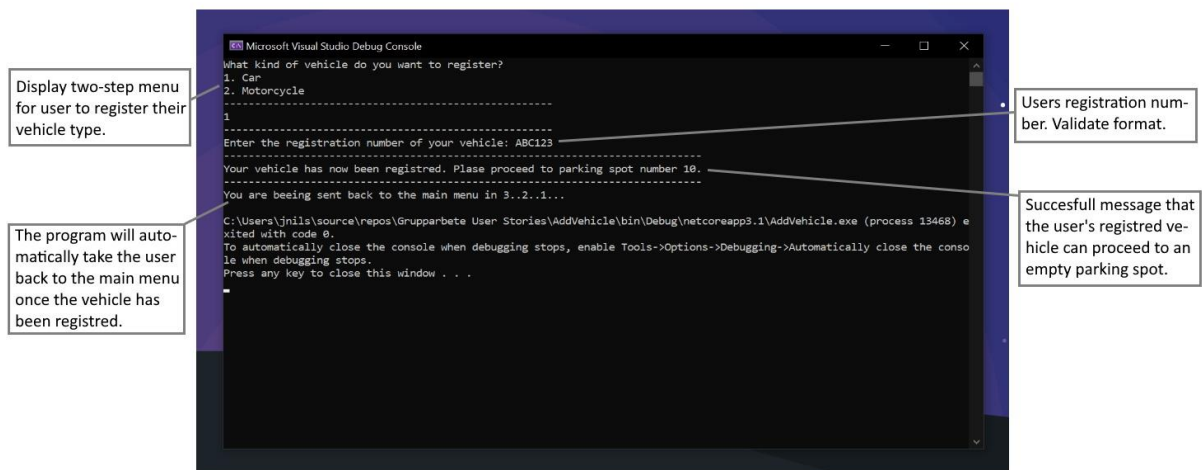


User Stories

1. Front of card

As a [employee], I want to [write a registration number], so that I can [register and park cars].



#2	ADD VEHICLE	Fibonacci Size #2
----	-------------	-------------------

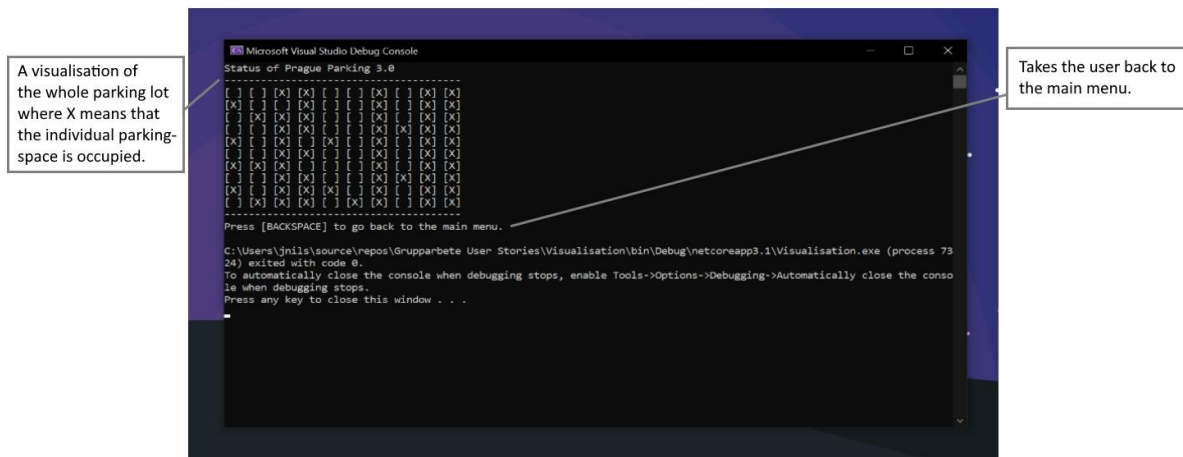
Back of card

Confirmation

1. Success – The user can register their desired vehicle and can proceed to an empty parking space.
 - a) After a successful vehicle register, the user gets transferred back to the main menu.
2. Failure – Display message
 - a) "The license plate number is too long!" – The user has input a license plate number that is more than 10 characters.
 - b) "Wrong input!" – The user has entered illicit characters.

