed very carefully so that it meets the changing requirements of the customer.	5%.	Appointing experienced analyst
3.	People Risk	These are associated with the development team. Key staff can be ill and unavailable at critical times.	17%	If at least two persons have skilled on any specific task, the people risk can be resolved by assigning the task to another person.
4.	Estimation Risk	These kind of risk are derived from the management estimates of the resources required to build the system . In our project The risk is small because we will try to make a whole system design at first place so that small changes or modifications (as requirements) can be made easily.	17%	If experienced analyst is provided, the likelihood of this risk will be reduced.
5.	Organizational risk	These kind of risks are derived from human resources.	0%	We will not change our management system

### ***RISK REDUCTION STRATEGIES:***

For the betterment of a project, the developers should take some steps so that the risks can be avoided or reduced if they occur. The risks of our project will be reduced by some strategies described in table(ii) :

Table (ii): Review of estimation and correction

Strategies	description
Replacement of any team member in emergency	If any team member has any emergency like illness or any other important tasks for which he/she can't present in his/her tasks, the member will be replaced by a new member(if available).
Replacement of defective tools	If any hardware or software tool acts abnormally, then the defective tool (hardware/software) will be replaced by another tool.
Review of estimation and correction	If there is any problem in the whole system design, then the estimation will be reviewed and appropriate corrections will be made by the project manager.

### **3.4 HARDWARE & SOFTWARE RESOURCE REQUIREMENT**

**Hardware Resource Requirement** – For developing our project, we need some hardware components. The hardware components of our project are:

**Client PC:** In order to develop this project and after the development of this system, a unique link or address of this site will be created before deployment by which a user can search this link by sending request to the server.

**Server PC:** The unique address will be stored in a server. When a user from the client PC requests to a site to the server, then the server will response the request through a protocol like, http://, etc. and the user will get the access to the desired site.

**Software Resource Requirement** – Along with hardware components, we need some software. They are:

**Android Studio:** In order to coding and developing our project, we need Android Studio.

**Browser:** To show the output of coding, a browser (like Google Chrome, Mozilla Firefox, Internet Explorer, etc.) is needed.

**MySQL Server:** To store all the required data, we need software like MySQL server.

### 3.5 WORK BREAKDOWN

This section sets out the breakdown of the project into activities and identifies the milestones and deliverables associated with each activity.

**ACTIVITIES** - The whole project work is divided into some smaller units of task and these units of task are collecting required hardware and software and installing the software, layout design, Data collection and DBMS (Class Routine, Exam Routine, Syllabus, Teachers Information and Financial Dealings), Linking Layout and RDBMS and Testing. These units or activities are listed in table (iii):

Table (iii) :Task division

Task Name	Task Title
T1	Collecting required hardware
T2	Installing software
T3	Layout design
T4	Data collection & DBMS
T5	Linking layout and RDBMS
T6	Testing

**MILESTONE:** The milestones of our project being fixed are installation of software (M1), System layout (M2), required data storage in database and DBMS (M3), completing the demo software (M4) and the last one is completing the whole system software (M5). The milestones are listed in table (iv):

Table (iv): Milestones

Milestone Name	Milestone Title
<b>M1</b>	Installation of software
<b>M2</b>	System layout
<b>M3</b>	Required data storage in database and DBMS
<b>M4</b>	Completing the demo software
<b>M5</b>	Completing the whole system software

**DELIVERABLES** - The deliverables of this project to the customers are the problem definition document (PDD), design document specification(DDS), system requirement specification(SRS), system layout, the demo & system software, and the user manual. These deliverables are listed in table (v):

Table (v):deliverables

Order	Deliverables
<b>1<sup>st</sup></b>	Problem Definition Document (PDD)
<b>2<sup>nd</sup></b>	Design Document Specification (DDS)
<b>3<sup>rd</sup></b>	System Requirement Specification (SRS)
<b>4<sup>th</sup></b>	System Layout
<b>5<sup>th</sup></b>	Demo & System Software
<b>6<sup>th</sup></b>	User Manual

### 3.6 PROJECT SCHEDULE

This section shows the dependencies between activities, the estimated time to reach each milestone and the allocation of people to activities.

