PROJECT TITLE: SMART-ASSET VAULT ENTERPRISE

MILESTONE 1

Submitted by

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Professor – Mona Abou Taka

Submission Date – 30th Jan 2022

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1 Abstract

A. Objective

The objectives of Smart Asset Vault Enterprise are the following:

- ✓ Streamline asset management process easily
- ✓ Asset monitoring to get accurate assets counts
- ✓ Full control over asset lifecycle and real-time visibility
- ✓ Tracking and recording maintenance for each asset owned by the company
- ✓ Efficient scheduling of shared assets across teams and departments
- ✓ Retrieve precise reports on purchase and inventory consumption
- ✓ Get alerts and notifications in case of new order, restock, repair or removal of assets.

B. Goals

The goal of Smart-Asset Vault Enterprise is to provide Cloud-based Asset management software you can access from anywhere. SAVE facilitates asset logging to track and maintain assets, improve asset utilization and eliminate waste. SAVE aids in maximizing the return on every investment by reducing the need to purchase duplicate assets unnecessarily, maintaining warranty records, restocking before asset depletion.

2 Project Charter

A. Project Authorization

This Charter formally authorizes to start the development of a cloud-based asset management software known as Smart- Asset Vault Enterprise (SAVE) to track and maintain the assets in an enterprise throughout the asset life cycle. In this document we have outlined the significance of the project, the scope, some of the expected deliverables of this project. Also, we have included the roles of the team members and all the information about the stakeholders of the project.

B. Project Scope

The scope of Smart-Asset Vault Enterprise is that they offer an integrated view of assets and their performance. This extends asset life, reduces life cycle costs, maximizes asset ROI, and decreases maintenance costs. Smart-Asset Vault Enterprise offers efficient management and maintainability.

C. Project Manager Authorization

The Project Manager, Venkata Pisupati, is hereby authorized to interface with management as required, negotiate for resources, delegate responsibilities within the framework of the project, and to communicate with all contractors and management, as required, to ensure successful and timely completion of the project. The Project Manager is responsible for developing the project plan, monitoring the schedule, cost, and scope of the project during implementation, and maintaining control over the project by measuring performance and taking corrective action.

D. Problems & Opportunities

- ✓ Manual tracking: Solely relying on manual counts to gain an understanding of stock assets can become a very tiresome and time-consuming task. With an automated asset management system, we can track the stock far easier and have an accurate real-time view of the asset management.
- ✓ The amount of stock the company owns is unknown: Not keeping track of the company assets can be an issue causing over-purchase or running low on asset stocks which can ultimately cause loss. With asset management businesses can generate reports at a click of a button to help you understand exactly the stock they are carrying. Making informed decisions about the business's overall strategic goals and the wider supply chain is made much easier with information like this.
- ✓ Maintenance issue: Absence of asset management system can provide certain consequences like production loss, rescheduling of whole project, overtime labor due to downtime asset wastage.
- ✓ Theft Occurrence: Asset theft and asset loss can cause a lot of money without a proper asset management system to track and manage assets.

E. Deliverables

The outcomes of completing the project include:

- ✓ Asset Tracking: a smart asset management tool to keep track of all the assets in an enterprise.
- ✓ Real time updates using cloud: Manage real time inventory and consumables assets.
- ✓ Connect to vendors: Easy access to knowledge of vendors of assets in case of repurchase, maintenance or replacement.
- ✓ Reporting tools: Smooth and flawless communication to enhance productivity and reduce human error.
- ✓ Asset forecasting: Powerful future insights to reduce risk of stockout and increase turnover rates also maximize asset efficiency.
- ✓ Asset Alters: To reduce asset wastage optimize asset levels improve cross department use of assets.

F. Business needs

Businesses use Asset vault to keep track of the value, location, availability, and maintenance schedules of the assets and equipment they use on a daily basis. Also, they can be used for compliance and financial tracking, as well as to increase the accountability of employees, and increase productivity with a centralized asset vault.

G. Legal Requirements

Privacy and Security Policy: It is of enormous importance to protect the asset data, vendor details, authorizations, warranty and ensure its integrity remains intact. Therefore, Asset management software must have security at the forefront of its focus. It must protect and uphold customer data always from increasing global cyber threats. In tandem with this is the provision of daily backups which are essential to have especially in times when the system fails, and information is needed to be retrieved. Ensure security and backups are a feature provided by the provider offering its services.

H. Technological Advancements

The introduction of automation, internet of things, artificial intelligence and cloud technologies in various industries has led to the advancement of centralized asset management solutions. As smart asset management solutions help reduce asset management time and costs, they are becoming increasingly popular in the all the industry.

