Application Green Quake

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Github Link:
https://github.com/PeterX12/Application-Green-Quake.git
APK Github Link:
https://github.com/PeterX12/Application-Green-Quake/blob/master/ApplicationGreenQuake.apk
APK Google Drive Link:
https://drive.google.com/file/d/1MlPChFA_Z_XOzcy3yi_Q1Gt6JyNJcC1e/view?usp=sharing

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1 Mission Statement

Green Quakes mission is to motivate people to be more eco-friendly by making it fun, easy and rewarding to do so by using gamification and equipping them with the right tools in an attempt to bring behavioural, social and cultural changes for the Green Deal in an attempt to reach a climate neutral Europe by 2050.

2 Introduction

My vision is to create both a cross platform mobile application as well as a web-based application. I aim to create two versions of this application. One for companies who wish to encourage and reward their employees for environmentally friendly actions and one for the general public. This application will use gamification for motivation of people, provide relevant information and generally make it easier to be environmentally friendly.

3 The Problems

We find ourselves in the year 2020 and it is now with the rapid acceleration in climate change more evident than ever that we all need to switch up our lifestyles and live a more environmentally friendly lifestyle but this comes with a number of challenges.
1. People not having the motivation change their lifestyles to be more eco-friendly.
2. People are not aware of their effect on the pollution levels and the current state of pollution levels around them and the world.
3. People not having all the information or not knowing what to do.
4. Massive food waste as people throw food away when they realise it is on the or past the date of expiry. In the EU approximately 20% of the total food produced is lost or wasted, while 33 million people cannot afford a good meal every second day. In the EU, households waste 47 million tonnes of food a year and contribute to 70% of the total waste.
5. Buying plastic bottles instead of possessing a refillable bottle. This contributes to the plastic pollution in Europe as most of these bottles are thrown away. Europe makes 60 millions tons of plastic a year but only about 30% is recycled.
6. Not knowing how much money they can be saving.

4 The Proposed Solution

My proposed solution is an application that tackles these problems. My solution is to create two versions of applications. One for the general public and one for the companies to provide for their employees. These applications will be cross platform and the company version will come with an accompanying web application.

The application will allow users to record their eco friendly actions and get points, level up, unlock avatars and earn achievements, badges and trophies for them. They will also be ranked against people using this application. The application will also help and inform

people about how to be environmentally friendly and other related topics. As well as this the application will reduce food waste by notifying it's users about expiry dates and it will show people the nearest water refill station to put people off using plastic bottles and using reusable ones instead.

