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Experiment / assignment / tutorial No. 4	
Signature of the Staff In-charge with date	

TITLE: Project Management Plan Document for Mini Project

AIM: To learn and understand the way of developing the software by classical methods of software engg., Planning and monitoring of the project using tools and prepare a document for the same by using the concept of software engineering

Expected OUTCOME of Experiment:

Books/ Journals/ Websites referred:

1. Roger Pressman, Software Engineering: A practitioners Approach, McGraq Hill, 2010 ,6th edition
2. Ian Somerville , Software Engineering , Addison Wesley,2011,9th edition
3 http://en.wikipedia.org/wiki/Software_requirements_specification

Software Project Management Plan

for

Spotify Web Application

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Version	Release Date	Responsible Party	Major Changes
0.1			Initial Document Release for Comment

Table of Contents

Build the table of contents here. Insert it when you finish your document.

1. Introduction

This section of the SPMP provides an overview of the project.

1.1 Project Overview

Include a concise summary of the project objectives, major work activities, major milestones, required resources, and budget. Describe the relationship of this project to other projects, if appropriate. Provide a reference to the official statement of product requirements.

This system will help the admin to update the database of the songs according to the availability of songs at the storage area and will also keep the customer's data up to date.

Users can register themselves by providing their information such as name, email, home address,and contact information,etc. once they get registered they can search for their favourite artists . They can also opt for a guest login.

1.2 Project Deliverables

List the primary deliverables for the customer, the delivery dates, delivery locations, and quantities required satisfying the terms of the project agreement.

- Working application to stream music and podcasts

- Easy to use interface for customers

-

- Providing online assistance to customers by verified practitioners

1.3 Evolution of the SPMP

Describe how this plan will be completed, disseminated, and put under change control. Describe how both scheduled and unscheduled updates will be handled.

A Spotify system serves many purposes, including the safe environment in the app . During the process, the system will prompt the users to verify the details they have filled is correct and displays accurate information on the label. To this end This document provides the Software Project Management Plan of Spotify management project, which is about providing the control of flow songs in a web-based environment using with PDA and Wireless Network.

1.4 Reference Materials

Provide a complete list of all documents and other sources of information referenced in the plan. Include for each the title, report number, date, author, and publishing organization.

spotify.in

1.5 Definitions and Acronyms

Define or provide references to the definition of all terms and acronyms required to properly interpret the SPMP.

SDLC-Software development life cycle

Ag- Agile Model

GC- Gantt chart

2. Project Organization

This section specifies the process model for the project and its organizational structure.

2.1 Process Model

Specify the life cycle model to be used for this project or refer to an organizational standard model that will be followed. The process model must include roles, activities, entry criteria and exit criteria for project initiation, product development, product release, and project termination.

Agile Model is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a Agile model, each phase is completed before the next phase can begin and allows overlapping in the phases.

The Agile Model illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete. In this Agile model, the phases do overlap.

2.2 Organizational Structure

Describe the internal management structure of the project, as well as how the project relates to the rest of the organization. It is recommended that charts be used to show the lines of authority.

2.3 Organizational Interfaces

Describe the administrative and managerial interfaces between the project and the primary entities with which it interacts. A table may be a useful way to represent this.

Organization	**Liaison**	**Contact Information**
Customer: <name>	<name>	<phone, email, etc.>
Subcontractor: <name>		
Software Quality Assurance		
Software Configuration Management		
<etc>		

Table F-1. Project Interfaces

2.4 Project Responsibilities

Identify and state the nature of each major project function and activity, and identify the individuals who are responsible for those functions and activities. Tables of functions and activities may be used to depict project responsibilities.

Role	**Description**	Person
Project Manager	leads project team; responsible for project deliverables	<name>
Technical Team Leader(s)	<define as locally used>	<name>
<etc.>	<etc.>	

Table F-2. Project Responsibilities.

3. Managerial Process

This section of the SPMP specifies the management process for this project.

In the development of the project the entire project member including managerial teams have a major role to the success of each phase in the project with the time and budget provided. The

managerial teams should manage, monitor and control, coordinate, and guide the work flow based on their specified responsibility.

3.1 Management Objectives and Priorities

Describe the philosophy, goals, and priorities for managing this project. A flexibility matrix might be helpful in communicating what dimensions of the project are fixed, constrained and flexible. Each degree of flexibility column can contain only one "X".

