

Test cases:

Test Case 1 : Driver Reg. No addition; **Priority : High**

Description: Driver should be able to add new car registration number in the application

Precondition : No registration number/car info added or selected in application

Related story: DRIVER: Configuration

Step no	Test step	Expected result	Results/Notes
1	Open driver application	Application opens	works good
2	Navigate to configuration	Application displays car configuration page	
3	Check registration numbers	Application displays an empty list	
4	Click to add new car registration	Application displays new car adding page	works good and immediate feedback
5	Enter new car info	Application displays visual feedback of info entered	works good and immediate feedback
6	Scan for Beacons	Application displays the list of beacons	works good and immediate feedback
7	Select the beacon		works good and immediate feedback
8	Confirm and add	Application adds the number into selectable registration no list	works good and immediate feedback
9	Check registration numbers	Application displays a list with only the added number	works good and immediate feedback

Post-condition: Registration number is added and stored in the application

Testers : Anil / Hanning

Test Case 2 : Driver Reg. No addition 2; Priority : High

Description: Driver should be able to add new car registration number in the application

Precondition : One or more registration number in application previously

Related story: DRIVER: Configuration

Step no	Test step	Expected result	Results/Notes
1	Open driver application	Application opens	works
2	Navigate to settings	Application displays car configuration page	works
3	Check registration numbers	Application displays previously added registration numbers	shows
4	Click to add new car registration	Application displays new registration adding page	works
5	Enter new registration no		works
6	Confirm and add	Application adds the number into selectable registration no list	works
7	Check registration numbers	Application displays a list with previous and added number	works'

Post-condition:

Testers : Anil / Hanning

Test Case 3 : Driver Reg. No selection; Priority : High

Description: Driver can select from a list of car registration numbers for the beacon to broadcast

Precondition : There should be more than one selectable beacons broadcasting car registration numbers added to application

Related story: DRIVER: Configuration

Step no	Test step	Expected result	Results/Notes
1	Open driver application	Application opens	
2	Navigate to configuration	Application displays car configuration page	
3	Check registration no lists	Application displays the list with previously added registration numbers	
4	Select new registration no	Select a different registration number	
5	Confirm selection	Application displays new registration number as selected	

Post-condition: Application uses the selected beacon

Testers : Anil / Hanning

Test Case 4 : Driver Availability Map; Priority : Medium

Description: Driver can observe which areas are highly populated or not through map function

Precondition :

Related story: DRIVER: Parking lot availability map

Step no	Test step	Expected result	Results/Notes
1	Open driver application	Application opens, displays menu	works
2	Click to map	Application displays map	works
3	Navigate to desired area	Application shows heatmap of area giving information about how populated it is	Confirmed the data displayed in map
4	Close map	Application returns to menu	works

Post-condition:

Testers : Anil / Hanning

Test Case 5 : Driver paid parking 1; Priority : High

Description: Driver parks his car in a paid parking area and confirms his parking using SPARK through smart meter

Precondition : Beacon is already configured and broadcasting the registration plate of the car.

Related story: DRIVER: Paid outside parking with SPARK

Step no	Test step	Expected result	Notes	Results/Notes
1	Exit the vehicle	You are outside		
2	Walk up to the smart meter	You are now closer to the smart meter		
3	Open application	Application opens and displays menu		pass
4	Click paid parking icon	Application connects to smart meter and displays the information for the area	Information should include: Parking area identifier, Price per hour and resolution	pass
5	Enter invalid time	Application does not let you confirm	Invalid time: -Over max limit. -Not multiple of resolution	pass
6	Enter valid time	Application lets you confirm the parking		pass
7	Confirm parking	Application confirms payment and returns the token.		pass
8	Exit application	You are free to go		

Post-condition: Corresponding parking event should be created and stored in CLOUD with the properties : **Parking area identifier**, **Parking time** and **CAR's register number**.

