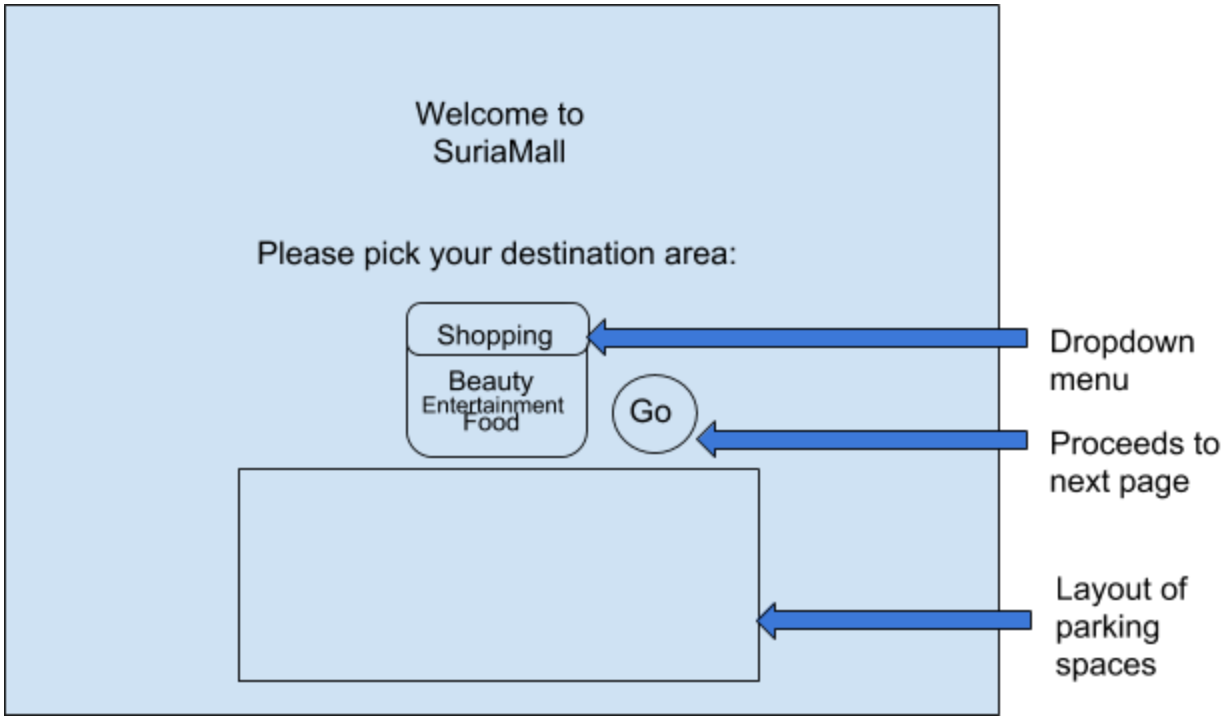
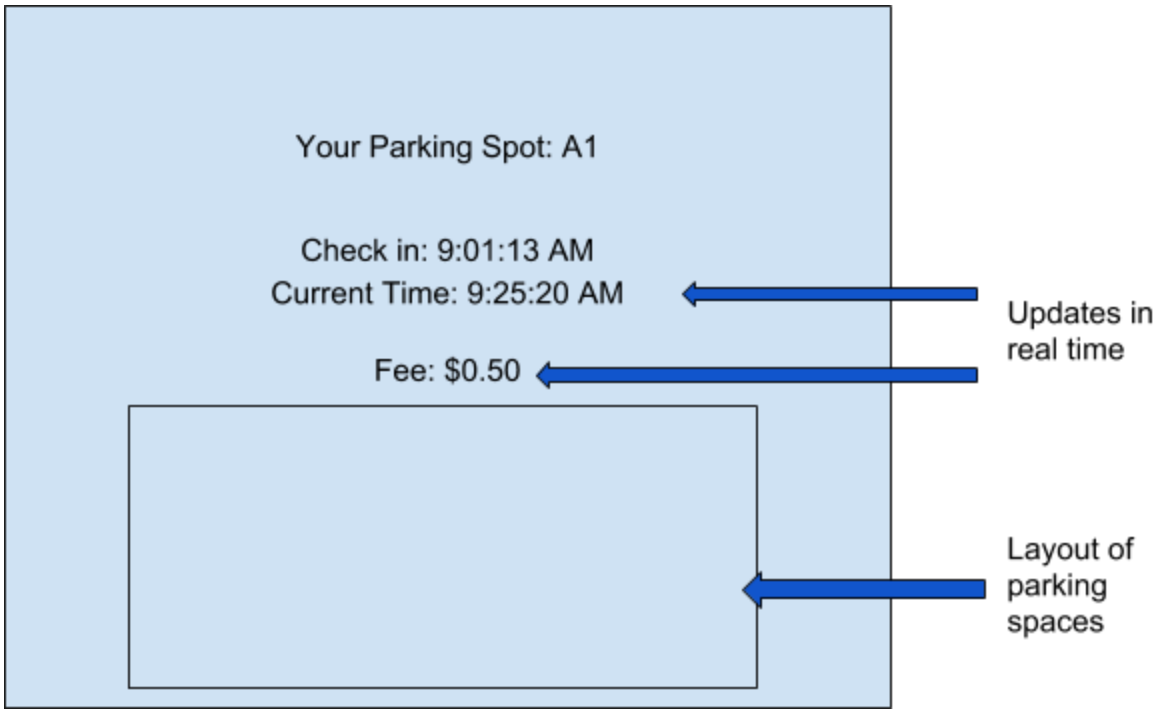
Criterion B: Design Overview