3 Team Charter

A. Team Members: 6

Aiswarya Antu, Aiswarya Roy, Priya Meelu, Shenglin Meng, Umashankar Sundarrajan, Venkata Pisupati.

B. Member Roles

Project Leader	Venkata Pisupati
Frontend Developer	Aiswarya Antu ,Aiswarya Roy
Backend Developer	Venkata Pisupati,Shenglin Meng
Unit Testing	Umashankar Sundarrajan, Priya Meelu
Project Analyst	Aiswarya Antu ,Aiswarya Roy

Project Documentation	Priya Meelu ,Umashankar Sundarrajan

C. Project Tasks

Project Selection	
Project Leader	Venkata Pisupati
Project Research	Venkata Pisupati,Shenglin Meng Aiswarya Antu ,Aiswarya Roy
Define Project Scope	All Members
Project Selection Documentation	Umashankar Sundarrajan, Priya Meelu
Project Planning	
Client requirements Gathering	Aiswarya Antu ,Aiswarya Roy
Project Scope Confirmation	All Members
Project Budget Estimation	Umashankar Sundarrajan, Priya Meelu
Define Timeline for Milestones	Venkata Pisupati, Shenglin Meng
Define Resource Usage	Aiswarya Antu ,Aiswarya Roy
Project Planning Documentation	Umashankar Sundarrajan, Priya Meelu
Project Execution	
Meeting with Client	All Members
Sub-team Tasks Assignment	Venkata Pisupati
Functionality Development	Venkata Pisupati,Shenglin Meng
Database Set-up	Venkata Pisupati,Shenglin Meng
Server Initiation	Venkata Pisupati,Shenglin Meng
UI Design & Development	Aiswarya Antu ,Aiswarya Roy
Website Deployment	Venkata Pisupati,Shenglin Meng

SQL Insertion	Venkata Pisupati,Shenglin Meng
Project Encapsulation	Venkata Pisupati,Shenglin Meng
Project Monitor & Control	
Client Meeting	All Members
Project Review	Aiswarya Antu ,Aiswarya Roy
Performance Testing	Umashankar Sundarrajan, Priya Meelu
Project Constraints Establishment	Umashankar Sundarrajan, Priya Meelu
Unit Testing	Umashankar Sundarrajan, Priya Meelu
Project Closure	
Website Maintenance	Aiswarya Antu ,Aiswarya Roy
Final Objectives Overview	Venkata Pisupati
Application Deployment	Venkata Pisupati,Shenglin Meng
Final Report Documentation	Umashankar Sundarrajan, Priya Meelu
Team Adjourning	All Members

D. Technical Expectations

- ✓ Data insertion into the database shall be smooth and functional.
- ✓ Asset listing shall be clear and descriptive.
- ✓ Websites UI shall be easy to use, fully functional and intuitive.
- ✓ Archiving the tasks strictly by timeline setup in milestones.

E. Communicational Expectations

- ✓ All team members shall attend weekly meetings on time to discuss the progress.
- ✓ Client requirements shall be updated immediately to gather alternative solutions.
- ✓ All team members shall communicate often through various platforms.
- ✓ All milestones shall be completed on time.
- ✓ Final product shall be deployed and delivered to the client at least a week before the deadline for additional changes and debugging.

F. Consequences

Potential failures in projects may happen, eventually resulting in lower overall product quality and client dissatisfaction.

- ✓ Technical failures such as server crash, unexpected server downtime, database corruption, chaotic UI will eventually decrease the overall satisfaction level for the client in product delivery stage.
- ✓ On the other hand, communicational failures among the group will also be crucial and may result in submission delay, or miss the deadline for milestones.

G. Agreement

- ✓ Aiswarya Antu, 30th January, 2022
- ✓ Aiswarya Roy, 30th January, 2022
- ✓ Priya Meelu, 30th January, 2022
- ✓ Shenglin Meng, 30th January, 2022
- ✓ Umashankar Sundarrajan, 30th January, 2022
- ✓ Venkata Pisupati, 30th January, 2022

4. Project Approach

A. Project Life Cycle Processes

The asset management plan produced during the strategy and planning phase is implemented by life cycle delivery subjects. Controlling the actions and liabilities connected with the acquisition, operation, maintenance, and disposal of assets is critical to the successful fulfillment of asset management programmers' operation and maintenance are the important phases of the asset's life cycle.

B. Project Management Processes

Asset management decision-making is influenced by capital or expense objectives, and costs are considered throughout the asset life cycle. The challenges faced and approaches in management decision-making for the three main stages of an asset's life are examined in this process: acquisition or creation, operation and maintenance, and end of life, which includes decommissioning, disposal, and renewal.