Table (vi): Task schedule

Task	Effort(Person)	Duration(Days)	Dependencies
T1	2	2	
T2	2	3	T1(M1)
T3	4	30	T1,T2(M2)
T4	4	30	T1,T2(M3)
T5	4	15	T1,T2,T3,T4
T6	6	30	T1,T2,T3,T4,T5(M4,M5)

From table (vi), we see that the first task T1 will be done by the effort of 2 members within 2 days and it depends no other tasks. The second task T2 will be done by 2 members within 3 days and it depends on task T1, after the completion of this task, we shall reach to the first milestone M1. Similarly, T3 will be done by 4 members within 30 days and it depends on the tasks T1 and T2; after the completion of this task, we will reach to the second milestone M2. T4 will be finished by 4 members within 30 days and it depends on the task T1 and T2. And we will reach to third milestone M3 after the completion of this task. T5 will be completed by 4 members within 15 days and it depends on the tasks T1, T2, T3 and T4 and after finishing this task, we will reach to the fourth milestones M4. The final task T6 will be done by 6 members within 30 days and it depends on T1, T2, T3, T4, and T5. After the completion of this task, we will reach to our final destination, the final milestone M5 which is completion of the whole software system.

**GANTT CHART** – Gantt chart is a chart in which a series of horizontal lines shows the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods. The task dependency and milestone are best represented through a graphical chart which is a bar diagram. The Gantt chart is shown in figure 1

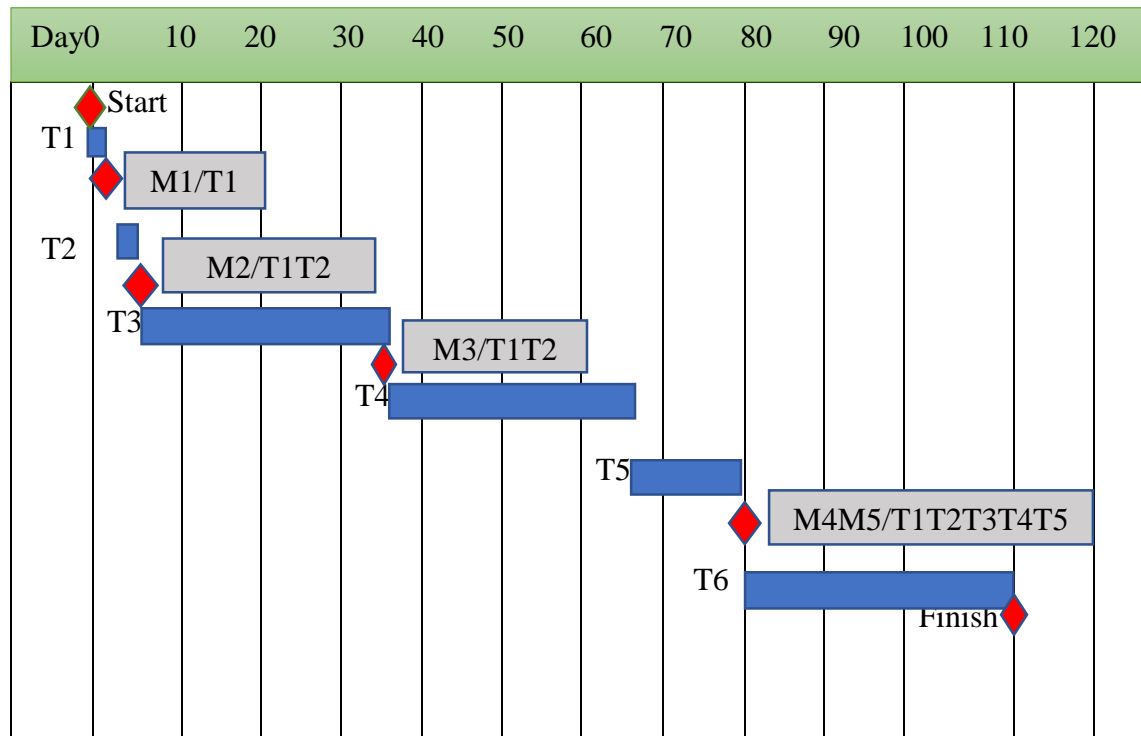


Fig 3.1: Gantt chart

From the chart in fig1, we see that the tasks are represented through deep blue colored horizontal bars, the milestones and task dependencies are represented here through grey colored horizontal bars. Also if a task is depended on another task, then the second task is started from the bottom-right corner of the 1<sup>st</sup> task. And if a milestone is reached after the completion of a task, then a diamond is placed on the top-left corner of that task. Moreover, the tasks are started by placing a diamond on the top-left corner of horizontal bar of the first task and finished by placing a diamond on the bottom-right corner of the horizontal bar of the last task.



