1. Introduction

1.1 Project Introduction

Art has a long history of its existence starting from Paleolithic to Metal age carried out from country to country garnishing people's attention from early days. It has already become a way to represent daily lives, facts and culture. Nepal as being one of the countries to take an interest in art still lacks to provide diligence platform on art. So with a plan to fix the problem, I decided to make an art system naming "ArtEstrade". ArtEstrade stands for "Art Platform", estrade as in platform in French aiming to provide suitable and secured platform to art interested people of all age and skills.

1.2 Justification of Project

The main reason to build this project was to solve the problem of artists. As any other career art has become one of the main career people chose but couldn't find more benefits on it. As a country with people having narrow minded still present around they fail to observe any artistic value giving a difficult path for artists to come out in a market. So this projects intends to increase the artistic value in a market and in life of people and so should be taken in action.

1.2.1 Background of Project

Art has already enriched in Nepal. It's no difficult to study art and its process as the establishment of universities and colleges are very well formed. However learning and earning differs and it's quite risky to choose art as a career seeing the huge expenses and limited income in context of Nepal. Regarding the consent, I decided to forward my project "ArtEstrade" to overcome it.

1.2.2 Problem Statement

Given the little background on the art pace in Nepal, there still exist lots of problems. Nepal being country of higher illiteracy rate are more focused on other sectors than art making no earning in it. To sell an art we need pretty god observers, Displays and showcase are done but sales stays low. Only few are interested in it. ArtEstrade will therefore provide a platform to share an artiste's work, views and interests among many other artists and users focusing both nationally and internationally.

1.3 Description of Project

Focusing from amateurs to professionals, the project intends to give chance to underground artists too. ArtEstrade will not only yield a way to display and sell their arts but will also provide basics and some decisive history on arts. It's a perfect chance for beginners to learn some knowledge beforehand. Whole idea is to build up the passage for artists to out show their artistic creativity. With that being said ArtEstrade comes with some amazing features which are listed below.

1.3.1 Features of Project

1. Upload of the work for views or for online sales.
2. Categories of arts for people with interested specific field.
3. Facility of personnel galleries to pin their own loved arts and to save their works.
4. Online study of basics and knowledge of art.
5. Comment box and chat box for communication.
6. Competitions to enhance their artistic ability and rewards accordingly.

1.4 Overview of the Project

On the whole, ArtEstrade is all about giving artists to show up their talents and works also providing them way to earn through it. Making a living doing what you love is one of the ArtEstrade's priority. Making communication as one of the important feature, the project intends to bind many artists together and enhance the knowledge. Categories are added so that user can watch art on particular field. Overall ArtEstrade is a good platform for artists to begin their art career.

2. Scope of the Project

2.1 Scope

- ArtEstrade is scoped to be reached out internationally too.
- The project intends to bring artists together for further artistic development.
- One of its scopes is to aid underground artists to come out to the world.
- Expand the art business deliberately.

2.2 Limitation

- The project is fully online based. So users will need good internet connection.
- The project focuses only on art so photographs and videos are excluded.

2.3 Aim

The main goal of the project is to set a platform for all artists to learn arts, share their work and earn their living through it.

2.4 Objectives

- Questioning people for further requirements and additional features.
- Good analysis of art sectors for specific information to build up the project.
- Designing the project model based on those analysis.

2.5 Overview of Scope

On the contrary with the aim of setting a good stage for every artists, ArtEstrade hope to expand itself exceeding the national level performing some useful tasks. Hopefully it will create a big advantage for artists all around the world.

3. Development Methodologies

3.1 Description of Project

Whereas waterfall is generally a traditional methodology that is sequential meaning the phase can continue only after the completion of previous phase. It's a common and well known methodology among any developers. As for my project I chose to follow waterfall methodology that follows certain steps given below.

