IT632-SOFTWARE ENGINEERING

SIR:PROFESSOR SAURABH TIWARI

MENTOR:SAMEEKSHA JAIN

GROUP MEMBERS:

PRACHI GOLE

FAISAL AJMERI

KARINA BAVISHI

AROHI SINGHAL

SHARVI GABANI

NIRMAL PANCHAL

UTTAMKUMAR DOBARIYA

DHRUMIL GOHIL

NISARG SHAH

AYUSH GARG

MANSI JANI

Diet Tracker and Analyser

1.INTRODUCTION

DietAdvisor is a **wellness platform** that provides services such as calorie tracking, fitness coaching, and diet plan.
It will allow users to track calories, and monitor progress toward weight-management goals.
DietAdvisor takes a holistic lifestyle tracking approach to keep users engaged, motivated, and adhere to exercise and diet goals.

2.OVERALL DESCRIPTION

2.1 Project Scope Description

- We are designing a **Diet Advisor Website**. Which helps users reach a specific goal of weight loss/gain/maintenance. Here the first user will enter his/her weight, normal activity level, goal to reach and time to reach the goal. Accordingly he is given the calories to be consumed daily that he has to abide by to reach his goal. Website contains a list of food items along with calories which the user can add to his daily diet. If certain food is not present he/she can add a food item along with calories. Weekly/monthly/end of goal reports are given. Further, option to change goal provided.
- Currently a lot of people are becoming aware of the importance of fitness in their lives. Our website helps them keep their weight in check by keeping track of the food they consume throughout the day and the exercise they do.

2.2 USERS AND STAKEHOLDERS

- Common People
- Admin

2.3 POSSIBLE FEATURES

- Portability
- Integrity
- Reliability
- User-friendly

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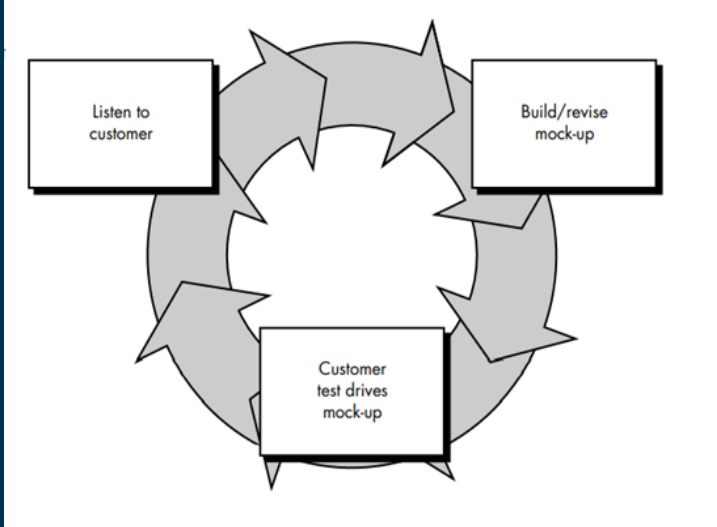
2.4 REQUIREMENT ELICITATION TECHNIQUE

- The following questions were raised upon requirement elicitation:
  - How are you maintaining the data in the project?
  - What are the risk factors that affect the proposed system development and what to do to avoid that?
  - What are the main features of the project?

2.5 PROCESS MODEL



- The prototyping model is a systems development method in which a prototype is built, tested and then reworked as necessary until an acceptable outcome is achieved from which the complete system or product can be developed.
- This model works best in scenarios where not all of the project requirements are known in detail ahead of time. It is an iterative, trial-and-error process that takes place between the developers and the users.
- We have chosen the **evolutionary prototyping model**. It will be easier to implement additional changes to the existing project.

