Start

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| --- | --- | --- | --- | --- |
| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can start program | User selects log in button | Log in form appears | Log in form appears | Pass |
| User selects exit button | Program closes | Program closes | Pass |

Log in

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| --- | --- | --- | --- | --- |
| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can log in | User enters and selects correct values. Username = MainAdmin, Password= 123pass, Role: Admin | User logs in and Welcome employee window opens. | User logs in and Welcome employee window opens | Pass |
| User enters and selects incorrect values. Username = abc, Password= xxx, Role: Staff | Error message -“Sorry try again” appears | Error message -“Sorry try again” appears | Pass |
| User enters incorrect value for Username = abc, correct values for the rest, Password= 123pass, Role: Admin | Error message -“Sorry try again” appears | Error message -“Sorry try again” appears | Pass |
| User enters incorrect value for  Password= xxx , correct values for the rest, Username = MainAdmin, Role: Admin | Error message -“Sorry try again” appears | Error message -“Sorry try again” appears | Pass |
| User selects incorrect value for Role= staff, correct values for the rest, Username = MainAdmin, Password= 123pass | Error message -“Sorry try again” appears  Error message -“Sorry try again” appears | Error message -“Sorry try again” appears | Pass |
| User doesn’t enter any values. | Error message -“Sorry try again” appears | Pass |

Welcome Employee

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| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can move forward to manage any part of the system | User selects manage stock button | Stock management form appears. | Stock management form appears. | Pass |
| User selects employee and customer management button | Customer and employee management form appears. | Customer and employee management form appears. | Pass |
| User selects rental management button | Rental management form appears. | Rental management form appears. | Pass |
| User selects edit button | Employee account form appears. | Employee account form appears. | Pass |

Employee Account

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| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can edit their account and save new values if update. | User doesn’t change any values and clicks save. | Details don’t get updated and welcome employee form appears. | Details don’t get updated and welcome employee form appears. | Pass |
| User enters valid values and clicks save.  Name = a, Username = aaa, Password = 1ab2, Address = a b c -12, Date of Birth =1/1/1996, Telephone no = 999, Office address = 123 a b c, Phone extension no = 123 | Details get updated and welcome employee form appears. | Details get updated and welcome employee form appears. | Pass |
| User tries to save empty values. | Error message appears, then Welcome form appears. | Error message appears, then Welcome form appears. | Pass |
| User tries to save a negative value in a field that can’t be negative. Telephone Extension Number = -98, Telephone Number = -845987549 | Error message appears, then Welcome form appears. | Error message appears, then Welcome form appears. | Pass |

Manage Stock

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| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can add new model information | User clicks on “Model” button and enters valid information in all fields. Model = “a” Brand = “b” Year of Manufacture = 2000, seat = 2, passenger capacity = 2, engine size = 1000, fuel capacity = 10000, rent charge = 10.50 | Model gets added | Model gets added | Pass |
| User leaves fields empty. | Error message is shown | Error message is shown | Pass |
| User enters invalid value: Year of Manufacture = 2 | Error message is shown | Error message is shown | Pass |
| User tries to save a negative value in a field that can’t be negative. Year of Manufacture = -2392, seat = -2, passenger capacity = -2, engine size = -320, fuel capacity = -100, rent charge = -9.50 | Error message is shown | Error message is shown |  |
|  | User tries to add car model with same model name = “Toyota” and brand name = “Corolla” | Car model doesn’t get added | Car model doesn’t get added | Pass |
| User can update model information | User tries to save model information and enters an invalid rent charge = -23.8 | Error message is shown | Error message is shown | Pass |
| User tries to save model information and enters valid value. Rent charge = 9999 | Selected model gets updated with the new value | Selected model gets updated with the new value | Pass |
| Remove Model Information | User clicks “Remove Model” button | Selected model gets removed. | Selected model gets removed. | Pass |
| User can add new car | User selects a model, then clicks on the “Add car” button, then enters valid values for all fields. Wof Due Date = 25/2/2018, registration due date = 25/5/2016, Engine Number = 8, Colour = “red”, Body Style = Hatchback, Status = OnShop. | A new car is added to the model | A new car is added to the model | Pass |
| User selects a model, then clicks on the “Add car” button, then enters invalid values for fields. wof due date = 2/2/2008 and registration due date = 3/5/1997, Engine Number = -5. | Error message appears | Error message appears | Pass |
| User tries to add car with same engine no = 44554 | Car doesn’t get added | Car doesn’t get added | Pass |
| User can delete a car from a model | User clicks remove car button | Car gets removed from the model | Car gets removed from the model | Pass |
| User can update car information | User selects a car and enters valid dates for wof due date = 2/2/2017 and registration due date = 3/5/2020 | The car is updated with the new information | The car is updated with the new information | Pass |
| User selects a car and enters past dates for wof due date = 2/2/2008 and registration due date = 3/5/1997 | Error message appears | Error message appears | Pass |
| User can search for cars by Brand | User enters an existing brand = Civic | Shows cars that are of brand “Civic” | Shows cars that are of brand “Civic” | Pass |
| User enters a brand that doesn’t exist. Brand = Mercedes | No cars appear | No cars appear | Pass |
| User can search for cars by Category | User selects an existing category = SUV | Shows cars that are of category “SUV” | Shows cars that are of category “SUV” | Pass |
| User can see car details | User selects a car from the given list | Details appear on the right, along with the car model details | Details appear on the right, along with the car model details | Pass |
| User can see car model details | User selects a model from the given list | Details appear on the right. | Details appear on the right. | Pass |