Project Dimension	**Fixed**	**Constrained**	**Flexible**
Cost		X	
Schedule	X		
Scope (functionality)			X

Table F-3: Flexibility Matrix

3.2 Assumptions, Dependencies, and Constraints

State the assumptions on which the project is based, any external events the project is dependent upon, and the constraints under which the project is to be conducted. Include an explicit statement of the relative priorities among meeting functionality, schedule, and budget for this project.

Assumptions:

● Users are expected to have a stable internet connection.

● The access to the database is fast.

● All the information like contact details,name,etc provided by the users is correct.

Dependencies

● Hardware features of the server. Any problem in the server will result in the

malfunctioning of the website.

● Ability of the website host to handle particular traffic on the website

3.3 Risk Management

Describe the process to be used to identify, analyze, and manage the risk factors associated with the project. Describe mechanisms for tracking the various risk factors and implementing contingency plans. Risk factors that should be considered include contractual risks, technological risks, risks due to size and complexity of the product, risks in personnel acquisition and retention, and risks in achieving customer acceptance of the product. The specific risks for this project and the methods for managing them may be documented here or in another document included as an appendix or by reference.

Identify

1. Interviews. Select key stakeholders. Plan the interviews. Define specific questions.

Document the results of the interview.

2. Brainstorming-Input is collected and prioritized.

3. Checklists-See if your company has a list of the most common risks.

4. Assumption Analysis.

5. Cause and Effect Diagrams.

Management of risks is done through the selection of appropriate sdlc (software development

life cycle) model We have chosen Agile model

In a Agile model scenario, we will try to plan risks well ahead of time, your estimation about the likelihood or severity of risks can be inaccurate. With constant changes of requirements in a shifting business environment, it is vital we define roles and responsibilities for continuously monitoring and controlling risks in your Waterfall project. Overlapping stages of development, poor quality assurance, and long processes are all sources of risk in a Agile environment.

3.4 Monitoring and Controlling Mechanisms

Define the reporting mechanisms, report formats, review and audit mechanisms, and other tools and techniques to be used in monitoring and controlling adherence to the SPMP. Project monitoring should occur at the level of work packages. Include monitoring and controlling mechanisms for the project support functions (quality assurance, configuration management, documentation and training).

A table may be used to show the reporting and communication plan for the project. The communication table can show the regular reports and communication expected of the project, such as weekly status reports, regular reviews, or as-needed communication. The exact types of communication vary between groups, but it is useful to identify the planned means at the start of the project.

- Determine variances and if they warrant a change request
- Influence the factors that cause changes
- Perform integrated change control
- Perform quality control
- Place an evaluation mechanism for team members
- Measure performance

Information Communicated	**From**	**To**	Time Period
Status report	Project Team	Project Manager	Weekly
Status report	Project Manger	Software Manager, Project Team	Weekly
Project Review	Project Team	Software Manager,All stakeholders	Monthly

Table F-4: Communication and Reporting Plan

3.5 Staffing Approach.

Describe the types of skills required for the project, how appropriate personnel will be recruited, and any training required for project team members.

Project Team - IT professionals with different skills (Frontend,Backend,Full Stack)

Project Manager-IT professional with most experience already dealt with similar or same project

Mentors- Customers, Producers involved in the process(various stakeholders)

4. Technical Process

This section specifies the technical methods, tools, and techniques to be used on the project. It also includes identification of the work products and reviews to be held and the plans for the support group activities in user documentation, training, software quality assurance, and configuration management.

We will be using the technical process across the entire project phase and the following processes are going to be carried out while the system is in the development: system

requirements, requirement analysis, definition process, design process, implementation process, system integration process, and testing process incudes verification and validation requirements. In addition, methodologies the project team will be using while developing the project will be discussed

4.1 Methods, Tools, and Techniques

Identify the computing system(s), development method(s), standards, policies, procedures, team structure(s), programming language(s), and other notations, tools, techniques, and methods to be used to specify, design, build, test, integrate, document, deliver, modify or maintain the project deliverables

The Agile methodology shall be used. .Net shall be the programming development environment and user interface environment. MS-SQL database management system shall be used storing and processing data. The main tools to be used for documentation shall be Microsoft Word 2019 for documents and Microsoft Project 2019 for project planning. Microsoft Visio 2019 shall be used for ER diagrams, design diagrams and process models. Laravel PHP framework as development language which contains HTML, CSS, and JavaScript for frontend development, PHP for backend development, and XML for some configuration. For code editing code editors such as sublime and Visual studio code will be used.

