

Big Blue Parking Genie

Project Overview

This project aims to build a system for finding multiple modes of parking for USU events.

The system will allow customers to search through parking options in parking lots, driveways, lawns, and other privately owned parking options. The system will also accept listings from the owners of private lots for a 25% fee on their profits and provide a simple purchase verification system to be utilized by the owner.

Team Organization

Project Manager: Alex Thurston (may change over the course of the project)

Designers and Developers: Nathan Merrill, Jay Peterson, Alex Thurston

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.

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

Discord – Main channel for communication. Used for group calls, file sharing, and other collaborative activities.

Google Drive – Storage for files needing collaborative effort and review for Milestone 1.

GitHub – Formal repository used for submissions, version control, data tracking, and communication with Professor Dan Watson and Bradley Payne.

Risk Analysis

- Database Structure
 - Likelihood – Low
 - Severity – Very High
 - Consequences – Ineffective data tracking leading to confusion concerning balances, transactions, account information, etc.
 - Work-Around – None. System loses value and functionality without proper database implementation.
- Login
 - Likelihood – Low
 - Severity – Med-High
 - Consequences – Dissatisfactory customer experience concerning preferences, transaction information, cancellations, and current balance.
 - Work-Around –
- Verification System
 - Likelihood – Low
 - Severity – Med
 - Consequences – Lack of security concerning exchange of parking services
 - Work-Around – Verify by name and vehicle type
- UI
 - Likelihood – Low
 - Severity – Very High
 - Consequences – Inability to interact with users in a clear and efficient way.
 - Work-Around – None. System loses value and functionality if users are not able to interact with it.

- Hosting
 - Likelihood – Low
 - Severity – Med
 - Consequences – Inability for system to host or serve information essential for system functionality
 - Work-Around – Host system through a hosting service

Configuration Management

See the README.md in the Git repository.