Assumptions, Test Cases and execution Report:

Assumptions:

1. Token id will always be in increasing order.
2. Token id will not be reused.
3. Data will not be backed up in any secondary storage.
4. Driver name and his mother name should not contain any space.
5. Car number should not have any space and it will be always a number.

Test case for entry system:

Step1: Chose any entry gate in the entry system.

Step 2: Enter the number of cars you want to park, number of cars should be less than space left in the parking.

Step 3: Fill the driver detail and car information.

Result: Space left will be decreased by number of car in the parking and result will be displayed on screen.

Execution Report: PASS

Test case for exit system:

One: Token id present

Step1: Chose any exit gate in the exit system.

Step2: Enter the token id for the car.

Result: If exit system will be able to find token id system will delete car and driver information in shared memory, result will be displayed after deletion.

Space left at entry system will be increased by one.

Execution Report: PASS

Two: Lost token id

Step1: Chose any exit gate in the exit system.

Step2: Enter driver information in the system.

Step3: system will return the token number.

Result: System should return the lost token id and according to token id deletion should occur. Space left at entry system will be increased by one.

Execution Report: Green

Test case for Mutex lock:

Step1: open all gates at entry system or exit system.

Step2: If one of the gate is open other one should not be able to enter or delete the car information.

Result: Thread will wait till the other one release the mutex lock.

Execution Report: PASS