C. Project Support Processes

Support the project by utilizing the various tools such as GitHub, Jenkins, Docker, DevOps, Eclipse and MySQL.

The processes that coordinate the development and life cycle of the activities contained in the primary processes, i.e., organizational and business processes. Customer or supplier to validate the software products of the project.

D. Organization

Organization and people are highly interdependent and have an impact on an organization's ability to successfully adopt and embed asset management. Our team will invest time and effort to produce the performance and behaviors that will support the successful delivery of the asset management strategies and objectives.

5 Communication Plan

A. Communication Plan between Project members

- ✓ Weekly or Biweekly meetings with Professor, where we discuss about the current standing of our project and he gives feedbacks for updating the project.

- ✓ Daily meeting of group members to discuss current status of project and discuss suggestions on changes or updates to be made.

DATE	STAKEHOLDERS	AGENDA
18/ 01/ 2022	Team members	project analysis and assigning project roles

23/ 01/ 2022	Mona Abou Taka	kick up meeting for, requirement gathering and analysis
25/ 01/ 2022	Team members	project status updates
27/ 01/ 2022	Mona Abou Taka	project plan analysis and feedback
30/ 01/ 2022	Team members	Milestone 1 submission
03/ 02/ 2022	Team members project coordinators	milestone one presentation and feedback
06/ 02/ 2022	Mona Abou Taka	Project progress evaluation update
08/ 02/ 2022	Team members, project coordinators	Regular update meeting
18/ 02/ 2022	Mona Abou Taka	Milestone 2 Evaluation and updates
20/ 02/ 2022	Team members	Milestone 2 submission
24/ 02/ 2021	Team members, project coordinators	milestone 2 presentation and feedback
13/ 03/ 2021	Mona Abou Taka	Milestone 3 Evaluation and updates
20/ 03/ 2021	Team members	Milestone 3 submission
24/ 03/ 2021	Team members, project coordinators	Milestone 3 presentation and feedback

03/ 04/ 2021	Mona Abou Taka	Milestone 4 Evaluation and updates
03/ 04/ 2021	Team members	Milestone 4 submission
07/ 04/ 2021	Team members, project coordinators	milestone 4 presentation and feedback
10/ 04/ 2021	Mona Abou Taka	Final Project evaluation, feedback, updates and additional requirements
11/ 04/ 2021	Team members, project coordinators	Final Report submission
11/ 04/ 2021	Team members, project coordinators	Peer Reviews
14/ 04/ 2021	Team members, project coordinators	Final Presentation

