Big Blue Parking Genie

Project Overview

This project aims to build a web application for managing and selling parking for specific time slots.

The system will allow a user to rent out a parking spot, specifying the specific time slot that they want to rent it. The user will be given a form of identification that can be given to allow entry to the parking zone. The system will also have a manager mode that will allow for seeing how much space is left, dealing with discrepancies, handling customer complaints, and overriding errors in the system, etc.

Team Organization

Anne Jetton - Project manager, responsible for time management and due dates for specific elements, along with over all work distribution, as well as contributions to code.

Kate Sargent - In charge of overall CSS and html development, Checking for correctness in CSS code, design input, etc.

Makalee Beelek - In charge of overall Python development, Checking for correctness in python code, design input, etc.

Derek Ward - In charge of overall Django development, Checking for correctness in the django framework and organization, etc.

This team intends to stick to their specific roles first, then lend a hand in the other departments where time and skill allows. We also intend to check each other's work for correctness, as well as help each other to devise unit tests to ensure absolute functionality of the application.

Software Development Process

The development will be broken up into five phases. Each phase will be a little like a Sprint in an Agile method and a little like an iteration in a Spiral process. Specifically, each phase will be like a Sprint, in that work to be done will be organized into small tasks, placed into a “backlog”, and prioritized. Then, using on time-box scheduling, the team will decide which tasks the phase (Sprint) will address. The team will use a Scrum Board to keep track of tasks in the backlog, those that will be part of the current Sprint, those in progress, and those that are done.

Each phase will also be a little like an iteration in a Spiral process, in that each phase will include some risk analysis and that any development activity (requirements capture, analysis, design, implementation, etc.) can be done during any phase. Early phases will focus on understanding (requirements capture and analysis) and subsequent phases will focus on design and implementation. Each phase will include a retrospective.

	Iteration
	Phase 1 - Requirements Capture
	Phase 2 - Analysis, Architectural, UI, and DB Design
	Phase 3 - Implementation, and Unit Testing
	Phase 4 - More Implementation and Testing

We will use Unified Modeling Language (UML) to document user goals, structural concepts, component interactions, and behaviors.

Communication policies, procedures, and tools

Our team will be meeting every saturday, from noon to 2pm, to discuss and look over last week's assigned work, to check for correctness and completeness, and fix any bugs, as well as check to see if the individual assigned pieces will work together well. We will also discuss what needs to be completed the coming week, and assign work accordingly. Work will be pushed to the repo after each of these meetings. We will be meeting via discord, and zoom where appropriate.

Risk Analysis

- Time Risks
    - We estimate that work on this process could take approximately 4-8 hours per person per week. The project might take more time than we are expecting due to unpredictable issues that could occur.

- Communication Risks
    - Due to the covid-19 crisis, Communication will be limited to virtual meetings. We have set up a server on Discord in hopes of maintaining consistent communication.
- Procurement Risks
    - Due to the difficulties of communication, procurement of source code may take longer than it traditionally would, however, we hope to avoid most of these difficulties using our virtual meetings.
- Miscellaneous Risks
    - Again, due to the Covid-19 crisis, the finding of beta testers for this system may prove more difficult than it normally would.

Configuration Management

See the README.md in the Git repository.