Concepts and methods assignment 1 report

**Introduction**

Within this assignment, we have planned and designed a car park simulator using C# programming. This report will contain a set of requirements that we will use while creating the simulator, a prototype of the simulator for an overview of what we the simulator will look like and while testing this prototype we will find areas of improvement and things we may have missed. Lastly, this report will include an evaluation of our project and how the development process worked.

**Requirements**

* Chip coin operated
* One entry and several exits of the car park
* Exits equipped with barrier and chip coin machines
* Prepaid system (Prepaid spaces)
* Drivers need to fully pay before leaving car park
* Car park displays structure at entrance as well as at the payment machines
* Employee and other discounts will be applied

**Update on requirements (Client questions and answers)**

**Is secured spaces on all of the spaces within the car park or are there set spaces for prepaid parking?**

There will be a set area within the car park for prepaid spaces, however with disability parking; family parking and other, these prepaid parking spots will be closer to the exits and entrances for easier access.

**What is the procedure for when a customer loses a chip coin?**

when a chip coin is lost, there will be an emergency call service for the customer where they can ring up and either pay for the park time space being used and the chip coin replacement on the phone or they have 14 days to pay (the car registration will be recorded) and the customer will be provided a code that will raise the barrier at the exit of the car park.

**Is their assigned parking and if so, how will this work with prepaid parking?**

at the entrance of the car park their will be a screen showing available spaces within the car park, customers are assigned a set of spaces that are available however they will have a choice between the spaces (will also show the available disabled and family parking spots). Prepaid parking will be assigned a car park so these spaces can be reserved. Employees will be assigned to prepaid parking.

**Is there disabled and family parking and if there are, how will they be implemented separately with other spaces?**

There will be disabled and family parking, and these will be assigned closer to the entrances and exits to make it easier for the customers, at the entrance it will show how many disabled and family parking spaces are available.

**How is the discount schemes implemented? Will we use technology like ANPR?**

Discount schemes will not be applied through ANPR (Automatic number plate recognition), however when the customer goes through the prepayment scheme they will send a chip coin that will have a set amount of entries and exit's and will be disabled once they have been used.

**Is there season passes for the car park and if so, then how long will they last and how will they be used?**

The customers will be able to buy a season pass within the discount scheme, this will have set dates and lengths for the season pass and the price will be lower than what the customer will have to have paid if they paid using the normal scheme. This will be applied for using the car parks website and the customer will receive a chip coin that will expire (will be disabled) when the set uses or time has been reached.\

**Prototype**

**Testing**

Sensors broke n

Car paid or doesn’t leave?

**Actual design of the car park simulator**

**Evaluation**