**PROJECT FEASIBILITY STUDY REPORT**

**Course : Software Engineering - CS301**

**INSTITUTE NAME : INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DHARWAD (IIITDWD)**

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ROLL NO. : 21BCS025 , 4TH SEM CSE SEC ‘A’**

**GITHUB PROFILE -** [**https://github.com/Chaturth-R**](https://github.com/Chaturth-R)

**PROJECT NAME :** A weather app that utilizes a weather API to display current and forecasted weather information.

**APP NAME : ANEGUDDE WEATHER APP**

**TEAM NAME : ANEGUDDE WEATHER APP**

**OBJECTIVE :** To conduct the Feasibility Study for the Weather App Project.

**1. Problem statement : This project is to create a weather app that utilizes a weather API to display current and forecasted weather information.**

**The problem statement** for a weather app project might be "Providing accurate, up-to-date weather information to users in a convenient and user-friendly format, allowing them to plan their activities and stay safe in different weather conditions."

**Some specific goals that my app might aim to achieve includes:**

* Provide accurate and up-to-date weather information for a specific location.
* Allow users to easily switch between multiple locations.
* Provide an easy-to-use and visually appealing interface.
* Provide the option to view the weather information in different formats.
* Provide the option to track the location and get the weather information of that place.
* And many more new features might be added according to how the project goes in future.

**Note** that, the problem statement and goals for the project can differ respectively based on how the project goes in future.

**2. General terms and conditions for the Projects :**

A. Project location : India

B. Project total cost : Depends

C. Project time span : Till the semester ends

**3. Discuss in detail the project feasibility considering the four dimensions such as :**

**A. Technical feasibility :** I will need to develop a user-friendly App that will help to know weather conditions of their location and any places they want to visit.So that it will help the customer to plan their respective schedules accordingly.My idea for making weather app like to create a registration of the user using, fetch the current location of the user and display their respective location weather information and the user can see any location’s weather informations , weather informations which might be included are uv index,wind speed,humidity etc.

**B. Economic feasibility :** The cost for making this weather app depends as we are doing this project on our own and respective API’s and other respective sources.Some API’s needed paid subscription also might cost some money.

**C. Operational feasibility :**  The system working is quite easy to use and learn due to its easy but attractive interface. Users require no special training for operating the system.The app will need to be regularly updated and maintained in order to ensure that it continues to function correctly and provide accurate weather information.

**D. Legal feasibility :** The proposed Weather App will comply with all relevant regulations regarding data privacy and security, user’s consent, and compliance with relevant regulations. The system will have strict security measures in place to protect user’s data.

**A. INTRODUCTION :**

Weather forecasting is the application of science and technology to predict the conditions of the atmosphere for a given location and time.Human beings have attempted to predict the weather informally for millennia and formally since the 19th century. Weather forecasts are made by collecting quantitative data about the current state of the atmosphere at a given place and using meteorology to project how the atmosphere will change.Once a human-only endeavor based mainly upon changes in barometric pressure, current weather conditions, and sky condition or cloud cover, weather forecasting now relies on computer-based models that take many atmospheric factors into account. Human input is still required to pick the best possible forecast model to base the forecast upon, which involves pattern recognition skills,tele-connections, knowledge of model performance, and knowledge of model biases. The Accuracy of forecasting is due to the chaotic nature of the atmosphere, the massive computational power required to solve the equations that describe the atmosphere, the error involved in measuring the initial conditions, and an incomplete understanding of atmospheric processes. Hence, forecasts become less accurate as the difference between current time and the time for which the forecast is being made (the range of the forecast) increases. The use of ensembles and model consensus help narrow the error and pick the most likely outcome.There are a variety of end uses to weather forecasts. Weather

warnings are important forecasts because they are used to protect life and property. Forecasts based on temperature and precipitation are important to agriculture, and therefore to traders within commodity markets. Temperature forecasts are used by utility companies to estimate demand over coming days. On an everyday basis, people use weather forecasts to determine what to wear on a given day. Since Outdoor activities are severely curtailed by heavy rain, snow and wind chill, forecasts can be used to plan activities around these events, and to plan ahead and survive them.

