### **Use Case 1 Start Parking**

* **Use Case ID:** 1
* **Use Case Name:** Start Parking
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** Driver (arriving at the garage)
* **Pre-conditions:**
  + Space available for drivers to park.
* **Post-conditions:**
  + Recorded license plate and entry time.
  + Ticket is issued
* **Basic Flow:**
  + Vehicle entering the garage
  + System display welcome message and instructions
  + System record license plate, issue ticket.
* **Extensions / Alternate Flows:**
* **Exceptions:**
  + The garage is full and prevents entry.
* **Related Use Cases:** Open Exit Gate.

### **Use Case 2 Calculate fee for driver to pay**

* **Use Case ID:** 2
* **Use Case Name:** Calculate Parking Fee at Exit
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** Driver (leaving the garage)
* **Pre-conditions:**
  + System record entry time.
* **Post-conditions:**
  + The amount due is calculated and presented to the driver
* **Basic Flow:**
  + Driver enters license plate at exit.
  + System retrieves the data and calculate the fee
  + The system provides payment options.
* **Extensions / Alternate Flows:**
* **Exceptions:**
  + Entered license plate not found
* **Related Use Cases:** Start Parking, Take Payment.

### **Use Case 3 Open Garage Gate**

* **Use Case ID:** 3
* **Use Case Name:** Open Garage Gate
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** Driver (Entering/exiting the garage)
* **Pre-conditions:**
  + System recorded entry time and license plate for entering
  + Allow entry when the garage is not full only.
  + Fee is paid when exiting.
* **Post-conditions:**
  + Gate opened
* **Basic Flow:**
  + Vehicle arrives at entry
  + System recorded entry time and license plate.
  + Opens the gate for entering
  + Vehicle arrives at exit and paid fee
  + Opens the gate for exiting
* **Extensions / Alternate Flows:**
* **Exceptions:**
  + License plate not found in the system
* **Related Use Cases:** Start Parking, Take Payment.

### **Use Case 4 Generate Driver Receipt**

* **Use Case ID:** 4
* **Use Case Name:** Generate Driver Receipt
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** Driver (payer)
* **Pre-conditions:**
  + License plate is found.
  + Fee is calculated and paid
  + A receipt generator is available.
* **Post-conditions:**
  + A receipt is generated, containing payment and car details,
* **Basic Flow:**
  + After successful payment, system generate a receipt for driver
  + System logged the event(entry/exit time and fee)
* **Extensions / Alternate Flows:**
  + Email the receipt instead of printing.
* **Exceptions:**
  + Printer failure.
* **Related Use Cases:** Calculate Amount for Actor to Pay, Take Payment, Open Exit Gate

### **Use Case 5 Take Payment**

* **Use Case ID:** 5
* **Use Case Name:** Take Payment
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** Driver (payer)
* **Pre-conditions:**
  + License plate found in the system
  + Provide accepted payment methods
  + System able to calculate payment.
* **Post-conditions:**
  + The amount due is paid in full.
  + The system recorded the fee.
  + Generate receipt for driver
* **Basic Flow:**
  + The driver initiates payment by entering the license plate.
  + The system calculate and display amount due
  + The system provide payment options
  + The driver selects a payment method.
  + The system processes the payment and generates a receipt.
* **Extensions / Alternate Flows:**
  + Driver selected one payment method then decided to change a payment method
* **Exceptions:**
  + Payment declined
* **Related Use Cases:** Calculate Amount for Actor to Pay, Generate Driver Receipt, Open Exit Gate

### **Use Case 6 Operator Generate report**

* **Use Case ID:** 6
* **Use Case Name:** Operator generate report
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** Operator (System user)
* **Pre-conditions:**
  + The operator is authenticated and authorized to do so.
  + The system is able to read the stored data.
* **Post-conditions:**
  + Report is generated and saved a copy in the system.
* **Basic Flow:**
  + Operator logs into the system
  + Operator navigates to the report section
  + Operator select print report or email report
  + Operator select report type(weekly/monthly report)
  + The system generates the report and records the operator request for the report.
* **Extensions / Alternate Flows:**
  + The System automatically generates monthly reports and saves them in the system.
* **Exceptions:**
  + Unable to access the stored data
  + No data found
  + Unauthorized access.
* **Related Use Cases:** Calculate Amount for Actor to Pay, Take Payment, Generate Driver Receipt

### **Use Case 7**

* **Use Case ID:** {This should be coded to identify the level of the use case}
* **Use Case Name:** {Short descriptive phrase}
* **Relevant Requirements:** \* {Reference to relevant requirements document.}
* **Primary Actor:** {Main sub-system/entity that initiates use}
* **Pre-conditions:**
  + {Requirements on the state of the system prior to this use being valid.}
* **Post-conditions:**
  + {This describes the state of the system following the successful completion of this use. Effects on other systems and actors may also be described.}
* **Basic Flow:**
  + {Numbered flow of events: 1 The user initiates an action by... 2 The system responds by...}
* **Extensions / Alternate Flows:**
  + {This section presents variations on this use case. It presents those use cases that have an extends relation with the current use case.}
* **Exceptions:**
  + {This section describes all error conditions that can arise in the use case.}
* **Related Use Cases:** {use cases that are either usually performed just before or after the current use.}