4.2 Software Documentation

Specify the work products to be built for this project and the types of peer reviews to be held for those products. It may be useful to include a table that is adapted from the organization's standard collection of work products and reviews. Identify any relevant style guide, naming conventions and documentation formats. In either this

documentation plan or the project schedule provide a summary of the schedule and resource requirements for the documentation effort.

To ensure that the implementation of the software satisfies the requirements, the following documentation is required as a minimum:

4.2.1 Software Requirements Specification (SRS)

The SRS clearly and precisely describes each of the essential requirements (functions, performances, design constraints, and attributes) of the software and the external interfaces. Each requirement is defined such that its achievement is capable of being objectively verified and validated by a prescribed method, for example, inspection, analysis, demonstration, or test.

4.2.2 Software Design Description (SDD)

The SDD describes the major components of the software design including databases and internal interfaces.

4.2.3 Software Test Plan

The Software Test Plan describes the methods to be used for testing at all levels of development and integration: requirements as expressed in the SRS, designs as expressed in the SDD, code as expressed in the implemented product. The test plan also describes the test procedures, test cases, and test results that are created during testing activities.

4.3 User Documentation

Describe how the user documentation will be planned and developed. (This may be just a reference to a plan being built by someone else.) Include work planned for online as well as paper documentation, online help, network accessible files and support facilities.

Assumptions and Dependencies

Assumptions:

● Users are expected to have a stable internet connection to access the application.

● The access to the database must be seamless to allow streaming of music.

● The application should save playlists created by using which contains a list of music.

Dependencies

● Hardware features of the server. Any problem in the server will result in the

malfunctioning of the website.

● Ability of the website to maintain concurrency of millions of users to access it at the same time.

4.4 Project Support Functions

Provide either directly or by reference, plans for the supporting functions for the software project. These functions may include, but are not limited to, configuration management, software quality assurance, and verification and validation. Plans for project support functions are developed to a level of detail consistent with the other sections of the SPMP. In particular, the responsibilities, resource requirements, schedules and budgets for each supporting function must be specified. The nature and type of support functions required will vary from project to project, however, the absence of a software quality assurance, configuration management, or, verification and validation plan must be explicitly justified in project plans that do not include them.

5. Work Packages, Schedule, and Budget

Specify the work packages, dependency relationships, resource requirements, allocation of budget and resources to work packages, and a project schedule. Much of the content may be in appendices that are living documents, updated as the work proceeds.

5.1 Work Packages

Specify the work packages for the activities and tasks that must be completed in order to satisfy the project agreement. Each work package is uniquely identified. A diagram depicting the breakdown of project activities and tasks (a work breakdown structure) may be used to depict hierarchical relationships among work packages.

5.2 Dependencies

Specify the ordering relations among work packages to account for interdependencies among them and dependencies on external events. Techniques such as dependency lists, activity networks, and the critical path method may be used to depict dependencies among work packages.

