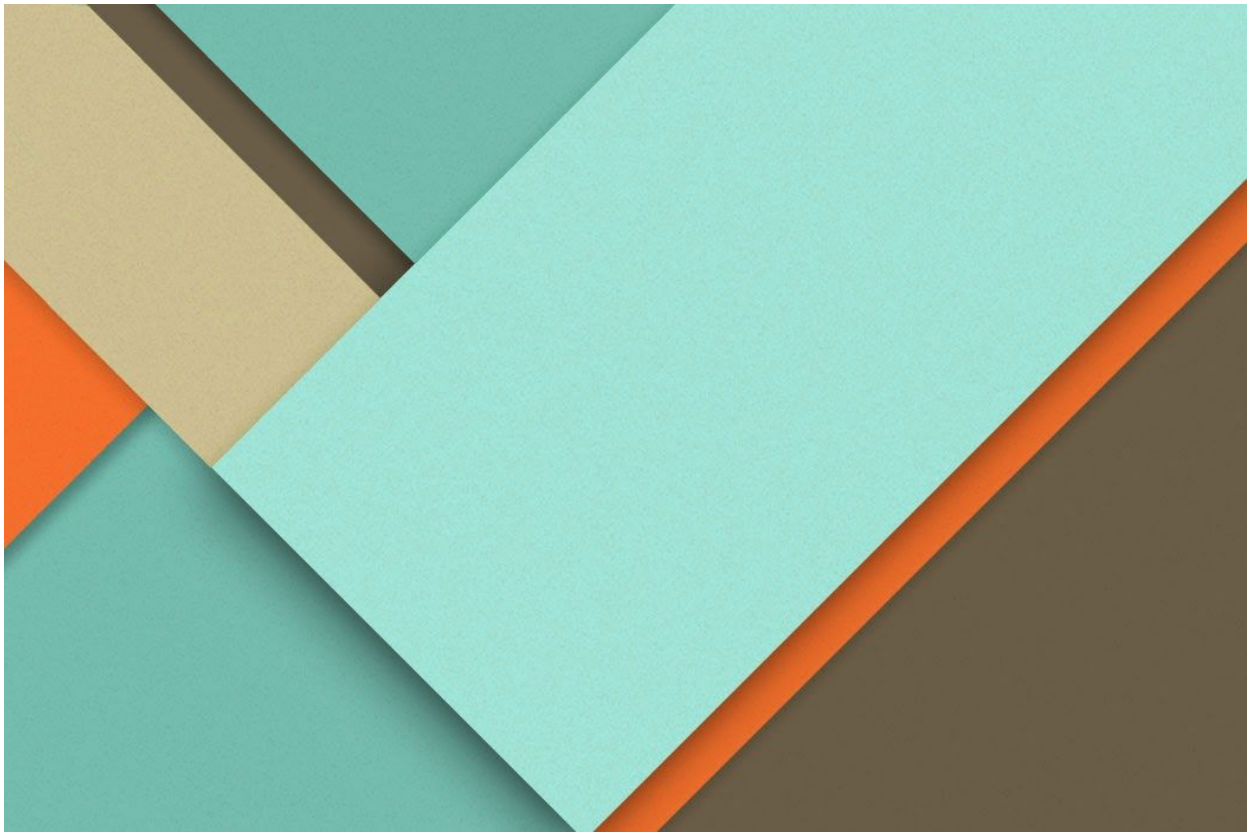

Mess Management System

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Group Details

Group No - B5

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Feasibility Study

Feasibility Study in Software Engineering is a study to evaluate feasibility of a proposed project or system. Feasibility study is one of the four stages of Software Project Management Process. As the name suggests feasibility study is the feasibility analysis or it is a measure of the software product in terms of how much beneficial product development will be for the organization in a practical point of view. Feasibility study is carried out based on many purposes to analyze whether software products will be right in terms of development, implantation, contribution of project to the organization etc.

Types of Feasibility Study :

The feasibility study mainly concentrates on below five mentioned areas. Among these Economic Feasibility Study is most important part of the feasibility analysis and Legal Feasibility Study is less considered feasibility analysis.

- **Technical Feasibility –**
  In Technical Feasibility current resources both hardware software along with required technology are analyzed/assessed to develop the project. This technical feasibility study gives a report whether there exists correct required resources and technologies which will be used for project development. Along with this, feasibility study also analyzes technical skills and capabilities of technical teams, existing technology can be used or not, maintenance and up-gradation is easy or not for chosen technology etc.
- **Operational Feasibility –**
  The Operational Feasibility degree of providing service to requirements is analyzed along with how easy the product will be to operate and maintenance after deployment. Along with this other operational scopes are determining usability of product, Determining suggested solutions by software development team is acceptable or not etc.