- **Planning:-** Requirements as per the users are noted giving us the clear view of what our project should look like and planning is done in accordance to it. Strategy is then applied according to the planning done. Analyze over planning is done and logic is carried out.
- **Analysis:-** Analyze over planning is done and logic and models are generated.
- **Design:-** It deals with the technical related stuffs and is concern on bringing project analysis into technical aspect. It deals with programming language, services, etc.
- **Implementation:-** Employing all the logic and models explained in previous phases finally source code is written for the project.
- **Testing:-** Testing is then done to define and solve any bugs within the application so that users don't have any problem while installing the application.
- **Maintenance:-** Modifications are expected since users requirements may change so maintenance generally means any changes to system for better performance as per those requirements.

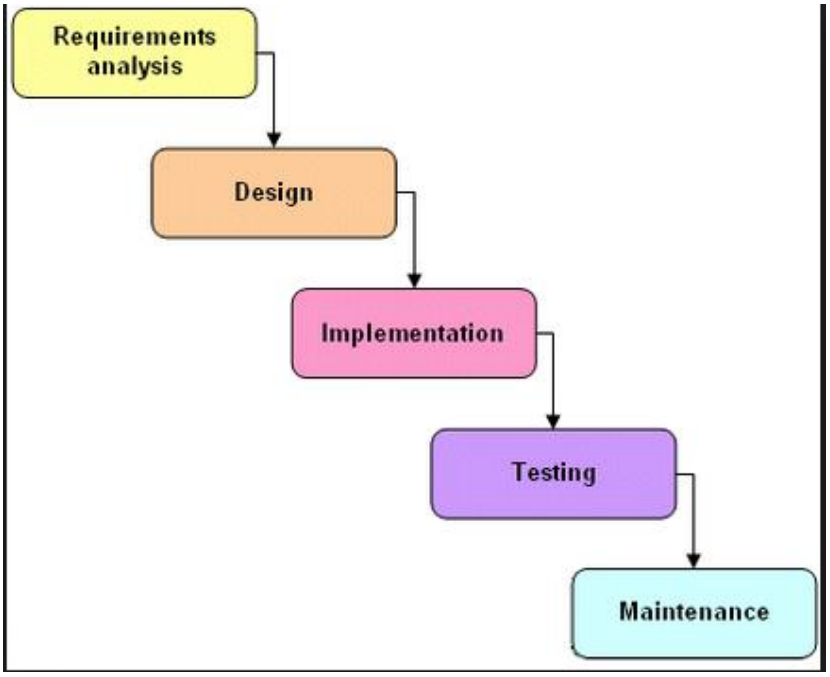

Figure 1 Waterfall Model

Waterfall was chosen because of the following benefits it provides:

- Requirements is recorded beforehand providing us information of what needs to be done and what not.
- Each development phase is well documented giving resistance to any change.
- After the requirements are analyzed careful planning is performed minimizing the chance of future problems and current problems.
- The timetable is set for each stages along with deadlines so project can run smoothly and accurately following each stage.
- It is highly methodical model so information between stages are transferred smoothly.

With the advantages, comes disadvantages too which are listed below:

- It is not doubt that we can set duration for each stage but the fact is it is difficult to set the exact duration and estimate cost for each stage.
- It becomes complex to change something once we have entered testing stage.
- Since it cannot handle complex projects well, it is not a good choice for large organization.
- It is difficult to go back if the requirements are in a high risk of a change.

3.2 Design Pattern

Design patterns helps to speed up the development process of projects as it provides solutions to basic problems faces during software development. MVC generally known as Model, View and Controller is one of the design patterns many developers are familiar with.

