IT314 Software Engineering Team 28

Feasibility Study Report

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Overview

This is the feasibility study report for Reverse Recipe Finder, one of Team 28's IT 314 Software Engineering course project idea.

Target Audience

Hungry people of the planet with something in their fridge.

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1	S. Chaitanya, Charmi Mehta and Nidhi Pitroda	Preliminary Analysis	Khyati Mahajan	29/01/16

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1. Introduction

Everyone in this world loves food. Different people have different taste and like different food. The chefs out there in the world try their best to introduce new recipes and make them delectable. People always like to try something new and have some good food. People buy recipe books to cook and enjoy the food by themselves. It would be comfortable if they get a comprehensive list of recipes from the ingredients available with them. The project proposed by the team aims to provide a solution to all the foodies out there who love to try new and innovative recipes of various cuisines but don't know much about cooking.

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. 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.

The aim of this feasibility report is to evaluate and analyze the potential of the project and the practical concerns which the team may face working in a team of eight people with different skill sets.

2. Feasibility

2.1 Technical

As per the preliminary requirements that would be required to make the application functional the team would require the use of Android Studio, a free popular Integrated Development Environment (IDE) for developing android applications, in addition to the use of the Python Flask web framework or Elastic search to search and store user queries. The rationale behind this choice is as follows:-

- The relative comfort of the team members with Python as opposed to other programming languages.
- Python Flask is an extremely customizable web framework with a simple learning curve compared to any of the other popular and stable frameworks.
- Android Studio provides an easy to use and visual development environment.
- Elastic search is a search server based on Apache Lucene, and provides fast text based querying of stored documents.

The project would require developing an android application from scratch in addition to hosting a separate server to store and maintain the gathered recipes in the form of an API endpoint, and provide it to the user when required. Currently, the team consists of about three to four people who have had past experience in working with basic android applications but have limited knowledge on the issue. The team also consists of two members who have extensive experiencing in scraping data from websites and parsing them into a usable form to store in a database. In such a situation the team believes that we will require about 10 hours of work over 2 weeks to understand the Android Studio ecosystem. The application server to host the API endpoint for search querying can be programmed by members who have experience in scraping and Python. The server endpoint would be hosted either by utilizing the Python Flask web framework or Elastic search. Elastic search is a Free and Open Source Software for text based searching which utilizes Hypertext Transfer Protocol (HTTP) and JavaScript Object Notation (JSON). It provides a tool to host a local server on a computer machine and data documents are submitted using GET and POST requests, common to HTTP and data is retrieved in a JSON format.

The project idea would also require extensive study into the android development techniques which not only aim to create an application but also include functionality to communicate with remote servers.

2.2 Economic

2.2.1 Cost Wise

All the software which the team will use in this project are free, so no costs will be incurred by our team.

The deployment of the software will be done on the Android Play Store, which will cost for making a developer profile, but since the team has a developer who already has an account, we will not incur costs for this. We might have to incur costs when we host the API server which will be utilized by the android application to buy the domain name space.

The client will only incur costs in the sense that an internet connection will be required to access the app.

2.2.2 Time Wise

We will require around 50 person hours per week to finish the project as per our preliminary estimate.

2.3 Legal

The tools used for the purpose of this project are all Free and Open Source and hence do not contain legal clauses in their use. In submitting to Google Play Store we need to ensure that no media files such as images are plagiarized, and ensure that the website we scrape recipes from does not result in copyright violations.

2.4 Scheduling

The team will prepare milestones and set up a detailed timeline in the project proposal.
As per our preliminary analysis of the amount of time required to acquire the needed skills (considering the knowledge base of the team required for tackling the given problem) and implement the plans made charted for the course, we believe the project could be implemented within three months.

3. Conclusion

As per the feasibility analysis furnished above, we conclude that the project is feasible for us. We have the required skills and time to be fluent with the frameworks we will consider and the project can be done within a stipulated time. The team also expects that making this project will be fun.
We are, hence, deciding to move ahead with this project considering its feasibility.

4. References

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