Graphical User Interface Outline:

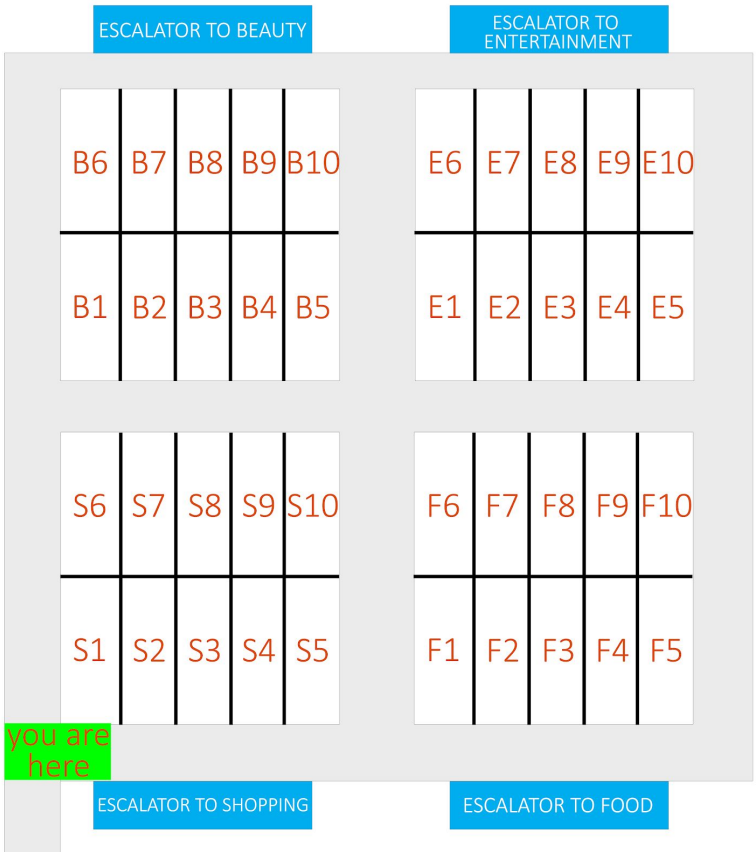
- Initial Page



- Parking Spot Assignment Page



Layout of parking spaces as described by client:



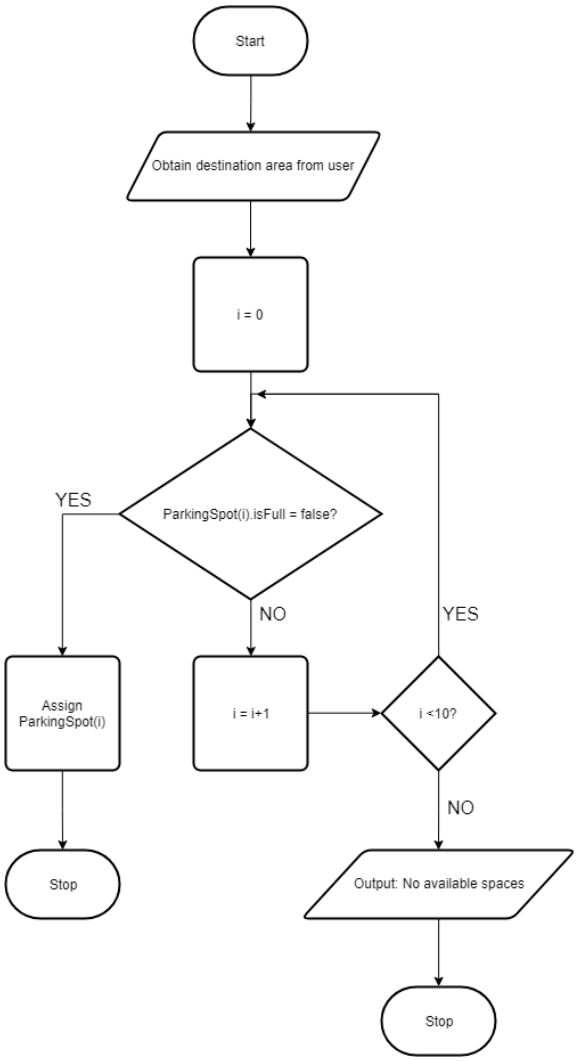
To assign parking spaces based on the distance of each spot from each destination would require very complex code, therefore splitting the space into clusters of parking spots (S for shopping, F for food, etc.) allows for more streamlined code.

Classes utilised in the solution:

ParkingLot
String name \\name assigned to the spot Boolean isFull \\variable for whether the spot is filled or not
void setFull() void setEmpty() Boolean getName() Boolean getIsFull()

Logic Algorithms used:

- Algorithm for assigning parking spaces, as described in a pseudocode flowchart:



Action to test	**Method of testing**	**Desired Outcome**
Check if website is up	Enter url into browser.	Website successfully appears.
Check if website layout is correct - with text, images and dropdown menu visible and in correct positions	Compare website to design layout.	No discrepancies between website and design layout.
Check if website page progression works	Select a destination in the dropdown menu.	User is brought to the next page where a parking space is assigned and a fee is being incremented.
Check if assigned parking spot is in cluster nearest user destination	Select a destination in the dropdown menu.	Assigned parking spot is in the correct cluster on the layout.
Check if parking fee increments	Observe if fee value increases over time.	Fee value increases over time.
Check if the next available parking spot is assigned if some are already taken.	Select a destination in the dropdown menu. Open website in new tab and select same destination.	The next parking spot is assigned ie. A2 is assigned if A1 is taken.
Check if “no available spots” message appears when a cluster of parking spots is selected when fully occupied.	Select a destination in the dropdown menu. Open website in new tab, and repeat.	After all 10 slots in a cluster are filled, the website displays the message.
Check if a spot opens up when a parked user checks out	Select a destination in the dropdown menu, checkout in next page. Return to first page and select the same destination.	The same parking spot is assigned.
Check if users can enter parking spot number	Enter parking spot number in first page.	User is brought to a page displaying fee.
Check if users receive error when entering wrong parking spot number ie. spot not in use or does not exist	Enter number of a parking spot not in use or a wrong number in first page.	User is brought to an error page.