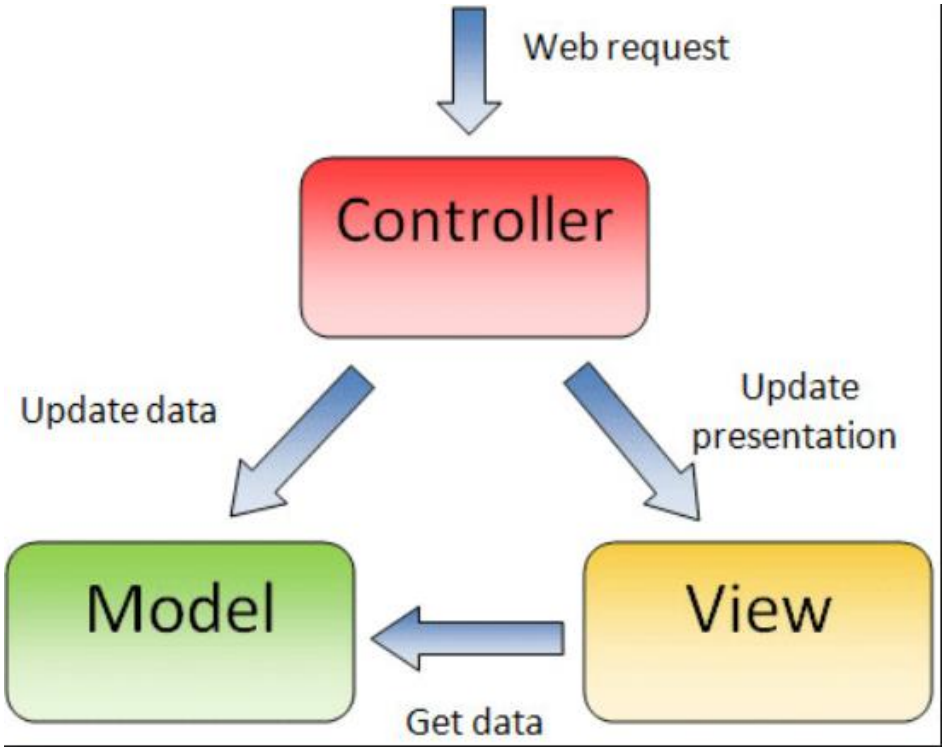

Figure 2. MVC Design Pattern

- **Model:-** It is the main component of MVC usually responsible for handling the data of any application. It is used to describe the business logic

- **View:-** It's function is to present the data received from controller.

- **Controller:-** Its function is to receive the user input and make a decision of what needs to be done with the exact input. It links the model with view by transferring data and information between them. It takes the user input through view, process it using model and again gives the result back to view for display.

3.3 Architecture

It is necessary to give a well structure your system. It depends on your project to decide what architecture you want to use. As for me I would chose three tier architecture.