2. Front of card

As a [employee], I want to [see a visualisation of the parking lot], so that I [know the status of every parking spot]



#3	VISUALISATION	Fibonacci Size #3
----	---------------	-------------------

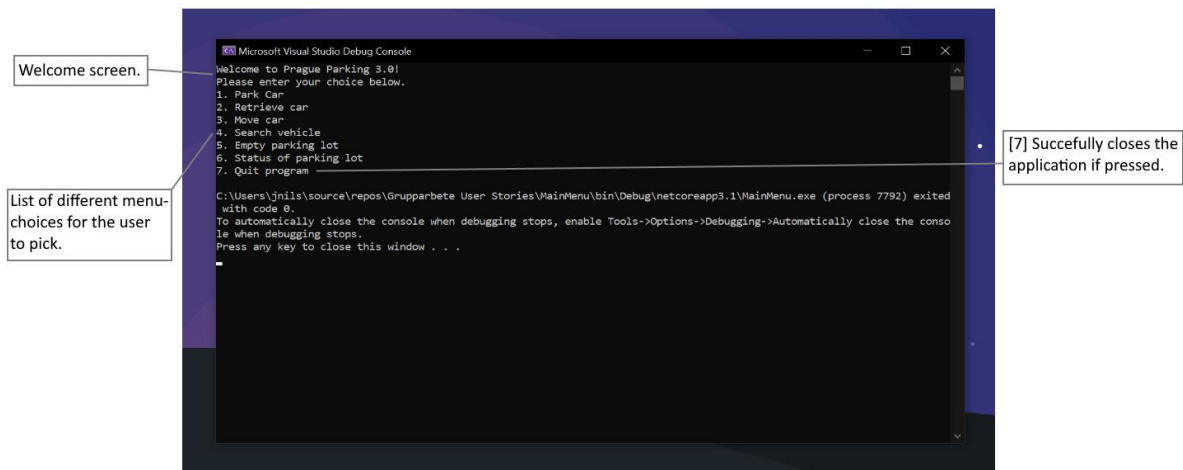
Back of card

Confirmation

1. Success – The user sees a visualisation of the whole parking lot
 - a) Takes the user back to the main menu when [backspace] is pressed.
2. Failure – Display message
 - a) "Wrong input!" – The user has entered the wrong key (not [BACKSPACE]).

3. Front of card

As a [employee/vehicle owner], I want to be able to [see a main menu], so that I can [navigate through the different options].



#1	MAIN MENU	Fibonacci Size #1
----	-----------	-------------------

Back of card

Confirmation

1. Success – The user can choose which option that the user desires.
 - a) Takes the user forward to the desired menu choice.
 - b) When the user is done, and choose "Quit program" from the menu, the application closes.
2. Failure – Display message
 - a) "Wrong character input!" – The user did not enter a number.
 - b) "Not a valid number!" - The input number is below or over the menu interval.

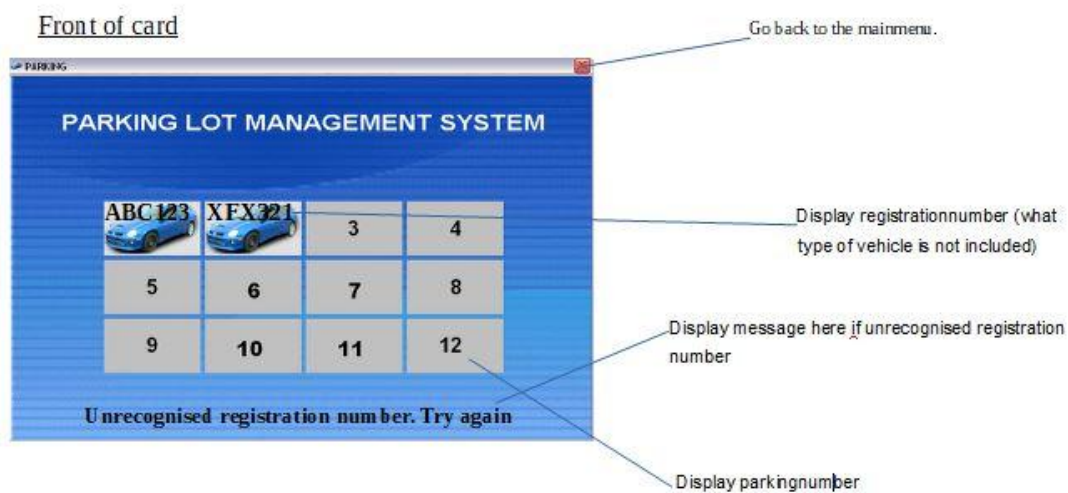
4. Front of Card

As an [employee]

I want to [search for a car with a registration number]

So that [I can find out the parkingspot/parking number]

The employee uses an application to help him/her to find a specific vehicle based on a registered registration number in order to find the parking number where it is parked.



