

CSN-254

CHANNEL-6 **FEASIBILITY REPORT**

Team members and their contributions:

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Ashok Madamanchi-20114052
 - Project proposal
- Sri Vardhan Macharla-20114051
 - Problem statement, Customer, Preliminary requirement analysis
- Nimmagadda Vasavi-20114064
 - Outline plan, probable technical requirements.
- Rishikesh kudikala-20114046
 - Suggested deliverables, Process to be followed.
- Mahi babu-20114058
 - Visibility plan, risk analysis, future work.

A statement of the task to be undertaken:

SaS news is a mobile application for the people who look out for news every second. Having categorised news feeds along with the text to speech conversion of the news, users can really enjoy navigating through news. Sharing with friends and saving articles is one of the features that suits the name of the application. People are one registration away from using these features.

The customer for whom the work will be done:

SaS news is a market-driven software which is developed for an open market i.e., to be launched in the product market . It mainly targets the crowd who read news and expect better features from the news feed app.

A preliminary requirements analysis:

Requirements analysis is the process of determining user expectations for our product. Preliminary requirements and expectations that users have from this news feed app are:

- It should dynamically load the latest news articles of various categories like politics, sports, education, entertainment and many more.
- It must provide the feature to add friends for users and share the articles they like with them.
- It must provide a space to save the articles for easy accessibility in future.
- They also look out for text-to-speech feature which helps them listen to news while they are on their work.

Suggested deliverables:

The deliverables for this project may include SRS document, design document, test document, source code, user's manual, etc.

- **SRS Document:** An SRS(Software Requirements Specification) is a document that describes the nature of the application/software. It is a manual of a project that is prepared before you kick-start an application. It describes the functionality the product needs to fulfil all user's needs.
- **Design Document:** It is a document which will provide the complete information of the resources, features the use cases with which an end user can interact.
- **Test Documentation:** It involves the documentation of artefacts that should be developed before or during the testing of Software. Documentation for software testing helps in estimating the testing effort required, test coverage, requirement tracking, etc.
- **Source Code:** It consists of a set of programs that are written in a suitable efficient high-level language.
- **User Manual:** This includes a description of the system functions and capabilities also the alternate modes of operation, and step-by-step procedures for system access and use.

Process to be followed:

The software development model we are using for this project is Iterative waterfall Model. Iterative waterfall model is easy to understand and implement. Iterative waterfall model is an extension of waterfall model. It is almost the same as the classical waterfall model except some changes are made to increase the efficiency of the software development. The iterative waterfall model provides feedback paths from every phase to its preceding phases, which is the main difference from the classical waterfall model. In this model, less time is consumed on documenting and the team can spend more time on development and designing. It is highly cost-effective to change the plan or requirements in the model.

The main factors to undertake this iterative waterfall model for this process is

1. User requirements are well-known.
2. Risks can be estimated.
3. Size of the project is small.

Outline plan:

First of all, the project proposal is created and a thorough feasibility study regarding user requirements, cost, timeline, and resources is carried out.

Later SRS documentation is prepared to provide a detailed overview of software product for users and various stakeholders. And finally, team members with the help of SRS document prepare the design of software.

Next phase which follows after this is coding where work is divided accordingly among team members to develop the frontend and backend of the project and then integrate it to a working software. Risk Analysis, Testing and Deployment are the next important steps undertaken in the project.

Milestones:

Phase-1 : In the first phase of the project, a Project Proposal is written, Feasibility Study is conducted, SRS document and Design Documents are prepared.

Phase-2 : Coding and Implementation of Software Stage take place in the second phase.

Stage I - Development of backend modules where various servers are created, and it can be accessed through the internet via API (Application programming interface). Its purpose is to perform remote tasks such as storing the user's login credentials and also the shared and saved news.

Stage II - Development of frontend in which backend modules are used to visualise the variable states in an animated manner.

Stage III - Monitoring of various flaws or presence of bugs in the code.

Phase-3 : Testing and Deployment of software

Probable technical requirements:

For this project, the frontend is built using React native, backend with node js and mongo dB for Database management.

The Visibility plan:

To build the communication between team members offline meetings are conducted from time to time and deadlines are set for completion for the work divided between the group members and in between the deadlines regular meetings are conducted to track the progress of different units and thus analyse the project collectively.

Every team member works according to the SRS document prepared for their part of the work. Team members communicate with (dummy)customers after finishing each and every phase to know their opinions, any additional requirements, and expectations.

Risk analysis:

Risk-1: There may be API server's crashes from which we collect/receive news.

Solution: We use backup servers to resolve this problem.

Risk-2: It is possible that requirements may be vaguely understood or misunderstood.

Solution: The Group's interpretation of the Client's requirements will be presented back to the (dummy)Client or conduct small surveys to get a confirmation on whether the Group has understood the Client requirements and to avoid the misunderstandings.

Future Work:

We may include download article option for the users depending on the time and feasibility during the process progress.