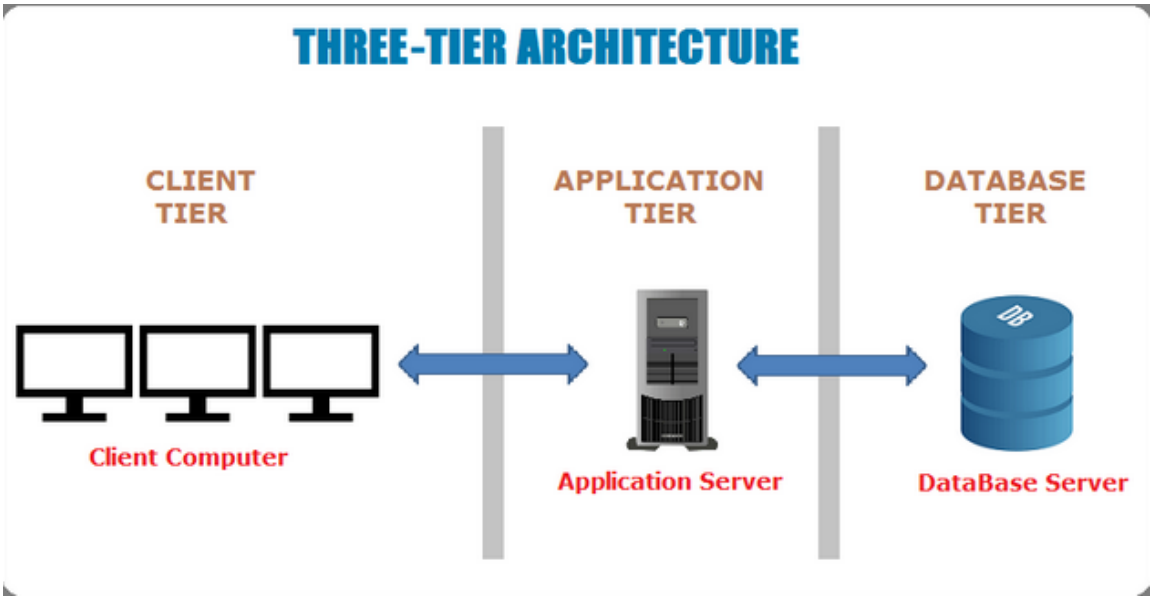

Figure 3. Three Tier Architecture

Three-tier Architecture:- It involves mainly three layers explained below:-

- **Presentation tier:-** Also known as client tier, it is used to display the data to the user as per the requested input. It is the front end layer consisting of user interface. For example textbox, button, checkbox, etc. are used for communication between user and software.
- **Application tier:-** It is also known as business tier. It performs detailed processing like validation and calculation of data, data insertion, etc. It is also known as intermediary tier as it is the link between client and data tier.
- **Data tier:-** It includes data storage structure and data access layer where database performance such as insert, update, delete, edit, etc. takes place. Data in this tier are independent of client and business tier.