Result : *Intermediate and Post-condition has been fulfilled*

Testers : Anil / Hanning

Test Case 6 : Driver disc parking; **Priority** : High

Description: Driver parks his car outside, in a parking disc area.

Precondition : Beacon is already configured and broadcasting the registration plate of the car.

Related story: DRIVER: Parking disc outside parking with SPARK

Step no	Test step	Expected result	Results/Notes
1	Stop your car in a parking disc area.	Car is stopped in a parking disc area.	For safety
2	Open driver application	Driver application opens and displays menu.	works
3	Tap parking disc icon	Application opens up parking disc menu	works
4	Tap park here	Application displays confirmation	works
7	Confirm parking	Application confirms parking and returns to main screen	works
8	Exit application	You are free to go	works

Post-condition: Corresponding parking event should be created and stored in CLOUD with the properties

Testers : Anil / Hanning

Test Case 7 : Driver disc parking extension; Priority : Medium

Description: Driver can extend his parking time in parking disc context at any time after initial parking using the application

Precondition : Car is already parked in a parking disc area and parking event is stored in cloud. User(Driver) should have internet connection.

Related story: DRIVER: Parking disc outside parking with SPARK

Step no	Test step	Expected result	Results/Notes
1	Carefully open up driver application	Driver application opens up and displays main screen	works
2	Tap parking disc	Application shows parking disc menu	works
3	Extend your parking time	Application asks for confirmation	Failed /Not Possible
4	Confirm extension	Application displays confirmation	Failed/Not Possible
7	Tap screen	Application returns to main screen	works
8	Exit application	You are free to go	yes

Post-condition: Corresponding parking event should be changed corresponding to the new values the time should be set again.

Testers : Anil / Hanning

Test Case 8 : Attendant paid parking check; Priority : High

Description: Attendant can check for parking violations in a certain parking area.

Precondition : Attendant has access to internet connection and **GPS(?)**, There are no parking violations in current parking area.

Related story: ATTENDANT: Paid outside parking

#note_24_1_17: check paid parking- scan for cars: when we press scan button within 4secs it gives an error alert. So the idea is to disable the scan button.or press the button after 4secs.**(Fixed)**

Step no	Test step	Expected result	Results/Notes
1	Open attendant application	Attendant application opens and displays main screen	works
2	Choose paid parking menu	Application displays list of paid parking areas	works
3	Select current area	Application displays list of register numbers in that area	works
4	Check list	No red marked registration numbers, all green marked registration numbers in list	Red : invalid Green : valid parkings
5	Check car info(Tap a car no)	Info should be displayed of car and parking event	Info : Allotted time of parking and time the parking was done
6	Exit application		

Post-condition:

Testers : Anil Ozdemir / Soumya Das

Test Case 9 : Attendant paid parking check 2; Priority : High

Description: Attendant can check for parking violations in a certain parking area , check the time exceeded for invalid parking and remove the invalid parked registration numbers from the list after fining.

Precondition : Attendant has access to internet connection and **GPS(?)**, There are valid and invalid parkings in area.

Related story: ATTENDANT: Paid outside parking with SPARK 2a

#note: android 5.1.1 ,kernel version 3.4.0-gc82e70f the app couldn't locate my location(Fixed).

Step no	Test step	Expected result	Results/Notes
1	Open attendant application	Attendant application opens and displays main screen	works
2	Choose paid parking	Application displays paid parking menu	works
3	Select current area	Application displays list of register numbers in that area	Doesnt work in my device
4	Check list	There are invalid and valid parkings displayed in list	Doesnt work in my device
5	Check invalid parking(Tap red)	Application displays info for invalid parking	Info: Registration no Time parking done Allotted time Time exceeded
6	Fine the car		Get'em
7	Remove the registration no	Application confirms removal and returns to list of registration no's for current area	
8	Check list	Application displays a list of registration no's without fined car	
9	Exit application		

Post-condition:

Testers : Anil Ozdemir / Soumya Das

Test Case 10 : Attendant paid parking, reg. no removal; **Priority : High**

Description: Attendant can check for parking violations and remove a registration number from list.

