Swach App

*Dr. Shaveta Bhatia, #Himanshu Kumar, #Dipali Goswami, #ShivamKalra
Associate Professor & Head-FCA,MRIIRS, #Students,FCA,MRIIRS

Abstract

Since the announcement of Swachh Bharat & Smart City initiative. There has not been much work done in digital technology to realize the working solution of it. Green Smart City App offers an architecture to digitally realize the Clean and Green community initiatives for all responsible citizens and societies. In our solution we propose a model and implement it digitally as an Android App for a unified use by individuals, governmental and private setups involved in Swachh Green initiatives. The broad purpose of this app is to cover illegal plastic issues, smart green solutions, hygiene & sanitation, nature and energy and many others. Which are closely related to quality of human life and existence.

Keywords: *Swachh Bharat Abhiyan, Digital India, Smart City, Sustainable environment, Clean and Green Development, Android Application, Digitization, SwachApp.*

Introduction

SwachApp is the combination of two of the government's most renowned initiatives, Swachh Bharat Abhiyan and Digital India. SwachApp is an android based application platform primarily focused on the sanitation of our cities through digitization. SwachApp is the latest platform for reporting issues of sanitation without, actually, being have to go to municipal corporation departments. Making the use Google maps, SwachApp helps in tracking and locating the issues related to sanitation in the near area and also tracks waste management sites & public toilets. This application also provides us with an interactive form filling session through which a user can report an issue, upload its pictures, and provide a description for the same. SwachApp also has the feature of support and interested-in, for a particular sanitation event/drive, which can be used to raise awareness for the issues reported on this application platform. Further, people who are interested in such events can participate in it and also provide feedback for the same after the event has been completed or the issue has been dealt with. SwachApp also provides with a realiability feature, a fakeness and a completeness check. If an issue is seen to be a fake one, then a user can report it fake on the application. Similarly, a completed issue or event can be removed from the event list and can be transferred to the list of completed & successful events, only by single click by the user. An individual or an organisation can also initiate a sanitation event or a drive for green and clean city through this application, and contribute their efforts towards India clean and green drives and also promote government's Swachh Bharat Abhiyan and Digital India initiatives.

Problem

The major issue which caused the generation of this application was the lack in the integration of digitization and the sustainable environmental development of the society. The initiatives taken by the government were already a major step towards sanitation, but, they lacked the means through which the citizens could be encouraged to take part in these movements. Government's initiative for making everything digital was pinnacle in itself, but lacked the motive of making its own offices up to that mark. People would line up just to file a complaint for the sanitation in their area. While, this could have been made easier if this reporting of issues were also made digital in nature. Citizens would be much more aware of their surroundings if they got to locate E-waste centres and E-toilets near them. And then secondly, these major movements of sanitation and green & clean environment were not under the realization of the citizens.

Solution

SwachApp is an approach towards the solution of the problem of not realizing the government's initiatives. And, also providing these movements with a single platform on which citizens can rely on, report the issues, take part in events and in drives, check the issue's validity. Providing the access to locating E-waste management sites and E-toilets in the near area.

Features and Novelties:-

1. **Reporting issues:** The broad purpose of this feature is to connect people to government. People can take picture of garbage/dumps/illegal usage of plastic and report it to the government officials. And government can take appropriate actions on that complaints. Users can vote the complaints which emphasizes that the complaints needs to be solved quickly.

2. **Organizing SwachhtaAbhiyaan:** This feature will provide a platform to users to connect mass people. Using this feature, users can organize SwachhtaAbhiyaan like awareness campaigns, cleanliness drives etc. Whenever any event will be organized then people will be notified for that upcoming SwachhtaAbhiyaan and they can take part in Abhiyaan.

3. **Locating E-toilets & E-centers:** E-waste collection centers and Public Sanitation/E-toilet(Sulabh) available over the city will be shown on the map to maintain effective hygiene and sanitization in the city. Users can also request to government for making E-toilets nearby their locality, if it is not there.

4. **Information Sharing:** Develop an impact through knowledge of Plastic waste & to make India Plastic Mukta with some alternate green packaging/parcel solutions. App will have Live Air Quality Index of their city.

5. **Contribution Statistics:** This segment of the app will have score and ranking of the user based on the number of SwachhtaAbhiyaan organized, taking part in Abhiyaan etc. And government can offer recognition/awards those people who have good score. It will encourage others to take part in the SwachhtaAbhiyaan.

Technology Stack

Java & XML: We are using Java and XML for developing the solution.In android we will write the program logic in Java and Frontend in XML.

Java provides vast variety of open source tools and libraries so that is why we will be using Java Technology.

Android Studio & Android Development Kit: Android Studio provides code editing, debugging, performance tooling, a flexible build system, and an instant build/deploy system. It allows to focus on building unique and high-quality apps.

With the help of Android Developer Tools (ADT), we can gain full support for Android app development. Besides offering Android-specific coding support, ADT lets developers use various on-device debugging tools, a graphical UI builder, emulators, and fully scriptable test automation support.

Firebase: We will be using Google Firebase to store the data. It provides storage, authentication, database and much more. It is much easier to work and handle it as compared to other services.

Java, XML
Android SDK
Android Studio
Firebase Database

Technology Stack Image

Conclusion

In the above synopsis we explored the problems faced by the citizens to take part and promote the initiatives taken by the government. And we learned about how sustainable environmental development of the society, to make our cities clean and green, can be made better through the digitization of the major government efforts towards sanitation. We also learned how this all can be implemented through a process of making an android based application platform which works through the users and for the users.