4. Project Planning:-

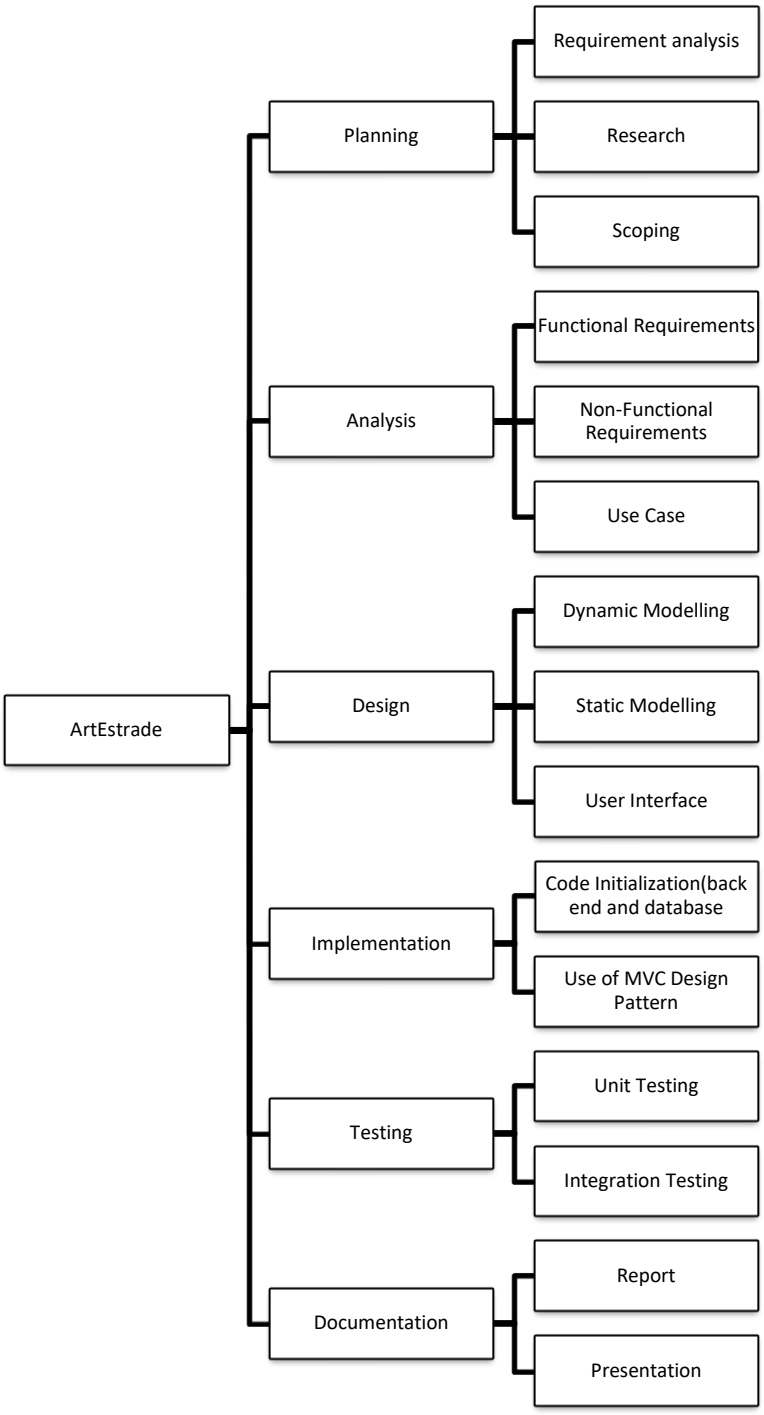

Figure 4. Project Planning

4.1 WBS:-

Dividing the complex works into other smaller parts makes it easier to understand and operate the work. That's what work breakdown structure does. It makes project simple to be executed and works can be supervised and estimated clearly.

WBS	Task Description	Estimated time in days
0	**ArtEstrade**	**109**
1	**Planning**	**15**
1.1	Research	5
1.2	Requirements Analysis	10
1.3	Scoping	
2	**Analysis**	**29**
2.1	Functional requirements	11
2.2	Non-functional requirements	11
2.3	Use case	7
3	**Design**	**26**
3.1	Dynamic Modeling	12
3.1	Static diagram	7
3.2	User-Interface	5
4	**Implementation**	**21**
4.1	Code Initialization	5
4.2	Use of MVC pattern	5
5	**Testing**	**7**
5.1	Unit testing	4
5.2	Integration testing	3
6	**Documentation**	**11**
6.1	Report	3
6.2	Presentation	3

