Project description

Food and recipe assistant

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Background description

Food is something that people need for their survival. From the food we get energy and nutrients needed for the body maintenance, fighting viruses and bacteria, for the body regeneration and stimulation of the growth. The amount of food people need differs from person to person depending on the sex, weight, height, age and physical activity of the individual. Energy gained from the food is measured in calories and the average for an adult is 2,700. This knowledge allows as to plan the proper diet that makes us vital and full of energy as well as ensures that body gets all stances needed. All the nutrients can be put into five groups. Those are carbohydrates, fats, proteins, vitamins and minerals.

Carbohydrate are the primary source of energy. The significant amount comes from the plants especially starchy ones like beans, potatoes and gains. However, people should be careful about the intake of sugars since the high amounts can lead to obesity and other health problems.

Fats are the second main source of energy. Even though many people avoid fats thinking they are dangerous for the weight maintenance, they are as important as sugars. The presence of same fats is even needed for the body to absorb some vitamins.

Proteins are the building blocks of the human body and thus are very important. The biggest resource of proteins are animal products and beans.

The times when food was just food, just a basic need is gone. As people evolved, their interest in food processing grew and became one of the most popular interests because everybody has to eat. People started to write down the recipes and started to share them. That is how cookbooks came into this world. As the modern technology progressed this part of human culture did not remain unimpacted. A lot of new technologies and applications were introduced to ease the everyday struggle with keeping and managing recipes. Original ways like paper cookbooks, newspaper cuttings, sticky notes on the fridge etc. were replaced with mobile applications and online forums where people can discuss and share their ideas with others. On the one hand it turned all the original issues into very simple tasks but on the other hand a new problem arose.

We have different applications likes recipe management systems, shopping lists, applications for keeping track of the expiry date of the groceries, forums for sharing recipes etc. This can be fine if people need just one or two applications but for the people with bigger interest in culinary arts or for people with special needs or diets a problem arises. People have to jump from one application to another and sometimes they even need to transfer data by themselves since these applications are not interconnected.

Moreover nowadays, in the world of internet, people have so many options that it might get difficult to make right decisions regarding their diet and they hard times picking the right recipe.

(food | Definition & Nutrition | Britannica.com, 2019)

(food | National Geographic Society, 2019)

Purpose

The goal of this project is to reduce the overwhelming number of different applications needed to manage, share recipes, create shopping lists and maintain diets by replacing them with a single solution so the user does not need to jump from one application to another.

Problem statement

Currently people need to install different applications with different purposes regarding the recipe management which takes resources and is time consuming. The challenge in this project is to provide a solution for the overwhelming amount of applications for the people with special needs or diets or for people that require advanced recipe management system.

- How can the user store the recipes and the user information?
- How can the user share the recipes with other users?
- How can the user access the application on different platforms?
- How can the user get recipe suggestions?
- How can the user keep their recipes sorted in some way?
- How can the user create and store a shopping list?

Delimitation

The listed functionalities will be out of our scope due to the limited time and resources for this project.

1. Functionality for keeping track of the expiry date of the groceries.
2. Functionality replacing forums for sharing recipes and discussions.
3. System for data exchange between different applications.

Methodology

To achieve a high agility and good overview the SCRUM was chosen for the development process management. Moreover, it will improve the project planning as well as give us an option to track and monitor the progress. This means that daily scrum meetings will be involved in the process and will take 10-15 minutes every morning to discuss work done from the previous day and to plan the work to be done that day, so everybody has an overview of what is currently going on. It will also provide a space for questions and discussion of problems. We also decided for UP to ensure high agility for the development process.

Project phases

Inception

In this phase we would like to achieve that all the stakeholders will understand the lifecycle and all objectives of this project. We want to focus on key things such as understanding what we want to build in which order. Identify and understand all functionalities of our system. If needed also do estimation on costs for project.

Elaboration

This phase of the project is going to be dedicated to gather and identify more detailed and in-depth system/project requirements, because having a detailed understanding of requirements and dependencies makes us stricter and more accurate on plan. Part of this phase is also going to be dedicated to design and validate the foundation of the system architecture.

Construction

For this phase we would like to start coding foundations for the system. Which also should provide is with more accurate estimation on time and costs. In this phase the strict timeline for sprints will come to hand since to be able to follow all our visions we must precisely follow our planned events. Also, all the diagrams and visualizations of our system will take place in this phase.

Transition

At this stage of project, we want to have all our project specifications and diagrams done and up to date according to system. The whole code will be documented etc. The team who was in development phase is also going to be responsible for transition.

Scrum roles

Scrum master

Patrik Ihnat

Product owner

 Patrik Kucerka

Development team

Patrik Kucerka, Patrik Ihnat

Sprint backlog

This backlog is going to be created at very beginning of each sprint and afterwards may be modified during or after sprint to adjust it according to outcomes.

Question	Objective	Model
How can we store the recipes and user information?	It is important to choose a suitable system for storing the information about the user as well as recipes.	JSON objects stored in the database.
How can the user share recipes with other users?	We need to satisfy the need to share recipes with other users.	Through the user email.
How can we make the application available on different platforms?	It is necessary that the users can access their recipes from any computer.	The solution will be a web application.
How can the user keep their recipes sorted in some way?	It is essential that the user can sort their recipes and organize them.	Option to apply filters to a list of recipes.
How can the application suggest recipes?	We have to find an algorithm that will try to predict and generate a suggestion for the users.	The application will collect data about recently cooked recipes and take into consideration user's requirements.
How can the user create and store a shopping list?	Possibility of creating a shopping list is of great importance.	Application UI will allow the user add items to shopping list directly from recipes. These items will be stored in the database as JSON objects

Time schedule

The time this project will take is estimated to be 554 hours per person. The following time schedule displays the ideal working time over the.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8 –16	8-16	8-16	0	8-16	0	0

Estimated durations of the phases of UP:

1.2 - 15.2 - Inception
16.2 – 7.3 - Elaboration
8.3 – 31.4 - Construction
1.5 – 30.5 – Transition

Schedule of SCRUM sprints:

Sprint 1	Sprint 2	Sprint 3	Sprint 4	Sprint 5	Sprint 6	Sprint 7	Sprint 8
1.2 - 15.2	16.2 - 29.2	1.3 - 15.3	16.3 - 30.3	1.4 - 15.4	16.4 - 31.4	1.5 - 15.5	16.5 - 4.6

Miles stones/sprint durations:

1.sprint: 70 hours

2 sprint: 64 hours

3 sprint: 70 hours

4 sprint: 70 hours

5 sprint: 70 hours

6 sprint: 70 hours

7 sprint: 70 hours

8 sprint: 70 hours

Risk assessment

Risk	Description	Likelihood Scale: 1-5	Severit y Scale: 1-5	Risk mitigation	Identifiers
Miscommunic ation	Communication failure	2	4	Morning meetings	Task are not being achieved
Unpredictable conditions	Unexpected work shifts	3	5	Back-up plan	Task are wrongly implemented
Lack of time	Extra classes	3	4	Precise planning	Task implementation is delayed
Redesigning of system	System has to be redesigned due to the lack of knowledge	2	5	Careful design	Design cannot be implemented

References

Anon 2019. *food | Definition & Nutrition | Britannica.com*. [online] Available at: <https://www.britannica.com/topic/food> [Accessed 28 Oct. 2019].

Anon 2019. *food | National Geographic Society*. [online] Available at: <https://www.nationalgeographic.org/encyclopedia/food/> [Accessed 28 Oct. 2019].