5.3 Resource Requirements

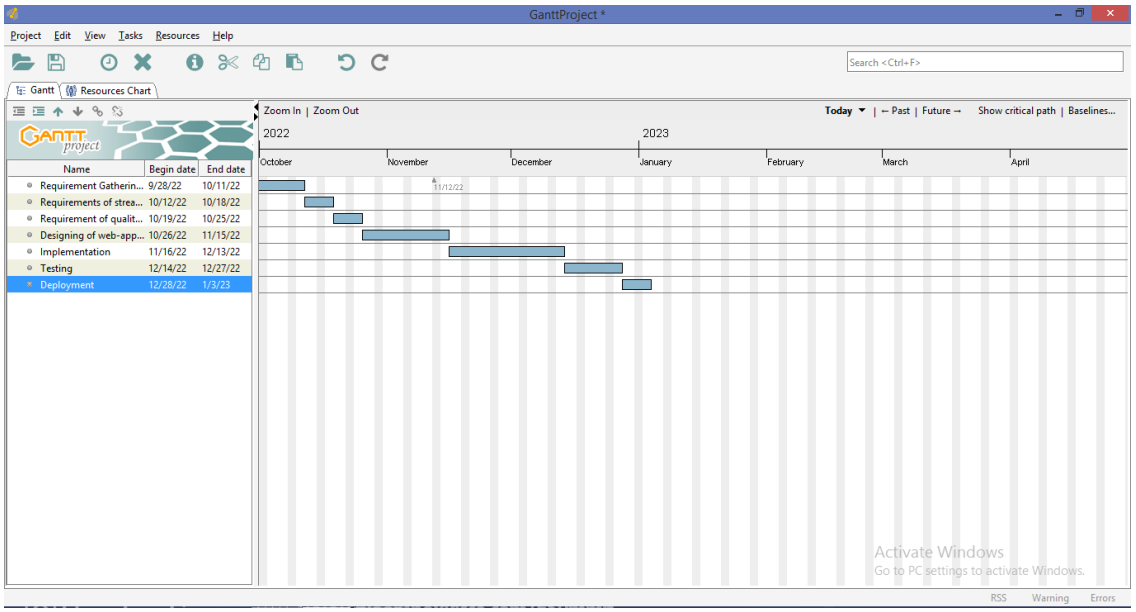
Provide, as a function of time, estimates of the total resources required to complete the project. Numbers and types of personnel, computer time, support software, computer hardware, office and laboratory facilities, travel, and maintenance requirements for the project resources are typical resources that should be specified.

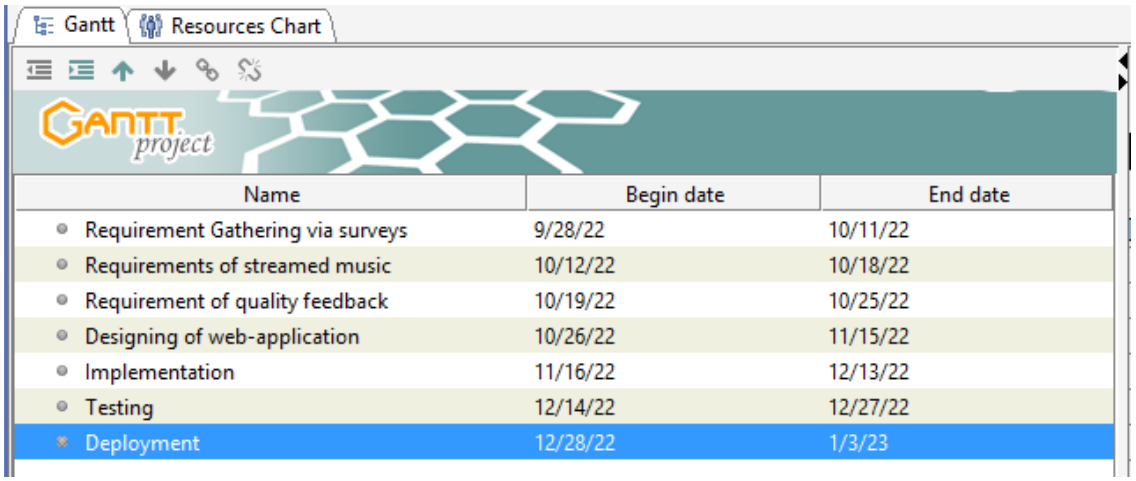
5.4 Budget and Resource Allocation

Specify the allocation of budget and resources to the various project functions, activities, and tasks.

5.5 Schedule

Provide the schedule for the various project functions, activities, and tasks, taking into account the precedence relations and the required milestone dates. Schedules may be expressed in absolute calendar time or in increments relative to a key project milestone.





- Requirement gathering via surveys
- Requirements of streamed music
- Requirements of quality feedback (music quality)
- Designing of web-application
- Implementation
- Testing
- Deployment

6. Additional Components.

Certain additional components may be required and may be appended as additional sections or subsections to the SPMP. Additional items of importance on any particular project may include subcontractor management plans, security plans, independent

verification and validation plans, training plans, hardware procurement plans, facilities plans, installation plans, data conversion plans, system transition plans, or the product maintenance plan.

6.1 Index.

An index to the key terms and acronyms used throughout the SPMP is optional, but recommended to improve usability of the SPMP.