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3. FUNCTIONAL REQUIREMENTS

3.1 FUNCTIONAL REQUIREMENTS AND USER STORIES:

- Register
- Login
- Calculate BMI
- User goal
- User preferences
- Calculate Calories
- Display calories
- Daily food intake, Display Type of Exercise
- Feedback
- User-Progress
- Progress at end of day/week/month
- Change goal
- Reminder
- Logout
- View profile
- Update profile

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3.2 USE CASE DIAGRAM

Use-case Diagram

3.3 USE CASE DESCRIPTION

use-case Description

4. NON FUNCTIONAL REQUIREMENTS

- Platform independent
- Usability
- Availability
- Security
- Performance
- Reliability
- Reusability

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5. ANALYSIS DESIGN DOCUMENTS

5.1 Analysis Class diagram

Analysis class diagram

5.2 Complete Analysis Diagram

Complete analysis diagram

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6. SYSTEM DESIGN

6.1 SUB SYSTEM DESIGN

Sub system design

6.2 OBJECT DESIGN

Object design

7. TESTING PLAN:

A Test Plan is a detailed document that describes the test strategy, objectives, schedule, estimation, deliverables, and resources required to perform testing for a software product. Test Plan helps us determine the effort needed to validate the quality of the application under test.

White Box Testing:- Unit Testing Each unit test is tested by the thunder client. This process is done by testing each module of our software project. Through unit testing, we have confirmed the performance of each unit component. Integration Testing:- In integration testing, the testing is done on combined unit test cases. Through integration testing, we have obtained the results about whether the modules work in combination or not.

Black box testing:- 24 In black-box testing, the input is taken from the frontend part and tested whether it fulfills the required requirements. This is done by taking the input from the tester and checking the conditions and based on that some output is generated. If the input satisfies the required requirements then the data flow will not be affected. If the input does not satisfy the required requirements then due to validations the data flow is affected and an alert message is displayed stating the corresponding message.

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8. TESTING STRATEGIES AND FRAMEWORK

Testing strategies and framework

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9. CHALLENGES WE FACED

Pros:
- Gives you an idea (if used correctly) of how much you have eaten during the day, or how many calories are in a certain food or drink. People notoriously underestimate how much they eat.

- Gives you immediate feedback so you can adjust your food/drink intake accordingly for your individual circumstances and goals.

- For people who like routines and targets, having to log food and activity each day can help them stick to their plan and provide a framework and structure.

- Now you can see how many calories in food and drink are consumed as well as how much protein, carbs, and fats are. From here you can adjust your targets. Be wary though some of the nutrient data entered are incomplete or incorrect.

- You can use it to try and improve habits, see how many calories are in certain foods and drinks, then change your habits and routines accordingly.

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9. CHALLENGES WE FACED

Cons:
- Misreporting- This can be anything from weighing inaccuracies, the wrong portion sizes, or consciously/subconsciously not entering food and drink consumed.

- Some may find it painful to have to log every day or plan their intake. People can end up forgetting what they have.

- Users may end up getting so focused on the numbers, ending up a bit neurotic about the diet and numbers. Social situations may become daunting as you don't want to mess up the calorie and macro targets

- Intuitive eating: Intuitive eating is the idea you should eat when you are hungry and stop when you are full stop eating when you start feeling. Some may rely on the app and just the numbers instead of listening to your body's hunger signals.

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10. LESSONS LEARNED

Identify:
This is done by revising what went well , what didn't go well and what needs to be improved. This should be done during lesson learning participated by the key stakeholders of the project. In this we summarised the result and analysed them along with other key reports during the session to identify project failures and success.

Documentation (steps):

- We created a UI for the project
- Which gave us the good idea about what makes our project friendly to user
- After sending the UI to the internal and external project stakeholders, they started with implementation

In this we documented the results with a detailed report that included the participants feedback on the strength and weakness of the project and recommendations for the improvement and once the report got completed, it was shared with the team.

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10. LESSONS LEARNED

Analyse:
Analyse the document in order to determine how to apply them

Archive:
Stores the documents in an easily accessible location for the project members. (i.e. Google Drive & GitHub).

Retrieve:
Refer to the documents for improvising the current project process and finalise the details. Organise the documents by creating folders for each type of project with their date and name

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THANK YOU