Back of card

Confirmation

1. Success:

a. User can choose which registration number to enter.

Shows the location of the car.

User returns to main menu.

2. Failure:

b. unrecognised registration number

Incorrect format, contains spaces/special characters.

Application crashes.

5. Front of card

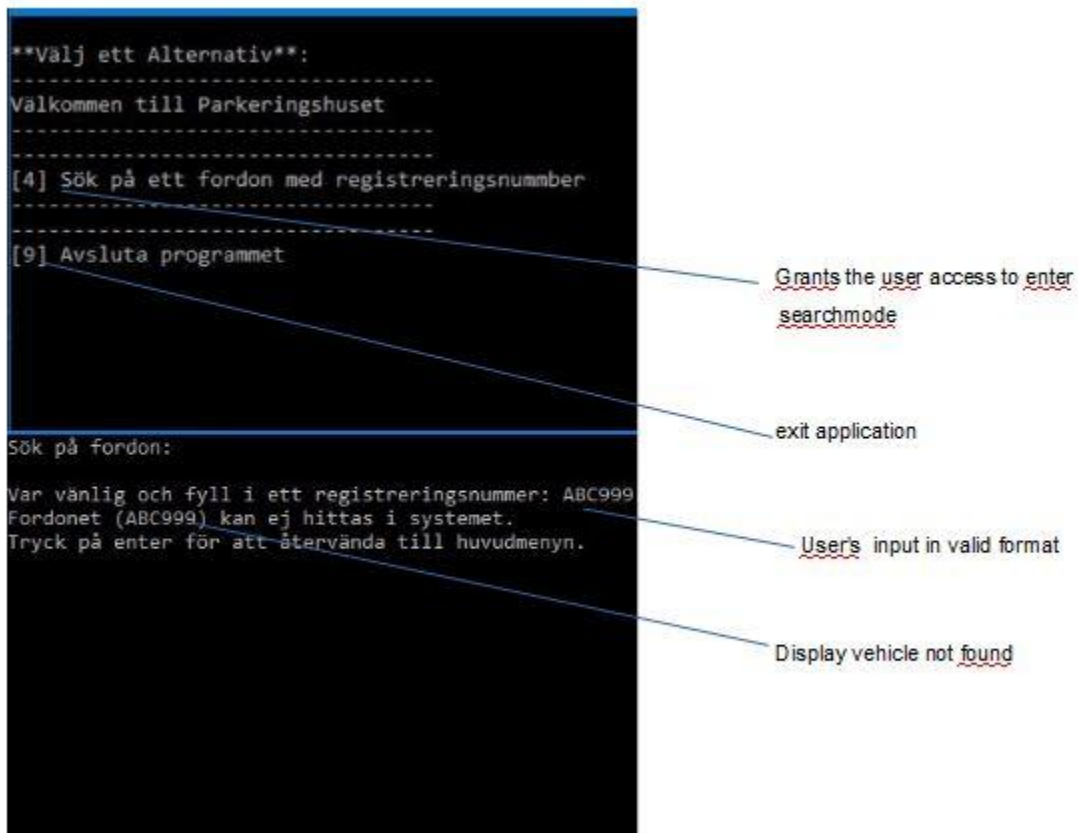
As an [employee]

I want to [Search for a registration number]

So that [the program alerts me if the vehicle is not found]

The employee uses the program/application to search for a vehicle through a registration number that is not included in the system and must henceforth alert the employee that it wasn't found.

Front of card



Back of card.

Confirmation

1. Success:

a. Takes the user from menu to searchmode
user enters a valid registration number
Alerts user if vehicle is not parked in the system
User exits the application when it's done.

2. Failure:

b. User enters a valid/parked registration number in the system
wrong character input, no special characters or spaces allowed when entering registration number

6. Front of card

As an [employee]

I want to [have an exit function]

So that [I can close the application from/through the menu]

The employee has the option to exit the application whenever she or he wants. Through different functionalities and options.

Front of card

```
**Välj ett Alternativ**:
-----
Välkommen till Parkeringshuset
-----
-----
-----
[9] Avsluta programmet

**Välkommen till menyn för att avsluta programmet**.
-----
Vill du Avsluta programmet? Mata in (Y) för JA och (N) för NEJ. Tack och välkommen tillbaka.
-----
```

The option to exit the application appears.