Both versions of the applications will be the same but with one key difference. The company version will reward people for their eco friendly activities and when they earn a certain amount of points they can cash them in for a reward. This will help companies promote themselves as eco friendly which in turn will make them more attractive to customers. As well as this company members and teams will be compared. This will embrace friendly competition to be environmentally friendly.
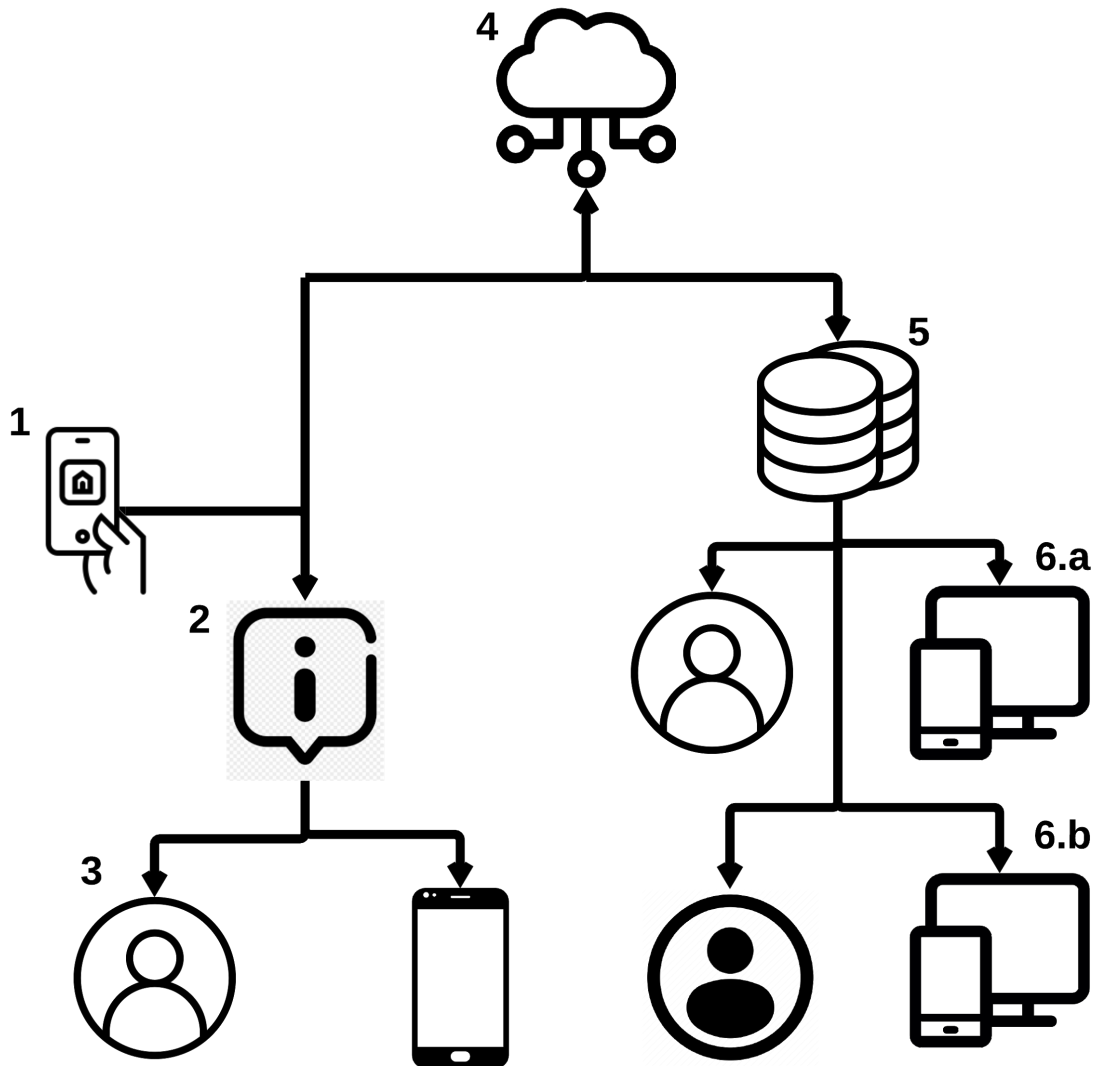
5 The Features

Following is a list of the features I would like my application to have:

1. Members will be encouraged to be environmentally friendly by logging their eco friendly activities which they will get points for as well as achievements. These eco friendly activities will be displayed in a list or a grid that the user can select and choose that they completed it ot a different option like placing it at the top of their to do list. They will be ranked on a score based system with their colleagues, friends or people around them.
2. Tips on how to be more eco friendly will be displayed to the members as well as other relevant information. Points and achievements can be earned by reading these.
3. Pollution levels will be displayed and other relevant information.
4. Food waste will be reduced as the member will be able to scan the barcode of the food or enter it manually to keep track of it's date of expiry. A notification will be sent when the date of expiry get's close. A user will also get points and earn achievements for using this feature and inputting or scanning their food items.
5. Members will be able to find refill stations for bottles on maps and will get points for using them and pinning new ones.
6. Amount of money saved will be shown.

These features are also subject to change as I will do more research and perhaps remove or add other features depending on the difficulty or possibility if the feature or if better ones are discovered.

6 Visual Representation of the Proposed Solution

1. The user logs in to the application and chooses an action form the menu. The user can log their actions, scan or manually enter a food item, view their nearest water refill station, view the scores and edit their profile.
2. The information is processed by the application and the correct screen is displayed
3. To the user on the mobile device.
4. This information is also sent to the cloud.
5. Which is then saved in a database.
6.
    a. The user can view and edit information.
    b. A company user can view and edit information as well as well as view their points and cash them for a reward.

7 Risks

- Some people never were and never will be interested in helping the environment so they will not try the app.
- People not wanting the app or being eco friendly
- People lying about their eco friendly actions.

8 Pillars of Success

I imagine my app to be successful if the following criteria are met:
- The full application is on the Google Play Stores and/or Apple Store.
- The company version of the app also has a website with metrics for the admin to use and reward its employees with.
- The application has users.

9 Potential Technologies

Database: Firebase.

Mobile app Programming Languages: Xamarin Forms, C#, JSON.
Mobile app Tools and Technologies: Visual Studio, Windows, Android and iOS.

Web app Programming Languages: JavaScript, Html, CSS.
Web app Tools and Technologies: Visual Studio Code, Windows, Vue.js.

Other Tools and Technologies: MS Teams, Gravit Designer, Miro, Various UI and Image Design Tools.

These are my proposed technologies and are a subject to change as I will carry out more research to see which I end up going with in the future.