Precondition : Attendant has access to internet connection and **GPS(?)**, Attendant is in a paid parking area where there are no parking violations.

Related story: ATTENDANT: Paid outside parking with SPARK 2b

Step no	Test step	Expected result	Results/Notes
1	Open attendant application	Attendant application opens and displays main screen	works
2	Choose paid parking	Application displays paid parking menu	works
3	Select current area	Application displays list of registration numbers that are parked in current area	Not implemented
4	Remove a car(valid) from list	Application confirms the removal and displays the list of registration numbers that are parked in current area without removed number.	Not implemented
5	Exit application		

Post-condition:

Testers : Anil Ozdemir / Soumya Das

Test Case 11 : Attendant paid parking check; Priority : Low

Description: Attendant can remove a certain registration no from list without possibly losing information in further checks.

Precondition : Attendant has access to internet connection and **GPS(?)**, Attendant previously checked the area and there were no violations so he removed some of the cars from list. Now attendant returns to the same parking area where the **previously removed** car turned into **invalid** parking.

Related story: ATTENDANT: Paid outside parking with SPARK 2b

Step no	Test step	Expected result	Results/Notes
1	Open attendant application	Attendant application opens and displays main screen	works good
2	Choose paid parking	Application displays paid parking menu	works good
3	Select current area	Application displays list with valid and invalid parkings	Invalid parkings should include previously removed registration number.
4	Exit application		works good

Post-condition:

Testers : Anil Ozdemir / Soumya Das

Test Case 12 : Attendant Parking disc check Priority : High

Description: Attendant can check the validity of parking events in a parking disc area.

Precondition : Attendant has access to internet and GPS(?) . There are 4-5 beacons dispersed in parking area and there are no invalid parking in the current area.

Related story: ATTENDANT : parking disc outside parking

Step no	Test step	Expected result	Results/Notes
1	Go to a parking disc area	You are in the parking area	Good job
2	Open attendant application	Attendant application opens and displays home screen	works good
3	Select parking disc	Application displays the screen for setting the maximum allowed time.	works good and immediate feedback
4	Set maximum allowed time.	Application displays the list for the registration numbers of cars in area.	works good and immediate feedback
5	Check list	All 4-5 beacons previously placed should be displayed on the list as green.	Green : valid Red : invalid
6	Exit Application		works good

Post-condition:

Testers : Anil Ozdemir / Soumya Das

Test Case 13 : Attendant parking disc check 2 Priority : High

Description: Attendant can check the validity of parking events in a parking disc area. Fine any invalid parkings and remove them from list

Precondition : Attendant has access to internet and GPS(?) . There are 4-5 beacons dispersed in parking area and there are at least 1 invalid parking.

Related story: ATTENDANT : parking disc outside parking with SPARK 2a

Step no	Test step	Expected result	Results/Notes
1	Go to a parking disc area	You are in the parking area	Good job
2	Open attendant application	Attendant application opens and displays home screen	works good
3	Select parking disc	Application displays the screen for setting the maximum allowed time.	works good and immediate feedback
4	Set maximum allowed time.	Application displays the list for the registration numbers of cars in area.	No feedback until click the "scan" button, and after 5 seconds, result shows up(Fixed)
5	Check list	All 4-5 beacons previously placed should be displayed with at least 1 red.	Green : valid Red : invalid and one red result appeared
6	Check invalid parking(Tap)	Application displays info on invalid parking	Info: Allotted time Time exceeded
7	Find the car		
8	Remove car from list	Application removes the car(registration no) and displays the list without it.	not impletmented
9	Exit application.		works good

Post-condition:

Testers : Anil Ozdemir / Soumya Das

Test Case 14 : Attendant disc removal check; Priority : Low

Description: Attendant can remove a certain registration no from list without possibly losing information in further checks.