One specific character for a specific functionality.

Displays variety of options if undetermined.

closes the program successfully.

Back of card

Confirmation

1. Success:

a. Takes the employee to the next phase.

The employee enters the correct type of character for next phase.

The employee have variety of options, successful if he/she enters the right character.

Exits the program.

2. Failure:

b. User enters the wrong type of character to enter the next phase of exit.

The User decides to enter (N).

Returns to the main menu.

7. Front of card:

As an [Employee] I want to [clear the parking lot] so that [I can do maintenance]

Description:

A menu option to clear all the parking spots if there is an issue with the database and clear the database.


```

))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
1. Park Vehicle
-----
2. Retrive Vehicle
-----
3. Search Vehicle
-----
4. Search Parking Slot
-----
5. Move Vehicle
-----
6. Show Parking lot
-----
7. Optimize Mc parking lots
-----
8. Empty Parking Lot
-----
9. Park 5 cars and 5 bikes (For testing purposes)
-----
10. Exit program
))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))

Car/Mc:          60/60
Free mc slots:   20
Occupied places: 90/100
Vacant Places:   10/100

Are you sure you want to empty the parking lot?
Y/N

```



Back of card:

Confirmation:

Message: Are you sure you want to clear the parking lot?

1. Option: Yes
2. Option: No

Success:

If Yes

1. Message: The parking lot was cleared.
2. Remove all entries from the database and the internal array/list etc.
3. Back to the main menu.

If No:

1. Message: The parking lot was not cleared.
2. Back to the main menu.

Failure:

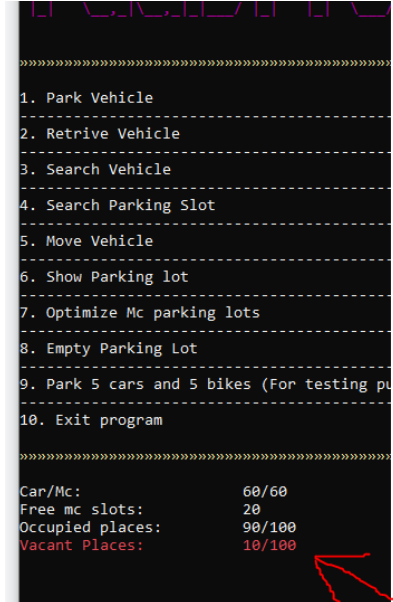
1. If wrong input an error message is displayed.
2. If database is not found
3. Message: The database was not found.
4. Log error to error log.

8. Front of card:

As an [Employee] I want to [know when there is less than 10 parking slots left] so that [know how many more vehicles I can attend to]

Description:

When there are 10 or less available parking spots remaining, a warning is displayed to the user.



Back of card:

1. If there are 10 or less parking spots available a warning is displayed underneath the main menu.
2. Message: xxx/xxx parking spots available. (in red text)
3. If there is more than 10 parking slots available there is no warning displayed

9. Front of Card

As a [system developer] I want to [get an error log] so that [I know what caused an error in the application]

Description:

If there is an error in the application the error should be logged and prevent the application from crashing so that the system developer can see what happened and potentially fix the error.

Back of card:

When there is an error in the application the error is written to a log file with time, date and type of error. An exception is thrown to prevent the application from crashing.

10. Front of card

As an [employee], I want to [enter a registration number], so I can [move a parked vehicle to a new location].

Lets the user enter the registration number of a vehicle, then shows available parking spots.

The user enters the registration number:

```
-----Relocate Vehicle-----  
Enter registration number of the vehicle:  
ABC123_
```

If the vehicle could be located, the nearest available parking spot is shown.

The user can move to that location or try another.

```
-----Relocate Vehicle-----  
Enter registration number of the vehicle:  
ABC123  
ABC123 is on spot 1. To which spot do you wa  
nt to move it?  
Spot 2 has a free spot for a Car  
Enter the spot number for where you want to  
move it:
```

Back of card

Confirmation

1. Success - Display registration number and new location.

- a) Entered registration number exists in the parking lot.
- b) Entered an available parking spot to move the vehicle to.

