Travel Junky Web App

Project Description

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What will be produced by this project?

This project will produce a web application that allows users to create a profile, login to a database with a username and password, and update their travel junky challenges through validation. These challenges will be a "bucket list" of destinations (small businesses) for the user to travel to and complete the validation for reward points. The application will use location services (API's) and more to validate the completion of the goal. The user will receive reward points for every challenge completed. The user can then redeem rewards with their points earned. This will also be a platform for small business owners to promote their small business by gaining access to free advertising and traffic generated from the users completed their challenges if their business is featured on the web application.

Who is the product for?

The product will be for travel enthusiasts and small business owners. Travel enthusiasts will earn rewards for traveling the country and completing challenges. Small business owners will also use this product to request their business to be features in the app.

How will this product be used?

The web application will be used by an individual creating a travel junky account by visiting the website from any device such as a mobile phone. They will input their information and create a user login. The user will login with their profile and update their challenges when they have traveled to a destination on the challenge list and is ready for validation. The web application will have validation features to ensure that the user actually traveled to that destination and completed the challenge. After a challenge is validated and completed, the user will receive reward points.

The validation process will include a user logging onto wifi at the small business, and the current IP address of the wifi being compared to the IP address stored in our database to see if it matches. We plan on doing this by using the GeoLocation API.

Small business owners can visit the website to submit a request to be featured on the app. This request will be for their small business to be featured as a challenge on the Travel Junky website for users to travel to and complete validation.

Why do this project?

I. Learn new tech skills

One of the main goals of this project is to gain experience using modern technologies. We will be learning multiple frameworks, tools, and languages that big companies use in their software development teams.

II. Promote Small Business

Our mission and problem that we are trying to solve would be the difficulty small business owners have in gaining customers. This app will help promote small businesses by having their business listed as a challenge to travel to and complete

validation. This will increase the traffic to their location and also provide advertising on the Travel Junky Website.

III. Create a fun app for travel enthusiasts

This web app will inspire people to travel more and give them rewards for traveling and visiting new places. Travel Junky users will be motivated to complete the challenges and receive rewards.

What hardware and software environment will be needed?

This application will need the eclipse software, apache tomcat server software, maven build tool software, MySQL workbench database software, and a hosting service such as Digital Ocean to deploy our web application. These tools can be downloaded and installed for free to help develop our web application. A hosting server such as Digital Ocean will take care of our server and hardware needs for a small fee. Users will visit the website from any device to use this web application after it is finished and deployed to a server.

- ➔ Git/Github
- ➔ Java/J2EE/JDBC/Servlets
- ➔ Spring/Spring Boot/ Spring MVC
- ➔ Hibernate Framework
- ➔ HTML/CSS
- ➔ Java Server Pages
- ➔ Bootstrap Framework
- ➔ JUnit Testing
- ➔ Apache Tomcat
- ➔ MySQL
- ➔ Web REST API's/AWS
- ➔ Maven
- ➔ Azure Devops

What are the benefits and advantages the user could expect?

The users of this application include the travel enthusiasts and the small business owners.

The travel enthusiasts will benefit from this product by receiving rewards when they travel. They will have a new set of challenges each year to get excited about and will receive more rewards from completing the new challenges that release each year.

The small business owner who submits a request to have their small business featured on the application will benefit from the advertising on the application and the traffic that the challenges will generate to their location.

What are the costs and requirements for the user?

The user will just need an electronic device with a web browser that will connect to the wifi at the small business location. There is no cost to visit the website and create an account. The user will create an account and then travel to the destination listed in the challenge to complete the validation to receive reward points. For the first release of the product, the user will need to login to their account on their device while at the location and connect to the wifi at the small business. This will allow the user to complete the validation and receive their points for that specific challenge.

Build vs Buy?

Originally our product did not have a specific mission or purpose. After research and brainstorming we have come to a clear mission and understanding of what this application will be used for and how it will work. We have done the research to ensure there is not another product like this one, which promotes small businesses and gives users challenges to complete for traveling the country and supporting these small businesses.