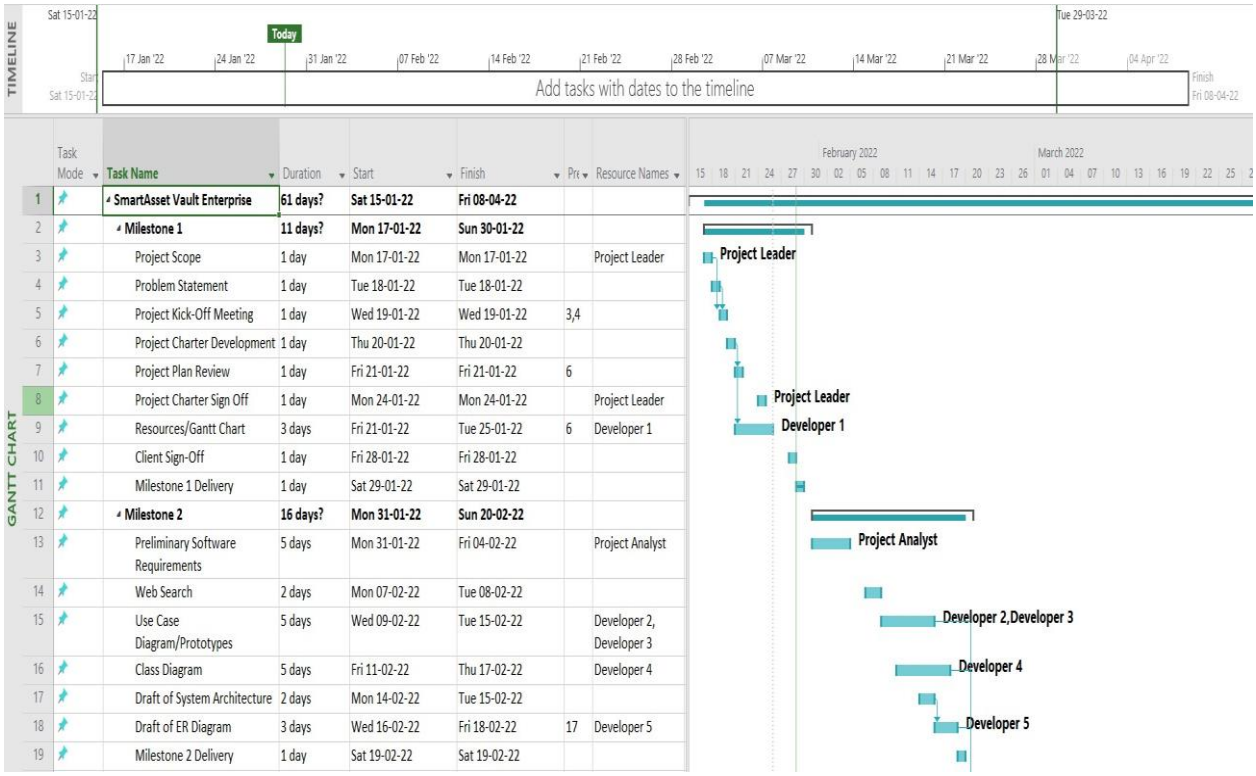
6 Work Plans

A. Work Breakdown Structure (WBS)

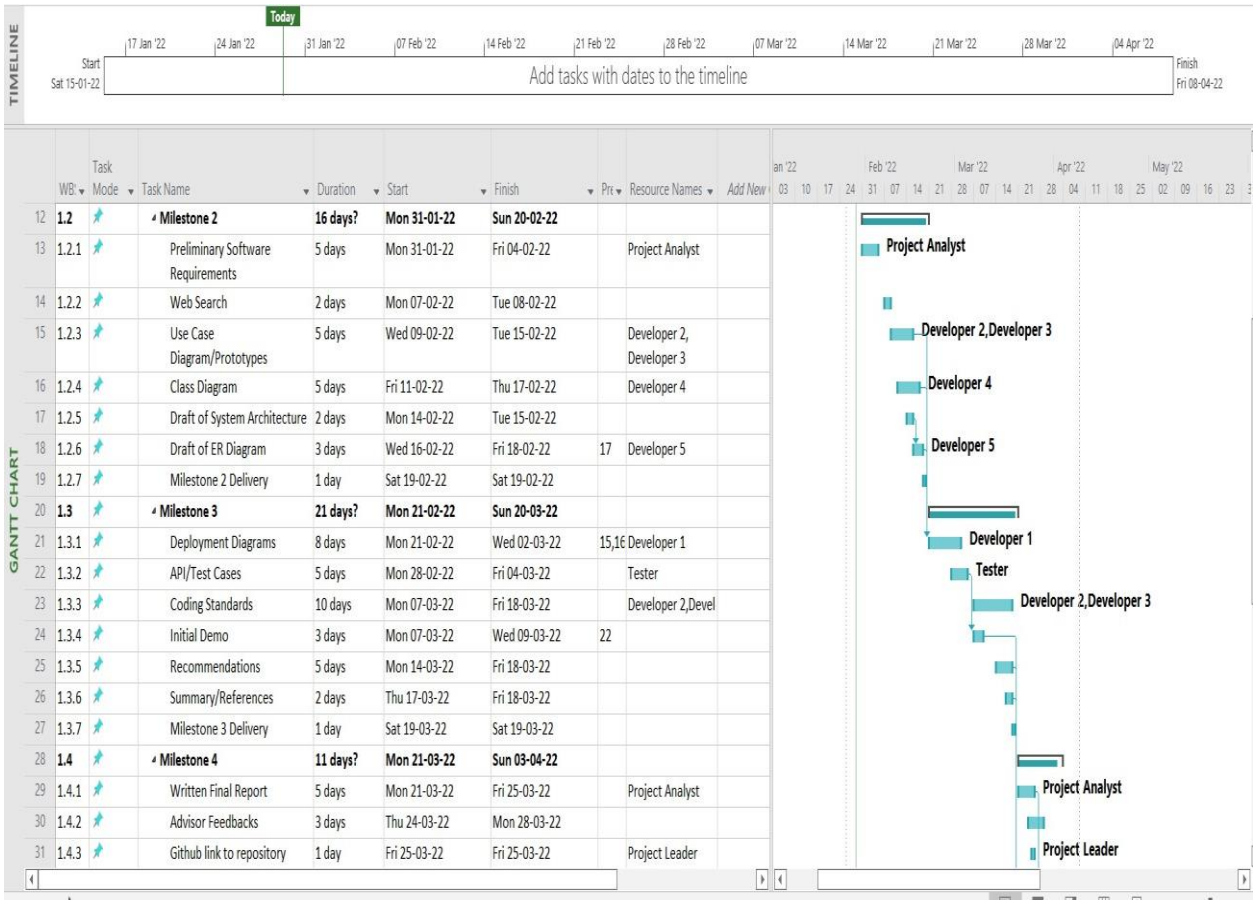
Most work breakdown structures have 3 levels that represent the project's main deliverable, control accounts, project deliverables and work packages.