### ***Tasks Allocation to Project Members:***

Tasks Allocation to Project Members is done by a chart. Here, each task is represented by the horizontal bar with. Each bar is expanded to its width with respect to the time duration. Here, team member Meharuma and Sohag allocated to tasks T2, T4, T5 & T6. Tanvir and Oishe are allocated to tasks T1, T3, T5 & T6. Subah and Zannatul are allocated to tasks T3, T4 & T6. Tasks Allocation to Project Members is shown in figure 2

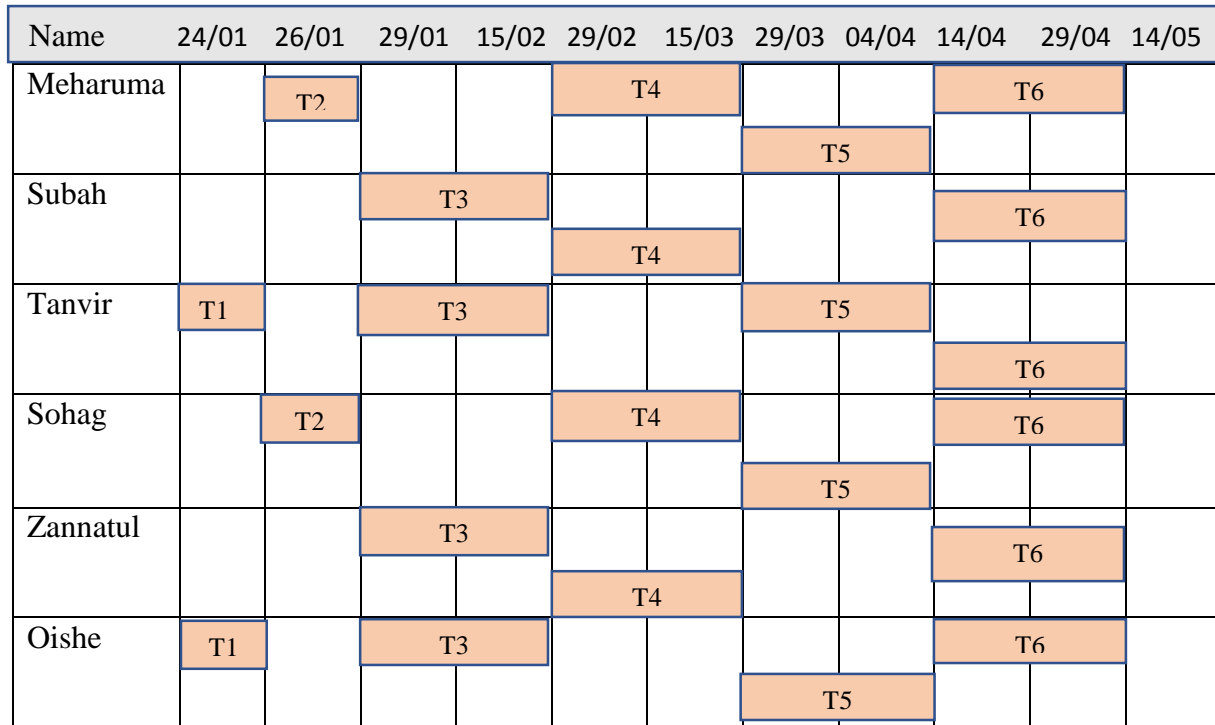


Fig 3.2: - Task allocation chart to the project members

### 3.7 MONITORING AND REPORTING MECHANISMS

The project managers of our team are monitoring all the members for the betterment of our project. They do important works like training, assisting the team members in their allocated task etc. . Our project manager is Tabassume Subah and assistant project manager is Tanvir. After the completion of each unit of tasks, the project manager will call a meeting to meet the other members, to discuss about the completed task and the next task.

Table (vii): Task monitoring

<b>Reports</b>	<b>Due Date</b>
<b>Problem Definition Document</b>	<b>31 January, 2017</b>
<b>Software Requirements Specifications</b>	<b>12 February, 2017</b>
<b>Interaction Diagrams</b>	<b>7 March, 2017</b>
<b>Class Diagram &amp; System Architecture</b>	<b>30 March, 2017</b>
<b>Test Report</b>	<b>20 April, 2017</b>
<b>Final Software Report</b>	<b>15 May, 2017</b>

### 3.8 CONCLUSION

After the completion of this report, client will be able to understand the overall planning of the project in detail. A Project Plan actually records the work to be done, who will do it and the development schedule. We hope that our project will be completed within the estimated time and fulfill customer requirements.