6.2 Appendices

Appendices may be included, either directly or by reference, to provide supporting details that could detract from the SPMP if included in the body of the SPMP. Suggested appendices include:

A. Current Top 10 Risk Chart

B. Current Project Work Breakdown Structure

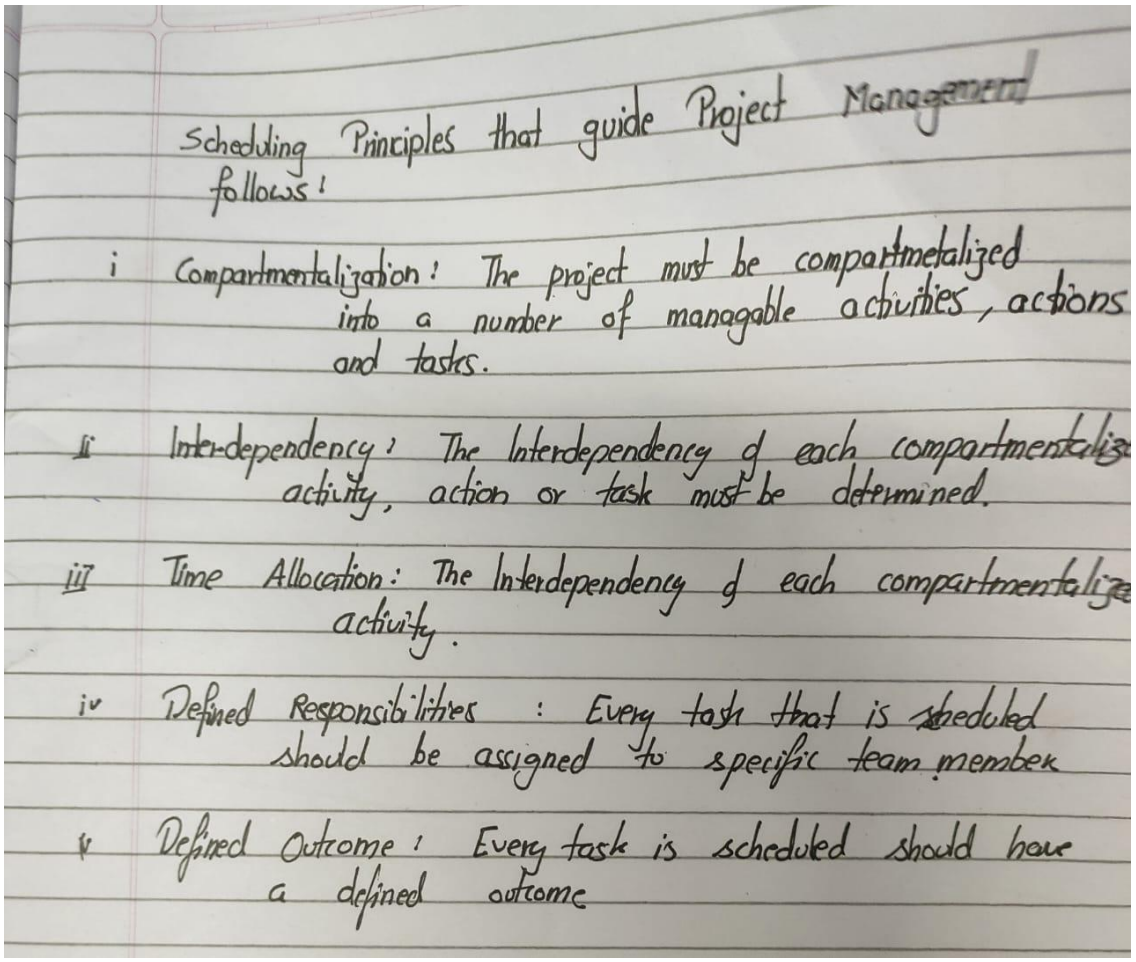
C. Current Detailed Project Schedule

Conclusion:

Hence we have created a project plan document for planning and monitoring the project using various tools and concepts.

Post Lab Descriptive Questions answers must be handwritten and to be submitted BEFORE the next turn.

1. State various Scheduling principles and explain them in detail.



Scheduling Principles that guide Project Management follows:

i Compartmentalization: The project must be compartmentalized into a number of managable activities, actions and tasks.

ii Inter-dependency: The Interdependency of each compartmentalized activity, action or task must be determined.

iii Time Allocation: The Interdependency of each compartmentalized activity.

iv Defined Responsibilities: Every task that is scheduled should be assigned to specific team member

v Defined Outcome: Every task is scheduled should have a defined outcome