- ✓ Include 100% of the work necessary to complete the goal.
- ✓ Don't account for any amount of work twice.
- ✓ Focus on outcomes, not actions.
- ✓ A work package should take no less than 8 hours and no more than 80 hours of effort.
- ✓ Include about three levels of detail.

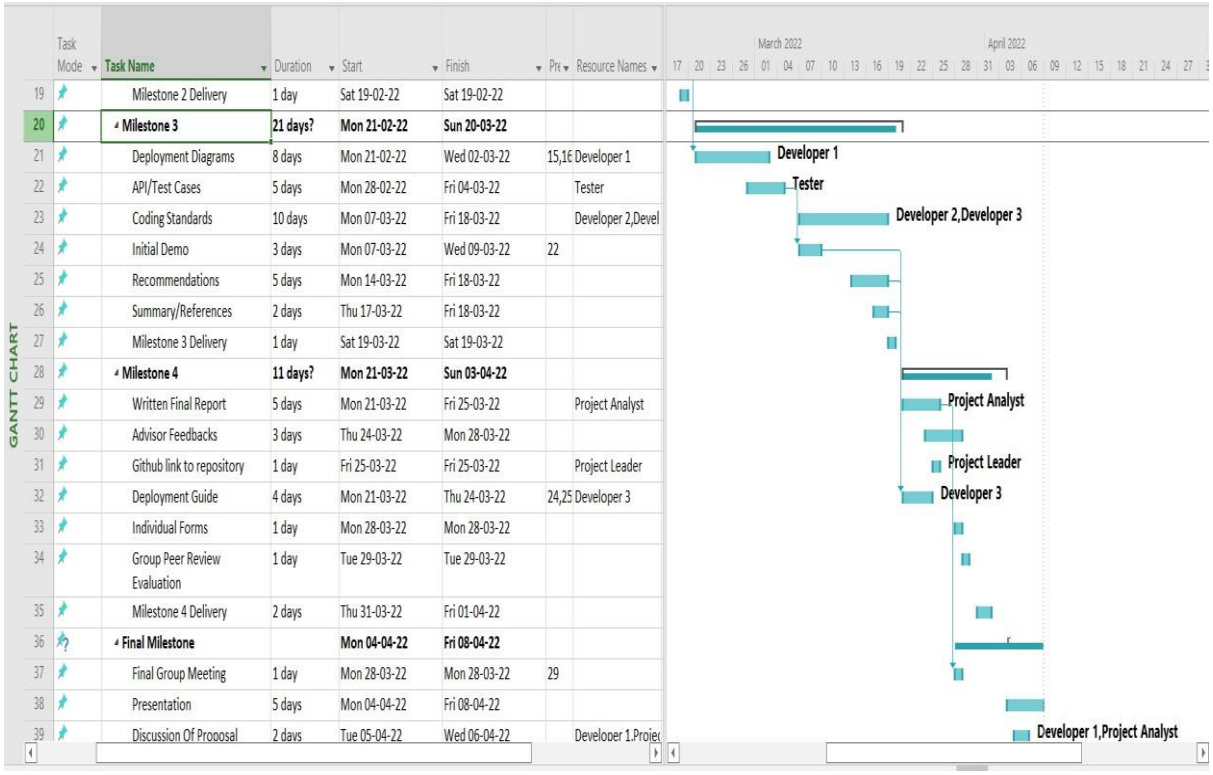
B. Gantt Chart



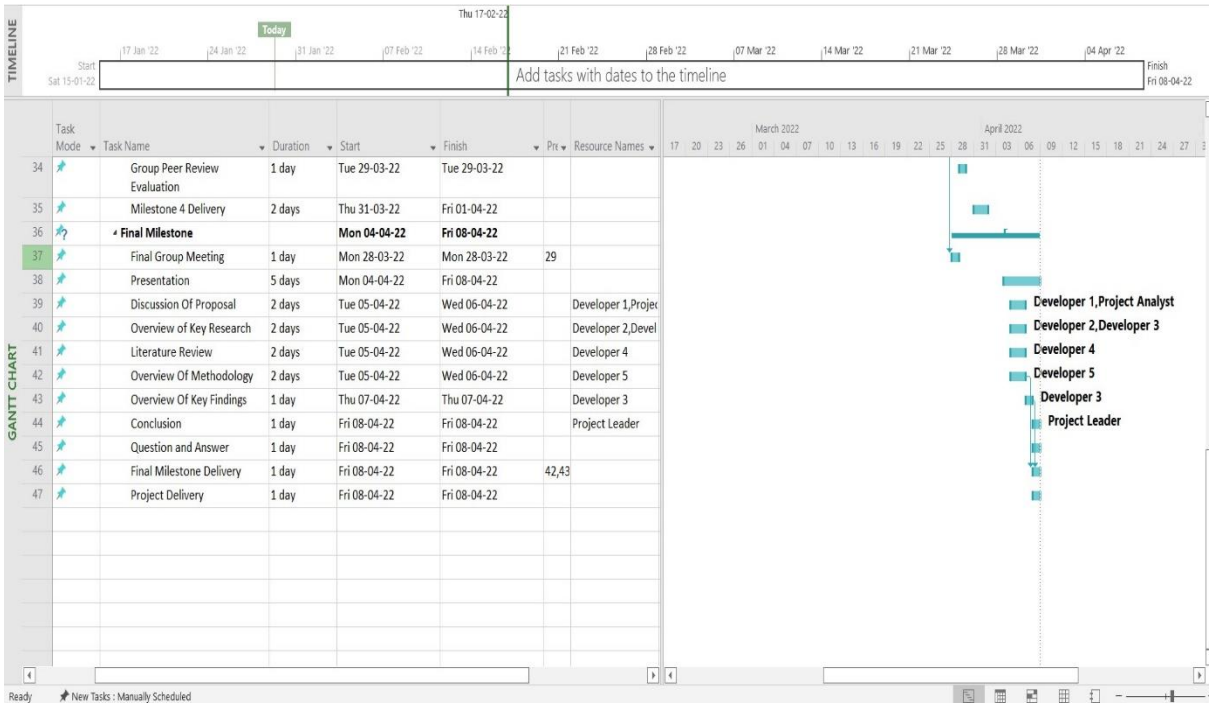
	Task Mode	Task Name	Duration	Start	Finish	Pr	Resource Names
1		**SmartAsset Vault Enterprise**	**61 days?**	**Sat 15-01-22**	**Fri 08-04-22**		
2		**Milestone 1**	**11 days?**	**Mon 17-01-22**	**Sun 30-01-22**		
3		Project Scope	1 day	Mon 17-01-22	Mon 17-01-22		Project Leader
4		Problem Statement	1 day	Tue 18-01-22	Tue 18-01-22		
5		Project Kick-Off Meeting	1 day	Wed 19-01-22	Wed 19-01-22	3,4	
6		Project Charter Development	1 day	Thu 20-01-22	Thu 20-01-22		