Precondition : Attendant has access to internet connection and **GPS(?)**, Attendant previously checked the area and there were no violations so he removed some of the cars from list. Now attendant returns to the same parking area where the **previously removed** car turned into **invalid** parking.

Related story: ATTENDANT: parking disc outside parking with SPARK 2b

Step no	Test step	Expected result	Results/Notes
1	Go to a parking disc area	You are in the parking area	Good job
2	Open attendant application	Attendant application opens and displays home screen	works good
3	Select parking disc	Application displays the screen for setting the maximum allowed time.	works good and immediate feedback
4	Set maximum allowed time.	Application displays the list for the registration numbers of cars in area.	works good and immediate feedback
5	Check list	Application should display list with at least 1 red.	Green : valid Red : invalid Invalid parking event should be the previously removed event.
6	Exit application		works good

Testers : Anil Ozdemir / Soumya Das

Test Case 15 : Driver paid parking without SPARK; Priority : Low

Description: Driver parks his car in a paid parking area and confirms his parking just using smart meter without SPARK system.

Precondition :

Related story: DRIVER: Paid outside parking without SPARK

Step no	Test step	Expected result	Results/Notes
1	Exit the vehicle	You are outside	
2	Go to smart meter	You walked up to smart meter	
3	Pay for your desired time of parking	You lost money received receipt	
4	Put ticket to your window	You have a ticket in window	
5	Leave premises		

Post-condition: Corresponding parking event should be created and stored in CLOUD with the properties : **Parking area identifier, Parking time**

UNABLE TO TEST

Test Case 16 : Driver paid parking with NO Connection; **Priority : Medium**

Description: Smart meter in case of losing connection to cloud should inform the users of the situation and refuse any bluetooth connections

Precondition : There is no connection to cloud service.

Related story: DRIVER: Paid outside parking with SPARK

Step no	Test step	Expected result	Results/Notes
1	Exit the vehicle	You are outside	good job
2	Get close to smart meter	You are sufficiently close to smart meter	good job
3	Open driver application	Driver application opens and displays home screen	works good
4	Select paid parking	Application displays error informing there is no connection to cloud	
5	Exit application		works good

Post-condition:

Tester : Anil Ozdemir

Test Case 17 : Driver paid parking - Insufficient money; **Priority : High**

Description: If the driver has no means to confirm the payment the parking shouldn't be verified and user should be notified of the situation.

Precondition : User cannot confirm payment, due to not enough credits in account or any other means, or cannot pay

Related story: DRIVER: Paid outside parking with SPARK

Step no	Test step	Expected result	Results/Notes
1	Exit the vehicle	You are outside	good job
2	Get close to smart meter	You are sufficiently close to smart meter	good job
3	Open driver application	Driver application opens and displays home screen	works good
4	Select paid parking	Application displays payment screen for the smart meter.	works
5	Confirm parking	Application gives error informing the user the payment cannot be completed.	works
6	Exit application		

Post-condition: : There should be no parking event created in cloud or any ticket available to user.

Tester : Anil Ozdemir

Test Case 18 : Driver paid parking - Insufficient money; **Priority : High**

Description: If the driver has no means to confirm the payment the parking shouldn't be verified and user should be notified of the situation.

Precondition : User cannot confirm payment, due to not enough credits in account or any other means, or cannot pay

Related story: DRIVER: Paid outside parking with SPARK

Step no	Test step	Expected result	Notes
1	Exit the vehicle	You are outside	
2	Get close to smart meter	You are sufficiently close to smart meter	
3	Open driver application	Driver application opens and displays home screen	Unable to test
4	Select paid parking	Application displays payment screen for the smart meter.	Unable to test
5	Confirm parking	Application gives error informing the user the payment cannot be completed.	Unable to test
6	Exit application		

Post-condition: : There should be no parking event created in cloud or any ticket available to user.

Tester : Anil Ozdemir