Concepts and Designs

Secure Carpark Validation

**Test - Cars Can Leave**

**Purpose - To test that cars are allowed to leave if they have paid**

**Expected outcome - If the user has paid at the machine the barrier should raise allowing them to leave**

1- Users car arrives at entrance and they get their coin at the barrier.

2- The barrier opens allowing the car to enter

3- The car arrives at their space

4- When the user wishes to leave they insert their coin into the machine and are shown their parking fee.

5- The User pays and gets their coin back

6- The User arrives at the exit barrier

7- The User enters their coin into exit barrier

8- The system checks that the fee belonging to the coin has been pain and opens if it has opens and keeps the coin

9- The car leaves the carpark

**Test - User Hasn’t Paid**

**Purpose - To test that cars are prevented from leaving if they haven't**

**Expected outcome - If the user has not paid at the machine the barrier will not rise until they pay**

1- Users car arrives at entrance and they get their coin at the barrier.

2- The barrier opens allowing the car to enter

3- The car arrives at their space

4- The user skips the payment phase

6- The User arrives at the exit barrier

7- The User enters their coin into exit barrier

8- The system checks that the fee belonging to the coin has not been pained and will not open

9- The User enters payment and can now leave

**Test - Carpark Full**

**Purpose - To test that no cars can enter if the carpark is full**

**Expected outcome - If the user has not paid at the machine the barrier will not rise until they pay**

1- The full sign will be lit

2- User arrives at the entrance

3- If they try to get a coin they will be told the carpark is full and the barrier will not rise

**Test - Prepaid Customer**

**Purpose - To test that no cars can enter if the carpark is full**

**Expected outcome - If the user has not paid at the machine the barrier will not rise until they pay**

1- User Arrives at the carpark and enters their personal coin

2- The machine returns the users coin and opens the barrier

3- When the user wishes to leave they don’t need to go to the pay machine

4- User arrives at