GREEN WITH GROOT

Team Name: WE_ARE_GROOT

TEAM MEMBERS

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AIM

To encourage users of our web app to reduce their carbon footprint by saving electricity, fossil fuels etc. The benefits to the environment are direct, namely, **Less electricity** implies **less dependence on carbon-intensive power plants**. As for a user, the **benefits are three fold-** One has to pay less (for electricity bills); He/she will receive benefits in the form of coins (which would be redeemable for discounts on environment friendly goods); and most importantly, the mental satisfaction one would gain with the experience would be immense.

INTRODUCTION

A **carbon footprint** is the total amount of greenhouse gases (including **carbon** dioxide and methane) that are generated by our daily actions.

We have built a web application which motivates the users to curtail their carbon footprint. The way it works is that every month, the Carbon Footprint of a user is calculated based on certain parameters. This value is then compared to the Carbon Footprint of the previous month, and if there is a decrease in the value, we add some coins (virtual) in the user's account depending upon the difference. These coins can then be redeemed in the form of discount coupons for the

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purchase of some recycled, green products. In this way, not only would we promote a cleaner environment at an individual level, but also **we would help the currently not-so-thriving Green Products Industry.**

PARAMETERS

 Currently we have focused on four major parameters-

- Electricity consumption
- LPG consumption
- Petrol consumption
- Diesel consumption

Carbon Footprint has been calculated from these values using appropriate Emission Factors from official websites. Electricity and LPG consumption can easily be verified by the use of some API's like Zuelpay which bring the information directly from government sources. Regarding Petrol and diesel consumption, in actual implementation, this can be linked with the details of the vehicle owned by the user (Kilometers travelled, mileage, age, etc). As of now, to execute basic implementation, we have used a local database which has these details for different accounts.

 As we progress further, we have planned on using more optional parameters, for example travel details, food habits etc..

ADDITIONAL FEATURES

- We have added a feature of streak, which maintains the number of months for which the user consecutively lowered his/her carbon footprint. Based on the streak of a user the number of coins gained increases accordingly. If a user fails to lower his/her carbon footprint, the streak would reset to 0 and the user will not be able to gain any coins for that month.

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- Apart from that, we have provided an interface, which would allow organisations to showcase environment friendly products and the users could purchase the same from our application.

- Our application also helps in facilitating the selling of recyclable waste. A request for waste pickup can be made by the user, which would then be catered-to by our partners.

LIST OF IBM CLOUD SERVICES USED

- **IBM APP ID**
- **IBM CLOUD STORAGE**