Michael Moede, Brandon Oium
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Group 3's Parking Automation SDP

A. Product Description

Auto-Parker is a self-service parking system. Our product will be installed on machine terminals in the parking garage of our clients and also the company computers for management. Auto-Parker has two main purposes: to cater to the customer parking, and to help management manage this parking software. Our clients include, first, the customer, who will include anyone who seeks to park in a parking garage at the current moment or later on, and second, management who uses the software to update parking maps, prices, and reservations.

i. Work for hire:

A parking garage company approached us and wanted us to make a software that catered to the customer to maximize the parking experience, but also help them manage the parking spaces (such as price, maps, spaces, etc.). Product ambiguities were addressed by the analysis team, and questions will be directed internally if we decide we have further questions. Auto-parker will be tested and made for computers initially, with hopes that it eventually be run on touch screen monitors for the parking company.

ii. Non-work for hire:

Auto-parker's potential audience includes anyone who needs parking at the parking garages our software is installed on. Audience would also include the managers who use the software to manage the parking software itself. The goal of this product is to provide customers with efficient, yet flexible parking, while letting the manager's have full control of their unique parking garage. The major functionalities of our product are split into two sections; those for our parking customers and those for managers of the parking garage.

Major Functionalities for the customer parking include:

- Check-in (Reservation Required)
- Check-out
- Reserve Parking Space
- Cancel Reservation
- Park Now

Major Functionalities for management include:

- View/Modify Reservations
- Add/Modify Parking Spaces
- Upload New Parking Map

B. Team Description

Tim Nortman

- Programming Languages - C++, Java, SQL
- Prefered Work - Front or Back End
- Strengths: Coding Weaknesses: Design

Ethan Potts

- Programming Languages - C++, Java
- Strengths: Coding structure, Visual design

Michael Moede

- Programming Languages - C++, Java, SQL, PL/SQL, HTML
- Strengths: Coding and professional experience with Oracle databases and various Oracle technologies. Education and some experience in project management.

Brandon Oium

- Programming languages - C/C++, Java, SQL, HTML
- Preferred work - Back-end

C. Software Process Model Description

We will be utilizing the Scrum process model. We believe Scrum fits well with our intended product because of our team size, time constraint, and ability to produce various, iterative, workable programs. Scrum, with it's short meeting windows and iterative sprints, will helps us maximize the effectiveness of our product.

D. Project Definition

The user base will consist of drivers of consumer vehicles that live in areas where parking ramps are used and have a need to park in them and also the ramp managers and owners. These users consist of a mix of novice drivers, those with little to no parking ramp experience, experienced drivers, and experienced parking ramp users. The interface for the software will be easy enough to use for both first-time and experienced drivers and parking ramp users. The software will allow users with special needs that need handicap stalls to easily be able to locate them and reserve vacant stalls. A user with a specific destination or simply a preference will also be able to locate and reserve a parking space in the ramp that is closest to their destination or to their liking at a specified price point if it is available. In the event that a user is in need of a parking space during a time in which they know the ramp will be congested they will have the opportunity to reserve an available spot ahead of time through this system. The parking ramp owners and managers will also be able to manage reservations and ramp data through their in-office administrative privileges. With the exception of high-tech automated parking garages, there isn't widely used software to make the static, manual parking ramp experience easier and more enjoyable. Most parking ramps that will be using this software will be upgrading from a manual human parking attendant or a firmware and embedded systems type design where a machine simply prints a ticket and a barrier is removed to allow the vehicle to advance into the garage.

E. Project Organization

Refer to attached PDF for WBS (schedule of project). Dependencies and estimated time for each requirement/task is located on Axosoft.

F. Validation Plan

We have created rough versions of our GUI for both our customers and our managers. Refer to visualization of GUI in attached PDF.

G. Configuration/Version Control

Our team will utilize TortoiseSVN as our configuration/version control.

H. Tools

Tools we will need, which may be major systems, subsystems, or general tools for developing our software, are included in the list below:

● Visual Studio(Coding)	● Axosoft (Requirements/Bugs)
● QT creator (GUI)	● Access (Database)