**a.Stakeholders including end users of the Application Software are customers who are using the app.**

**b. Business profile :** [**https://www.linkedin.com/in/chaturth-r-745b3a22a**](https://www.linkedin.com/in/chaturth-r-745b3a22a)

**c.Problems in the existing system, if any :The current weather apps available in the market are not providing a user-friendly and personalized experience for customers.**

**B. Project scope :**

The scope of a weather app project would typically include the following:

* Development of a user interface that allows users to view current weather conditions and forecast information for a specific location.
* Integration with a weather API or data source to retrieve and display accurate weather information.
* Option for users to save multiple locations and switch between them.
* Option for users to view the weather information in different formats.
* Option for users to track the location and get the weather information of that place.
* And many more new features might be added according to how the project goes in future.

**Note** that the specific scope of the project may vary depending on how the project goes in future.

The proposed weather app is intended to address the growing need to learn about local and global weather conditions.Weather apps are the most popular way to instantly access forecasts, warnings and other useful weather information on our mobile phones. The proposed system is intended to improve the public with unprecedented flexibility: users choose the information they want, how they get it and how it looks. Weather App can be used to present weather and climate information services to the right people, in the right places and at the right times, so they can make informed lifesaving, business, leisure decisions and important decisions like lifesaving from harsh weather conditions.

**C. Methodology and tools used for feasibility study :**

**Brainstorming :**

Brainstorming is a popular technique for generating a large number

of ideas in a short amount of time.Brainstorming helped me to be creative, able to solve problems, helped me to improve my decision making for the project.

In brainstorming process I got many ideas for making weather app like to create a registration of the user using, fetch the current location of the user and display their respective location weather information and the user can see any location’s weather informations , weather informations which **might** be included are uv index,wind speed,humidity etc and **many more new ideas and new features which might be implemented in future according to how the project goes in future.**

**D. Observations or findings from the feasibility study :**

The main objective of the observation session is to understand the activity, task, tools used, and events performed by others. My Weather App will be providing a user-friendly and personalized experience for customers.I observed and got many ideas which made me feel like implementing them in my app.I observed the challenges faced by the customer’s currently and accordingly I got a chance to solve the challenges faced by the customer’s.Because of observation I got to improve my app ideas.

**E. Challenges and assumptions considered for the project study :**

**Challenges :**

* Data accuracy: Weather data can be complex and difficult to predict, so it is important to consider the potential for errors or inaccuracies in the data.
* Location tracking: The app will need to effectively track the user's location and use that information to retrieve and display weather information for the user's current location.
* Data source: The app will need to be integrated with a weather API or data source to retrieve and display accurate weather information. The technical feasibility of the app will depend on the availability of a reliable and robust weather API, as well as the ability to effectively integrate with that API.

**Assumptions :**

* Users will provide accurate location data for the app to retrieve weather information.
* A reliable and robust weather API is available.
* Users will have an internet connection while using the app.

**F. Recommendations :**

**Some Recommendations that I got :**

* Integrate with a reliable and robust weather API: It is important to ensure that the app is able to retrieve accurate and up-to-date weather information. This can be achieved by integrating with a reliable and robust weather API.
* Focus on user experience: The app should be easy to use, visually appealing and provide value to users in order for it to be adopted and used.
* Location tracking: The app should effectively track the user's location and use that information to retrieve and display weather information for the user's current location.
* Consider different formats of weather information: The app should provide the option to view the weather information in different formats.

**Recommendations for users :**

* Ensure that your device's location settings are enabled: In order for the app to provide accurate weather information for your location, it will need to be able to access your device's location.
* Check for updates regularly: Weather conditions can change rapidly, so it's important to ensure that the app is displaying the most up-to-date information.
* Customize the app to your needs.
* Users should have an internet connection while using the app.

**G. Team name, Student name and Roll number :**

**APP NAME : ANEGUDDE WEATHER APP**

**TEAM NAME : ANEGUDDE WEATHER APP**

**STUDENT NAME : CHATURTH R**

**ROLL NO. : 21BCS025**

**H. Glossary/References :**

[**https://en.wikipedia.org/wiki/Weather**](https://en.wikipedia.org/wiki/Weather)

[**https://en.wikipedia.org/wiki/Weather\_forecasting**](https://en.wikipedia.org/wiki/Weather_forecasting)