How will the product work?

A user will create a profile on the Travel Junky website. The user will be given a set of challenges. The original challenge will be the “US Travel Junky Challenge 2019.” This challenge will be updated each year with new challenges and destinations to travel to. This US challenge will have 50 challenges to complete within a year.

Small business owners will go to the Travel Junky website to submit a form to request their small business on the Travel Junky Application.

Validation will be completed by the user connecting to the wifi network of the small business with their device while being logged into their Travel Junky Account. The IP address will validate that the user is actually at that location so the user can complete the challenge and receive their reward points for that challenge.

Inspiration?

This application was inspired by ideas from applications such as Pokemon Go, Trip Advisor, and mobile reward apps used at restaurants such as Chipotle, Jimmy Johns, and Buffalo Wild Wings. Pokemon go is an application that inspires people to travel to destinations to complete challenges. Tripadvisor specifically motivates its users to travel by helping users with travel ideas, planning, and costs. Mobile reward applications for fast food chains reward users for specifically visiting their location and purchasing their products. Our application found some inspiration in these ideas, but this application will promote small business owners and provide a rewards platform for multiple businesses not just one. The challenges with validation will bring excitement to the user.

Bibliography?

1) https://www.tripadvisor.com/ (Research)
2) https://www.udemy.com/spring-tutorial-for-beginners/ (Spring Framework Tutorial)
3) https://www.eclipse.org/downloads/ (eclipse software)
4) https://maven.apache.org/download.cgi (Maven Software Download)
5) https://azure.microsoft.com/en-us/services/devops/ (Team Software/ Azure Devops)
6) https://www.mysql.com/downloads/ (Database software / MySQL)
7) https://tomcat.apache.org/download-80.cgi (Server Software / Apache Tomcat)

Schedule?

The schedule is divided into sprints. These sprints contain features of the web application to be completed in each sprint. Each sprint will be two weeks. The first sprint included the development setup. We downloaded all necessary software and tools for the project. We also spent time planning and researching.

How to implement stack?

To develop this application, we will use a stack of technology that is modern for web application development. This stack includes various languages and frameworks.

Backend:

We will use MySQL for the database of the web application. This database will store the user info such as login, what challenges they have completed, and their reward point balance.

Hibernate is an ORM framework of Java that we will use to send queries to the database from our Java logic. This framework allows for easy implementation when working with Java and mySQL.

Middle:

We will use Java for the business logic of the application. The Spring MVC framework will be used to connect the frontend web pages to the business logic. Spring MVC is a framework that provides dependency injection, bean management, security, and more.

Front End:

We will use HTML, CSS, and JSP for the frontend of the web application. These technologies allow us to design the user interface and connect it with the business logic.

Server:

Apache Tomcat will be the server software to handle incoming requests from the application. Our website will be hosted on Digital Ocean, which is a web application hosting service.

Tools:

Azure Devops will be a tool we use for project management and team communication. This allows us to divide up sprints, complete tasks, and more.

Github will be the version control software that we will use to develop and code as a team by having a remote repository to push and pull code from.

Sprint Schedule

Sprint 1 (8/25 - 9/7)

★ Setup Git, Azure Devops, Eclipse
★ Use Case Diagram
★ Study Tech Stack

Sprint 2 (9/8 - 9/21)

★ Sign Up/Create Account Feature
★ Login Feature
★ Logout Feature
★ Delete Account Feature
★ Reset Password Feature
★ Update Account Feature

Sprint 3 (9/22 - 10/12)

★ View Bloomington Challenge List Feature
★ Refer Small Business Feature

Sprint 4 (10/13 - 11/2)

★ Validate Challenge Feature
★ View U.S. Challenge List Feature

Sprint 5 (11/3 - 11/16)

★ Polish up User Interface
★ Deployment/Hosting

Sprint 6 (11/17 - 12/1)

★ Testing/Updates

Use Case Diagram