4.2 Milestone

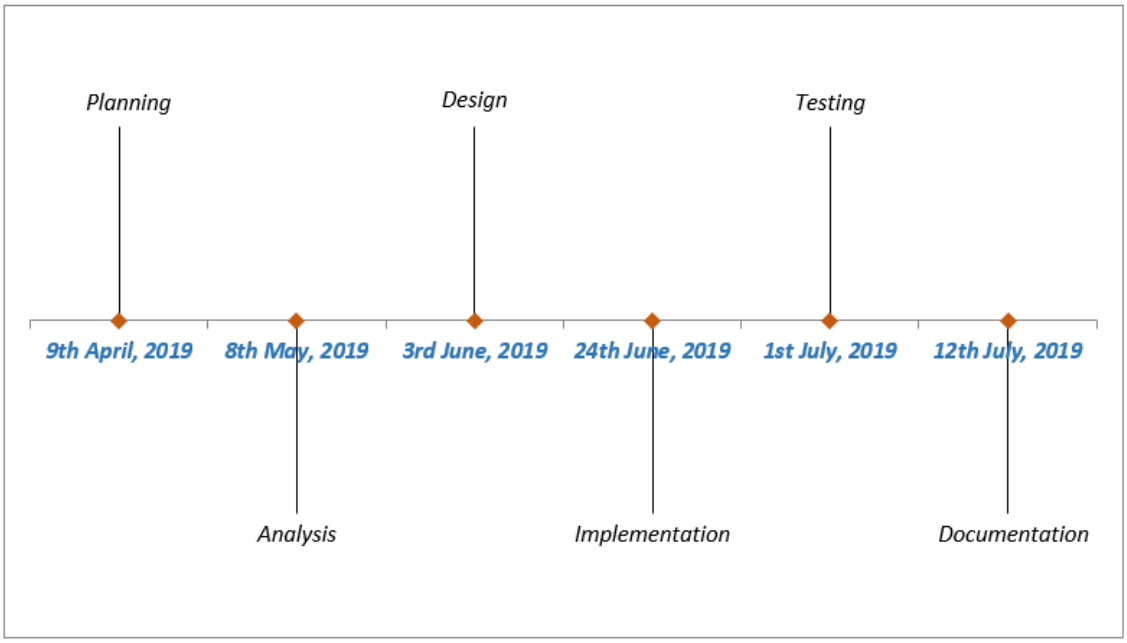

Figure 5. Milestone Chart

Planning:- 26th March,2019- 9th April,2019
Planning of proposal includes the analysis of requirements, research accordingly and the scope it covers.

Analysis:- 10th April,2019- 8th May,2019
Functional, Non-functional and use case are used deliberately for clear analysis. Use case includes diagram for clear and easy view.

Design:- 9th May,2019- 3rd June,2019
Designing based on analysis is done using different models like dynamic modeling, static modeling and user interface.

Implementation:- 4th June,2019- 24th June,2019
Coding is written in accordance with design that follows different design patterns. For this project I used MVC design patterns.

Testing:- 25th June,2019- 1st June,2019
Testing for code is done to solve any existing bugs. Unit testing and integration testing are two main testing mostly used.

Documentation:- 2nd July,2019- 12th July,2019
The final documentation is then prepared that includes summary of whole project. Report is made and presentation based on documentation is done if necessary.

4.3 Schedule

	Name	Duration	Start	Finish	Predecessors
1	**ArtEstrade**	**109 days?**	**3/26/19 8:00 AM**	**7/12/19 5:00 PM**	
2	**Planning**	**15 days?**	**3/26/19 8:00 AM**	**4/9/19 5:00 PM**	
3	Requirement Analysis	5 days?	3/26/19 8:00 AM	3/30/19 5:00 PM	
4	Research	5 days?	3/31/19 8:00 AM	4/4/19 5:00 PM	3
5	Scoping	5 days?	4/5/19 8:00 AM	4/9/19 5:00 PM	4
6	**Analysis**	**29 days?**	**4/10/19 8:00 AM**	**5/8/19 5:00 PM**	
7	Funtional Requirements	12 days?	4/10/19 8:00 AM	4/21/19 5:00 PM	5
8	Non-Functional Requirements	12 days?	4/22/19 8:00 AM	5/3/19 5:00 PM	7
9	Use Case	5 days?	5/4/19 8:00 AM	5/8/19 5:00 PM	8
10	**Design**	**26 days?**	**5/9/19 8:00 AM**	**6/3/19 5:00 PM**	
11	Dynamic Modelling	8 days?	5/9/19 8:00 AM	5/16/19 5:00 PM	9
12	Static Modelling	10 days?	5/17/19 8:00 AM	5/26/19 5:00 PM	11
13	User Interface	8 days?	5/27/19 8:00 AM	6/3/19 5:00 PM	12
14	**Implementation**	**21 days?**	**6/4/19 8:00 AM**	**6/24/19 5:00 PM**	
15	Code Initialization	14 days?	6/4/19 8:00 AM	6/17/19 5:00 PM	13
16	Use MVC	7 days?	6/18/19 8:00 AM	6/24/19 5:00 PM	15
17	**Testing**	**7 days?**	**6/25/19 8:00 AM**	**7/1/19 5:00 PM**	
18	Unit Testing	4 days?	6/25/19 8:00 AM	6/28/19 5:00 PM	16
19	Integration Testing	3 days?	6/29/19 8:00 AM	7/1/19 5:00 PM	18
20	**Documentation**	**11 days?**	**7/2/19 8:00 AM**	**7/12/19 5:00 PM**	
21	Report	8 days?	7/2/19 8:00 AM	7/9/19 5:00 PM	19
22	Presentation	3 days?	7/10/19 8:00 AM	7/12/19 5:00 PM	21