7		Project Plan Review	1 day	Fri 21-01-22	Fri 21-01-22	6	
8		Project Charter Sign Off	1 day	Mon 24-01-22	Mon 24-01-22		Project Leader
9		Resources/Gantt Chart	3 days	Fri 21-01-22	Tue 25-01-22	6	Developer 1
10		Client Sign-Off	1 day	Fri 28-01-22	Fri 28-01-22		
11		Milestone 1 Delivery	1 day	Sat 29-01-22	Sat 29-01-22		
12		**Milestone 2**	**16 days?**	**Mon 31-01-22**	**Sun 20-02-22**		
13		Preliminary Software Requirements	5 days	Mon 31-01-22	Fri 04-02-22		Project Analyst
14		Web Search	2 days	Mon 07-02-22	Tue 08-02-22		
15		Use Case Diagram/Prototypes	5 days	Wed 09-02-22	Tue 15-02-22		Developer 2, Developer 3
16		Class Diagram	5 days	Fri 11-02-22	Thu 17-02-22		Developer 4
17		Draft of System Architecture	2 days	Mon 14-02-22	Tue 15-02-22		
18		Draft of ER Diagram	3 days	Wed 16-02-22	Fri 18-02-22	17	Developer 5
19		Milestone 2 Delivery	1 day	Sat 19-02-22	Sat 19-02-22		