- **Economic Feasibility –**

  In Economic Feasibility study the cost and benefit of the project is analyzed. Means under this feasibility study a detailed analysis is carried out of what will be the cost of the project for development which includes all required cost for final development like hardware and software resource required, design and development cost and operational cost and so on. After that it is analyzed whether the project will be beneficial in terms of finance for organization or not.

- **Legal Feasibility –**

  The Legal Feasibility study project is analyzed in legality point of view. This includes analyzing barriers of legal implementation of project, data protection acts or social media laws, project certificate, license, copyright etc. Overall it can be said that a Legal Feasibility Study is a study to know if proposed projects conform to legal and ethical requirements.

- **Schedule Feasibility –**

  In Schedule Feasibility Study mainly timelines/deadlines is analyzed for proposed projects which includes how many times teams will take to complete the final project which has a great impact on the organization as the purpose of the project may fail if it can't be completed on time.

Feasibility Study For Our Online Mess Management System :

Our online mess management system is built around the ongoing condition of our Hostel Mess. This system will be beneficial in terms of both time consumption and ease of use for every student. We aim at providing a simple web platform for the daily ins and outs of the mess and hostel work which is currently managed manually. Let's have a deeper look into it and explore the different feasibility studies we did before finalising everything about this project.

- **Technical Feasibility –**

  As said above we as a team decided to choose web as our working platform because of the ease of maintenance, accessibility and cross platform support. The project will be divided in two parts - frontend and backend. We had so many so many popular technologies and frameworks to choose from but the choice of concern was revolving around two points - Modularity and Future support. So, for the frontend Nuxt which is built on top of Vue checked all the boxes as it's a very popular frontend framework with a great community support, on top of it we used VueSax as the UI framework to ease up the development process. As the backend development goes, we chose yet another class leading framework, fairly popular Django with SQLite as the database for the same.

- **Operational Feasibility –**

  The modularity of our choice of frameworks gives us an edge over maintenance. Vue lets us work with small UI components divided in Single Page templates, so if something breaks we just need to work on a single component rather than finding bugs going through the entire website. This eases up the maintenance. Both the frontend and backend frameworks are backed by an amazingly active community, so if our team gets stuck at some point, we have an ocean full of materials and help guides. Maintenance of the servers and hosting will be done by third party providers.

- **Economic Feasibility –**

  The expenses and cost of the project are going to be fairly limited to the hosting, servers and human labour. Considering the features to be implemented and the prices of hosting and servers, we estimate around 80-90 thousand Indian rupees initially. There won't be any need for specific

hardware and the development process won't require any paid softwares as such. The recurring cost of hosting and maintenance should be around 2k Indian rupees per month. The cost of the project is kept to minimal while making sure that the project leads aren't getting underpaid for their efforts.

- **Schedule Feasibility –**

  The initial planning and structuring of the project should be done in a week. After considering the scale of the project and the features to be implemented we aim to complete this project in 2 months of time. The end results may vary as per various situations. The project henceforth should be live in 2 and a half months.

Requirement Analysis

I. Hardware

Hardware requirements are minimal for this project. We will need two personal computers, with an operating system of user's choice. The servers and hosting will be provided by the hosting providers.

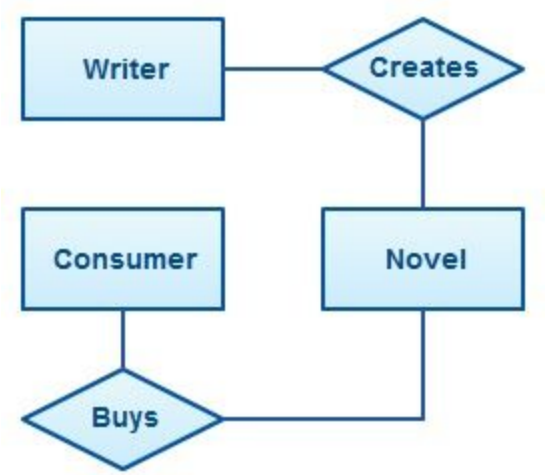
II. Software

We will be using free industry leading softwares for our project development. Our choice for code editor will be Visual Studio Code with the necessary plugins installed. The developers will be free to use any other helping softwares for a more efficient workflow.

- We will use GitHub for version control,managing and sharing our code.
- Frontend part will be developed using Nuxt (A server-side rendering framework built over Vue), Vue and VueSax(For UI components).
- Backend part will be developed by using Django (A python backend framework) , REST API and SQLite for databases.

Entity Relationship Diagrams

An Entity Relationship Diagram (ERD) is a visual representation of **different entities within a system and how they relate to each other**. For example, the elements writer, novel, and a consumer may be described using ER diagrams the following way:



Entity relationship diagrams are used in software engineering during the planning stages of the software project. They help to identify different system elements and their relationships with each other. It is often used as the basis for data flow diagrams or DFD's as they are commonly known.

ER Diagrams are composed of entities, relationships and attributes. They also depict cardinality, which defines relationships in terms of numbers.

ER Diagram for Mess Management System