Figure 6. Schedule Table

Gantt Chart

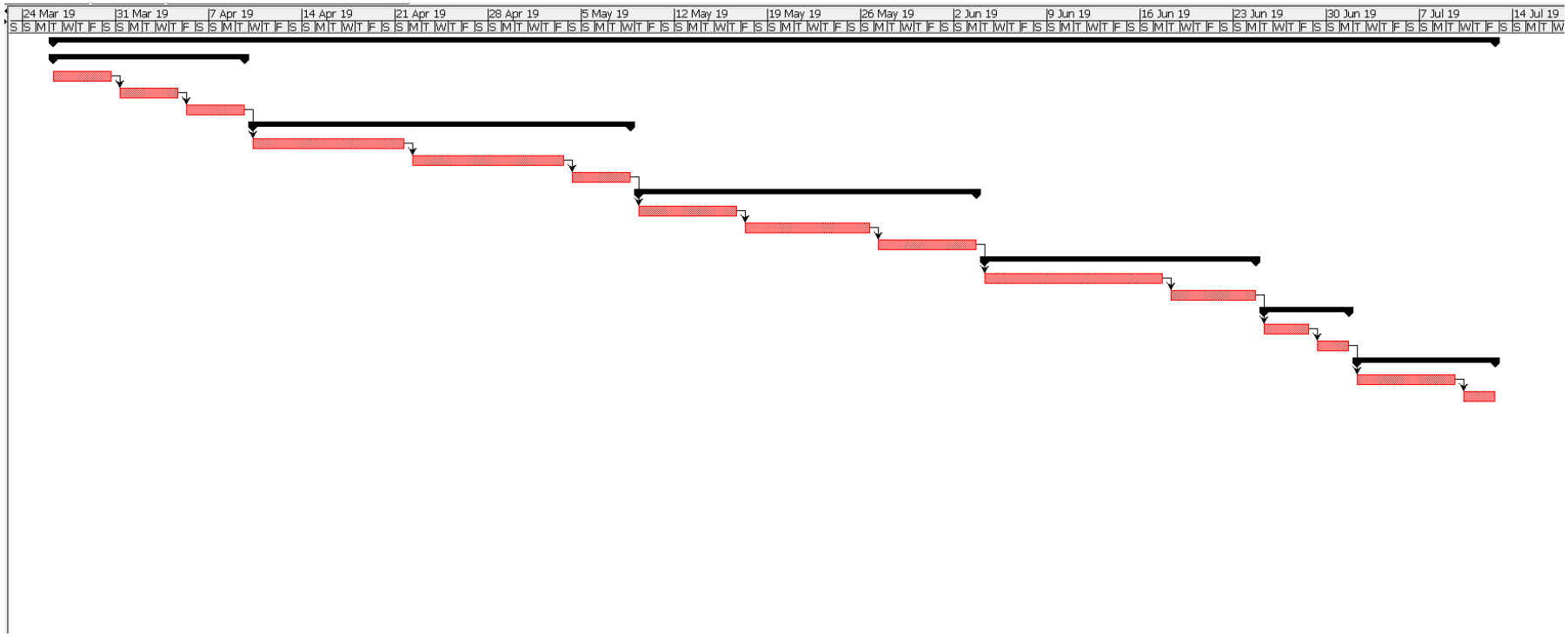

Figure 7. Gantt Chart

5. Risk Management:-

With every development that takes place, risks are bound to take place no matter what. Uncertainties and dangers always hover around making it difficult to proceed forward. However taken a great care and step these risks can be managed and reduced. Solutions to those uncertainties can be prepared beforehand if we can identify such uncertainties.