2. Failure – Display error message

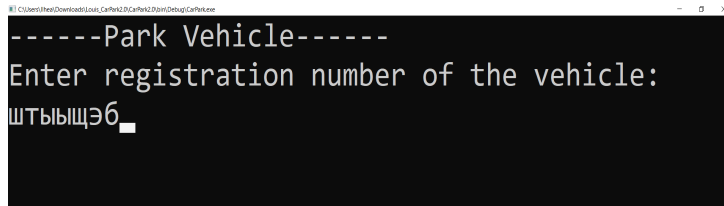
- a) Entered registration number doesn't exist.
- b) Entered parking spot is unavailable, please try another.

11. Front of card

As an [employee], I want to [be able to register all types of license plates], so I can [park foreign vehicles].

The system can handle all types of letters and digits.

The user enters the registration number here:



Back of card

Acceptance criteria:

The system can handle and display any national and custom registration number without causing an error.

12. Front of card

As a [vehicle owner], I want to [receive a ticket when I checkout], so I [know how much I have to pay].

The user receives a ticket with a fee during checkout.

The user enters the registration number of the vehicle that is about to checkout.

```
-----Checkout Vehicle-----  
Enter registration number of the vehicle:  
BBB123
```

The user receives information about the parking and fee.

```
-----Checkout Vehicle-----  
Enter registration number of the vehicle:  
BBB123  
Tog bort fordon från parkeringsplats 44:  
Fordon: BBB123 är en Car som parkerades 2020-10-08 18:  
46:04. Total kostnad: 8980 SEK
```

Back of card

Confirmation

1. **Success** - Display location of the vehicle and parking fee
 - a) System can calculate parking fees for cars and motorcycles.
 - b) Removes the vehicle from the parking lot upon checkout.
2. **Failure** - Display error message
 - a) Vehicle could not be found
 - b) Customer failed to pay the ticket.

15. As a [employee], I want to [get a warning message] that the parking lot is full, so that I can [inform the customers] directly.

16. As a [Employee] I want to [retrieve data/backup if the program crashes] so that [I know where the vehicles are parked]

The program should save the data whenever there is a change in the program so that the database is always up to date.

Prioritering och estimering efter poäng i Planning Poker

1	As an [employee], I want to [be able to register all types of license plates], so I can [park foreign vehicles].	8
2	As a [vehicle owner], I want to [receive a receipt when I checkout], so I can [know how much I have to pay].	40
3	As an [employee], I want to [enter a registration number], so I can [move a parked vehicle to a new location].	8
4	As a [system developer] I want to [get a error log] so that [I know what caused an error in the application]	40
5	As an [Employee] I want to [know when there is less than 10 parking slots left] so that [know how many more vehicles I can attend to]	3
6	As an [Employee] I want to [clear the parking lot] so that [I can do maintenance]	5
7	Description:	-
8	As an [employee] I want to [have an exit function] So that [I can close the application from/through the menu]	20
9	As an [employee] I want to [Search for a registration number] So that [the program alerts me if the vehicle is not found]	13
10	As an [employee] I want to [search for a car with a registration number] So that [I can find out the parkingspot/parking number]	40
11	As a [employee/vehicle owner], I want to be able to [see a main menu], so that I can [navigate through the different options].	100
12	As a [employee], I want to [see a visualisation of the parking lot], so that I [know the status of every parking spot].	40
13	As a [vehicle owner], I want to [write my registration number], so that I can [register and park my car].	100

1. Menyn
2. Lägga till fordon (reg.nr)
3. Kvitto
4. Felhantering
5. Visualisera Parkeringsplats
6. Söka på reg.nr
7. Avsluta-funktion
8. Felmeddelande om sökt fordon inte finns
9. Utländska fordon
10. Flytta fordon
11. Rensa parkeringsplats
12. Mindre än 10 platser kvar

Sammanfattning

Vi har valt att arbeta i Kanban-verktyget från hemsidan Trello. Vi kollade upp ett flertal olika innan vi valde för att jämföra men tyckte att den såg trevlig och enkel ut att använda. Det var lätt att lägga upp våra olika User story-kort och skriva en beskrivning av varje. Sen var det även enkelt att färgkoda de olika korten och vi valde röd för de högst prioriterade storiesen och sedan orange, gul och blå för de efterföljande prioriteringsnivåerna. För att få fram prioriteringarna på våra user stories så använde vi Planning Poker och så gick vi efter de som hade fått högst poäng. Trello var även användarvänligt att arbeta i och man såg förändringar i realtid. Vi satte WIP limits baserat på att vi tänkte att vi har tre utvecklare, två testare och två programvaru distributörer och att då varje individ kan ta åt sig en user story i taget. Detta är en uppskattning vi gjorde som kan ändra på sig under projektets gång.