	WBS	Task Mode	Task Name	Duration	Start	Finish	Pr	Resource Names
12	**1.2**		**Milestone 2**	**16 days?**	**Mon 31-01-22**	**Sun 20-02-22**		
13	1.2.1		Preliminary Software Requirements	5 days	Mon 31-01-22	Fri 04-02-22		Project Analyst
14	1.2.2		Web Search	2 days	Mon 07-02-22	Tue 08-02-22		
15	1.2.3		Use Case Diagram/Prototypes	5 days	Wed 09-02-22	Tue 15-02-22		Developer 2, Developer 3
16	1.2.4		Class Diagram	5 days	Fri 11-02-22	Thu 17-02-22		Developer 4
17	1.2.5		Draft of System Architecture	2 days	Mon 14-02-22	Tue 15-02-22		
18	1.2.6		Draft of ER Diagram	3 days	Wed 16-02-22	Fri 18-02-22	17	Developer 5
19	1.2.7		Milestone 2 Delivery	1 day	Sat 19-02-22	Sat 19-02-22		
20	**1.3**		**Milestone 3**	**21 days?**	**Mon 21-02-22**	**Sun 20-03-22**		
21	1.3.1		Deployment Diagrams	8 days	Mon 21-02-22	Wed 02-03-22	15,16	Developer 1
22	1.3.2		API/Test Cases	5 days	Mon 28-02-22	Fri 04-03-22		Tester
23	1.3.3		Coding Standards	10 days	Mon 07-03-22	Fri 18-03-22		Developer 2,Devel
24	1.3.4		Initial Demo	3 days	Mon 07-03-22	Wed 09-03-22	22	
25	1.3.5		Recommendations	5 days	Mon 14-03-22	Fri 18-03-22		
26	1.3.6		Summary/References	2 days	Thu 17-03-22	Fri 18-03-22		
27	1.3.7		Milestone 3 Delivery	1 day	Sat 19-03-22	Sat 19-03-22		
28	**1.4**		**Milestone 4**	**11 days?**	**Mon 21-03-22**	**Sun 03-04-22**		
29	1.4.1		Written Final Report	5 days	Mon 21-03-22	Fri 25-03-22		Project Analyst
30	1.4.2		Advisor Feedbacks	3 days	Thu 24-03-22	Mon 28-03-22		
31	1.4.3		Github link to repository	1 day	Fri 25-03-22	Fri 25-03-22		Project Leader



	Task Mode	Task Name	Duration	Start	Finish	Pre	Resource Names
19		Milestone 2 Delivery	1 day	Sat 19-02-22	Sat 19-02-22		
20		**Milestone 3**	**21 days?**	**Mon 21-02-22**	**Sun 20-03-22**		
21		Deployment Diagrams	8 days	Mon 21-02-22	Wed 02-03-22	15,16	Developer 1
22		API/Test Cases	5 days	Mon 28-02-22	Fri 04-03-22		Tester
23		Coding Standards	10 days	Mon 07-03-22	Fri 18-03-22		Developer 2,Developer 3
24		Initial Demo	3 days	Mon 07-03-22	Wed 09-03-22	22	
25		Recommendations	5 days	Mon 14-03-22	Fri 18-03-22		
26		Summary/References	2 days	Thu 17-03-22	Fri 18-03-22		
27		Milestone 3 Delivery	1 day	Sat 19-03-22	Sat 19-03-22		
28		**Milestone 4**	**11 days?**	**Mon 21-03-22**	**Sun 03-04-22**		
29		Written Final Report	5 days	Mon 21-03-22	Fri 25-03-22		Project Analyst
30		Advisor Feedbacks	3 days	Thu 24-03-22	Mon 28-03-22		
31		Github link to repository	1 day	Fri 25-03-22	Fri 25-03-22		Project Leader
32		Deployment Guide	4 days	Mon 21-03-22	Thu 24-03-22	24,25	Developer 3
33		Individual Forms	1 day	Mon 28-03-22	Mon 28-03-22		
34		Group Peer Review Evaluation	1 day	Tue 29-03-22	Tue 29-03-22		
35		Milestone 4 Delivery	2 days	Thu 31-03-22	Fri 01-04-22		
36		**Final Milestone**		**Mon 04-04-22**	**Fri 08-04-22**		
37		Final Group Meeting	1 day	Mon 28-03-22	Mon 28-03-22	29	
38		Presentation	5 days	Mon 04-04-22	Fri 08-04-22		
39		Discussion Of Proposal	2 days	Tue 05-04-22	Wed 06-04-22		Developer 1,Projec



	Task Mode	Task Name	Duration	Start	Finish	Pre	Resource Names
34		Group Peer Review Evaluation	1 day	Tue 29-03-22	Tue 29-03-22		
35		Milestone 4 Delivery	2 days	Thu 31-03-22	Fri 01-04-22		
36		**Final Milestone**		**Mon 04-04-22**	**Fri 08-04-22**		
37		Final Group Meeting	1 day	Mon 28-03-22	Mon 28-03-22	29	
38		Presentation	5 days	Mon 04-04-22	Fri 08-04-22		
39		Discussion Of Proposal	2 days	Tue 05-04-22	Wed 06-04-22		Developer 1,Projec
40		Overview of Key Research	2 days	Tue 05-04-22	Wed 06-04-22		Developer 2,Devel
41		Literature Review	2 days	Tue 05-04-22	Wed 06-04-22		Developer 4
42		Overview Of Methodology	2 days	Tue 05-04-22	Wed 06-04-22		Developer 5
43		Overview Of Key Findings	1 day	Thu 07-04-22	Thu 07-04-22		Developer 3
44		Conclusion	1 day	Fri 08-04-22	Fri 08-04-22		Project Leader
45		Question and Answer	1 day	Fri 08-04-22	Fri 08-04-22		
46		Final Milestone Delivery	1 day	Fri 08-04-22	Fri 08-04-22	42,43	
47		Project Delivery	1 day	Fri 08-04-22	Fri 08-04-22		

