Sous-Chef
Project Proposal v3.0

Submitted to: **Prof. Asim Banerjee**

Mentor: **Ms. Hemantha K.**

IT314 SEN 2016

Team 28

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1. Version Details

Date	Author	Reviewer	Version
30/01/2016	Shaleen Kumar Gupta, Nidhi Pitroda, Charmi Mehta and Khyati Mahajan	S. Chaitanya Prasad	3.0

2. Abstract

The project aims at making an Android application that can enable users to search for recipes based on the core ingredients they have at their disposal. In a nutshell, it is reverse searching for Food Recipes. The user would submit queries relating to the core ingredients they have at their disposal. The application would then display the results which the user could use in the order to cook. In successive iterations the team also hopes to incorporate user profiles and enable users to submit their own recipes. All the recipes maintained in the database would also be rated and would have associated reviews, all of which would help the users to make the best choice for their meal.

3. Project DevOps Team

- Shaleen Kumar Gupta (Team Leader)
- S. Chaitanya Prasad
- Khyati Mahajan
- Kandarp Joshi
- Jaimin Khanderia
- Nidhi Pitroda
- Jay Bhatt
- Charmi Mehta

4. Development Plan:

We plan to follow an Iterative Software Development Lifecycle [1] in the course of the project. The overall cycle of software development has been broken down into a set of phases, each handling a different concern of software development process:

- **Pre Development Phase**
  The pre development phase decides on the following stages:

1. Feasibility check
2. Project proposal

- **Development Phase**

    At the end of document phase the outputs will be:
    1. Requirements
    2. Design
    3. Coding and Unit testing
    4. Integration testing
    5. System testing

- **Post Development Phase**

    By the end of the development phase, the following checks need to be done:

    1. Acceptance testing
    2. Maintenance of system
    3. Discussions on next iterations

Following are the details of each phase:

4.1 Pre Development Phase

4.1.1 Feasibility Check

The feasibility checks were performed for all the project ideas that our team considered. One of those ideas which were discussed to be feasible was chosen and is proposed in this proposal.

4.1.2 Proposal

This is a formal document outlining the process and the deadlines to be followed while developing the project.

4.2 Development Phase

4.2.1 Requirements

The project would require the following in order to develop the application.

- Infrastructure Requirements

    - Server Space of at least 1GB
    - Working internet connection with at least 1Mbps speed
    - Personal Computers for all the developers

- Software Requirements

    - Android Studio
    - Android Software Development Kit (SDK)
    - React JS
    - JetBrains PyCharm Community Edition
    - Git Version Control
    - Python
    - Elastic Search module for python

All the requirements will be specified in the Software Requirements Specifications (SRS) document

4.2.2 Design Phase

In this phase the team will create UI mockups and showcase the core functionalities of the applications in a visually appealing way so that it would be easier for the reviewers and possibly the client. In this phase the requirements which are documented will be transformed into a structure which is suitable for implementation.

4.2.3 Coding and Unit testing phase

This phase, essentially the crux of the software development life cycle, will involve the actual programming implementation of all the ideas proposed in the project proposal. This would involve developing the Android application and configuring it to interact with a separately developed API endpoint which in turn, will serve the requests from users and return back the results. This API endpoint will be developed in python using

the Flask module. Core functionalities like search will implemented using the Elastic Search API for python.

4.2.4 Integration and System testing:

The team will integrate all the standalone modules to make the final software which will be further tested by the members. Integration testing will confirm that the interfaces between the modules work correctly and system testing will check whether the entire software work as desired or not.

4.3 Post Development phase:

This phase would primarily involve deployment of the product on the server, alpha-beta testing, publishing the application on the Google Play Store for users to download, and lastly, the maintenance work. The maintenance team will analyze the user reviews collected and do appropriate bug fixing if need be.

5. Deliverables and Deadlines:

Phase	Tasks Involved	Start Date	Deadline
Inception	Finalizing a project idea, feasibility analysis, Submitting the proposal	January 18, 2016	January 31, 2016
Elaboration	Defining, validating and base lining the architecture, Submitting Software Requirements Specifications (SRS), Setting up development environment	February 1, 2016	February 15, 2016
Construction	Complete component development, Resource Management, Assessment	February 16, 2016	April 7, 2016

	against acceptance criteria, Unit Testing, submitting change proposal and iterate through the phase again if required		
Transition	Deployment on Server, Beta Testing, Preparing the User Manual, Publishing the Application, Getting and Analyzing User Reviews	April 7, 2016	April 15, 2016

6. Team Organization/Work Distribution:

1. Documentation
    a. Khyati Mahajan
    b. Shaleen Kumar Gupta
    c. S. Chaitanya Prasad
2. Android App Development
    a. Kandarp Joshi
    b. S. Chaitanya Prasad
    c. Shaleen Kumar Gupta
    d. Khyati Mahajan
    e. Nidhi Pitroda
    f. Charmi Mehta
3. Database Administration
    a. Jaimin Khanderia
    b. Jay Bhatt
4. Web Framework
    a. S. Chaitanya Prasad
    b. Shaleen Kumar Gupta
    c. Khyati Mahajan
    d. Kandarp Joshi
    e. Jaimin Khanderia
5. Server Deployment

a. Jaimin Khanderia
   b. Shaleen Kumar Gupta
   c. Kandarp Joshi
6. User Manual
   a. Khyati Mahajan
   b. Nidhi Pitroda
   c. Charmi Mehta
7. Testing
   a. Nidhi Pitroda
   b. Khyati Mahajan
   c. S. Chaitanya Prasad
8. User Reviews
   a. Charmi Mehta
   b. Jay Bhatt

7. Project Monitoring and Quality Control:

The team plans to closely monitor the progress of the product development. The team has set up a S*lack*[2] and a Trello[3] account to create and monitor deadlines. Regular group meetings will be conducted and the TA mentor will be invited at least to every alternate meeting to track progress. We also plan to schedule a mid-project presentation to present the work undertaken till that point of time.

Moreover, to keep a tab on the quality of the project, an extensive review process will be undertaken by a separate set of individuals. Due alpha and beta testing shall be performed and user reviews will be collected and analyzed once the application is developed.

8. Cost Analysis:

We figure that the major costs incurred would have been of the server space and Android Developer account. But luckily, these come at no cost to us, since one of the members already has a play store and the team has

identified a free web hosting platform for python based products. Moreover, we plan to use all freely available softwares and APIs for the development of the product. So, the team will not incur any major financial cost. The only cost would come in terms of sweat and time. But since all the team members are students and this is going to be an excellent learning opportunity for all of them, the team has agreed to work without any remuneration.

9. References

[1] Rational Unified Process http://sce.uhcl.edu/helm/rationalunifiedprocess/
[2] Slack https://slack.com/is
[3] Trello https://trello.com/