Some basic steps can be followed to cope with such risks which are stated below:-

1. Identification of risk
2. Analyze the risk
3. Comparison of risk
4. Treat the risk
5. Observe and Review the risk

Likelihood	**Value**
Low	1
Medium	2
High	3

Consequence	**Value**
Very low	1
Low	2
Medium	3
High	4
Very High	5

Following the principles of risk management and using risk management strategy, the risk management table is given below:-

S.N.	Risks	Likelihood	Consequence	Impact	Action
1.	Budget termination	2	2	4	Estimation of budget beforehand and save some extra amount.
2.	Data Breach	3	4	12	Strong password, implementation of strong security policies.
3.	Time constraints	1	3	3	Good set up of time for each task and .daily reminder should be set.
4.	Environmental factors	1	5	5	Backup beforehand and reclamation policies.
5	Hardware failure	2	4	8	Diagnosis of hardware,, back up beforehand, regular updates of the system
6.	Resource shortages	2	3	6	Checking all the resources early, finding the shorthand resources earlier and order them
7.	Lack of training	1	3	3	Essential provision of required training.

6. Configuration Management

It is the management of project's excellency, functions and its entities. Besides that configuration management also determines project's design, assessments and operative statistics.

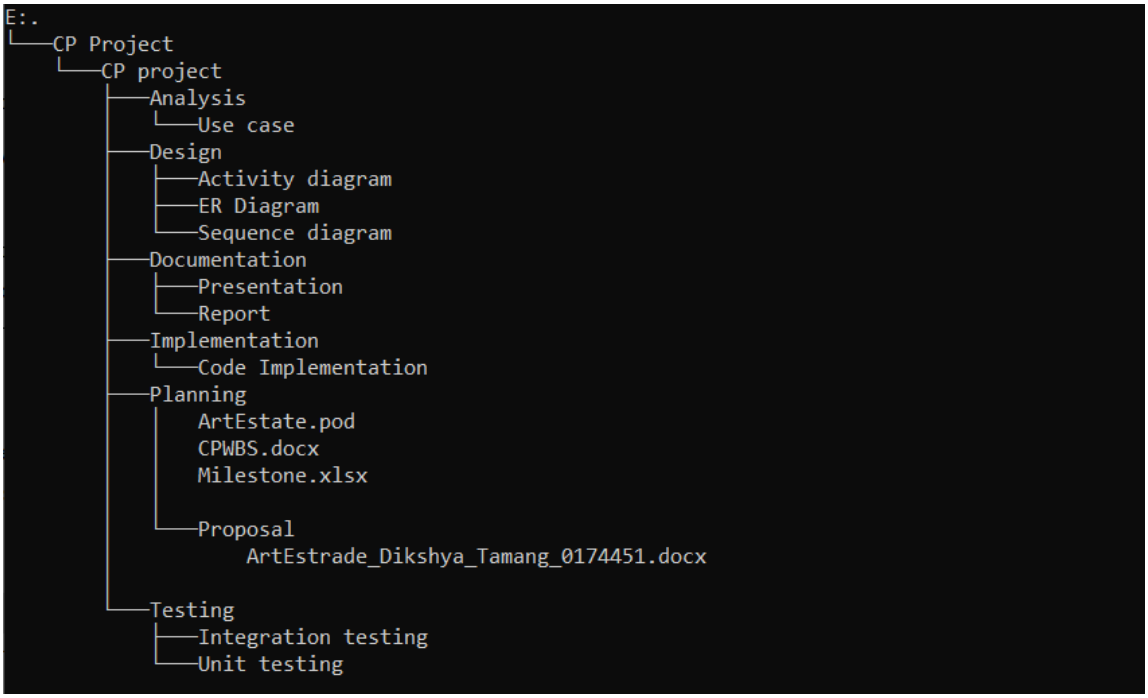

Figure 8. Configuration Management Tree Structure

7. Conclusion

To sum up, ArtEstate project was initiated to give a good marketing and learning platform for artists. What project is and why project was taken in account was explained well. The development process for the project was well clarified and measures to keep in mind were stated. Problems that are present and could come were stated. Moreover time constraints and diagrams were shown for the project for its sooth running.

8. Reference

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