C. Problem Statement

- ✓ The first key point would be the asset information.
- ✓ Putting all the information and data in a well-organized manner.
- ✓ This helps to design the database and web page in a clear and efficient way.
- ✓ The data and information must be classified according to the criteria not by his relative importance or frequency of usage
- ✓ A data classified system can be implemented to make the organization's information asset easy to find, share and maintain
- ✓ The second key point which we should focus on is asset failure.
- ✓ Breakdown or insufficient use of the data or information is known as the asset failure.
- ✓ These things must be separately classified and marked down for the reference purpose in the companies.
- ✓ The main reason for the asset failure would be blindly following the schedule, instead sufficient tracking and running of tests would cause asset failure.
- ✓ There should be no downtime in running the data and process. This will affect the productivity of the organization.
- ✓ Regular usage of asset tracking software will help us to overcome the issue.
- ✓ Regular check in/out can help to track the asset and usage.
- ✓ The third major key point would be the maintenance.
- ✓ Designing the maintenance is the important factor. Maintenance team has to be designed according to how big the company asset is.
- ✓ Regular maintenance would result in utilization of full assets.
- ✓ The Fourth key point would be the accuracy of the data
- ✓ To take the organization to the next level, accuracy of the data is important.
- ✓ It helps the organization to plan for the future goals and plays an efficient role in productivity.

7 Relevance/Significance

Asset management is widely used in many industries and some of them are listed below.

- ✓ University required to drive the recruitment, funding and student engagement.
- ✓ 100 per used in the real estate industry to know about places which are occupied, and which are left over.
- ✓ Used widely in the e-commerce industry to track every day-to-day update.
- ✓ Health care industry to track their room availability, instrument, and rest other stuff.
- ✓ Car manufacturing industry to track the parts and their scale of operations.
- ✓ IT and telecommunications are getting more benefited from asset management since the most are from IT software asset management.

8 Roles

Developer 1
Developer 2
Developer 3
Developer 4
Developer 5
Project Leader
Project Analyst
Tester

9 Milestones

Milestone Number	Title	Forecast Date
1	Building the Structure for the Project and Database	30/01/2022
2	Start collecting the data from different source and organizing it.	20/02/2020
3	Building the project with all the available resources.	20/03/2022
4	Testing and deploying the project	04/03/2022
5	Release of the project	11/03/2022

10 Performance and Metrics

There are many metrics to satisfy when it comes to asset management. Some of them are listed below.

- ✓ MTR (Mean time to repair)
- ✓ MTBF (Mean time between failures)
- ✓ MTTF (Mean time to failure)
- ✓ AFR (Annualized failure rate)
- ✓ Average occupancy rate (AOR)
- ✓ On-time delivery (OTD) rate
- ✓ Overall equipment effectiveness (OEE)
- ✓ Inventory turnover ratio (ITR)

These development key performance indicators (KPIs) for asset management can help business to improve their plan decisions and achieve all the goals. By collecting all the data and asset information from the company and executing the above-mentioned metrics we can successfully run our project and performance would be maintained in the required rate. We can also use salesforce, Avaya CMS tools to track of the performance and to monitor the metric scale.

11 Client Sign-Off

- ✓ Client: Mona Abou Taka
- ✓ Project Advisor: Ian Barker
- ✓ Project Name: Smart-Asset Vault Enterprise
- ✓ Project Manager: Venkata Pisupati
- ✓ Version: V1.0
- ✓ Issue Date: 30-01-2022
- ✓ Distribution: Mona Abou Taka
- ✓ Prepared by: Aiswarya Antu, Aiswarya Roy, Priya Meelu, Shenglin Meng, Umashankar Sundarrajan, Venkata Pisupati
- ✓ Authorized by: Mona Abou Taka

12 Financial Plan

The main audience to the financial plan is us as our project is entrepreneur one. We may try to adopt the different project workflow such as Agile methodologies, it drastically reduces the project cost to the client when compared to the waterfall and V shaped models. We will finalize the financial plan in coming weeks.