Employee and Customer Management: Employee

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| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can add employees | User clicks on the “Add Employee” button. User enters and selects valid values. Name = “a”, Id = 1, Username = “ab”, password = “2w”, address = “asdf 1”, date of birth = 25/5/1988, telephone no = 11111, Office Address = “road 1”, phone extension number = 1, Role = admin | Employee is added to the list of employees | Employee is added to the list of employees | Pass |
| User leaves fields empty | Error message appears | Error message appears | Pass |
| User clicks on the “Add Employee” button. User enters and selects invalid values. Id = -6, telephone no = -222221, phone extension number = -4 | Error message appears | Error message appears | Pass |
|  | User enters valid values but enters an existing Id = 1 | Employee doesn’t get added. | Employee doesn’t get added. | Pass |
| User enters valid values but enters an existing Username = “ab” | Employee doesn’t get added. | Employee doesn’t get added. | Pass |
| User can remove employees | User selects an employee and clicks on the “Remove Employee” button | Employee is removed from the employee list | Employee is removed from the employee list | Pass |
| User can view details of employees | User selects an employee. | The details are shown on the right | The details are shown on the right | Pass |
| User can update employee details | User selects an employee and tries to update with valid values: Name = “b”, Username = “abc”, password = “2wc”, address = “qwer 1”, date of birth = 25/5/1989, telephone no = 222221, Office Address = “road 2”, phone extension number = 4 | Selected Employee details are updated with the new details | Selected Employee details are updated with the new details | Pass |
| User selects an employee and tries to update with invalid values: telephone no = -222221, phone extension number = -4 | Error message appears | Error message appears |  |
| User can search for employees by Id | User enters an existing ID = 1 | Shows the employee that has an ID of 1 | Shows the employee that has an ID of 1 | Pass |
| User can search for employees by Name | User enters an existing Name = “a” | Shows the employee that has a name of “a” | Shows the employee that has a name of “a” | Pass |
| User can search for employees by Date of birth | User enters an existing Date of birth = 25/5/1988 | Shows the employees that have a date of birth of 25/5/1988. | Shows the employees that have a date of birth of 25/5/1988. | Pass |

Employee and Customer Management: Customer

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| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can remove customers | User selects a customer and clicks on the “Remove Customer” button | Customer is removed from the customer list | Customer is removed from the customer list | Pass |
| User can view details of customers | User selects a customer. | The details are shown on the right | The details are shown on the right | Pass |
| User can update customer details | User selects a customer and tries to update with valid values: Name = “b”, licence number = “abc”, address = “qwer 1”, date of birth = 25/5/1989, telephone no = 222221, licence expiry date = 25/5/1989, | Selected Customer details are updated with the new details | Selected Customer details are updated with the new details | Pass |
| User selects a customer and tries to update with invalid values: telephone no = -222221 | Error message appears | Error message appears | Pass |
| User leaves fields empty. | Error message is shown | Error message is shown | Pass |
| User can search for customers by Id | User enters an existing ID = 1 | Shows the customer that has an ID of 1 | Shows the customer that has an ID of 1 | Pass |
| User can search for customers by Name | User enters an existing Name = “a” | Shows the customer that has a name of “a” | Shows the customer that has a name of “a” | Pass |
| User can search for customers by Date of birth | User enters an existing Date of birth = 25/5/1988 | Shows the customers that have a date of birth of 25/5/1988. | Shows the customers that have a date of birth of 25/5/1988. | Pass |
| User can view rental records of a selected customer | User Clicks on the “View rental records of Customer” button | Detailed log of rentals of the selected customer are shown. | Detailed log of rentals of the selected customer are shown. | Pass |

Employee and Customer Management: Person

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| --- | --- | --- | --- | --- |
| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can view details of people | User selects a person. | The details are shown on the right | The details are shown on the right | Pass |
| User can search for people by Id | User enters an existing ID = 1 | Shows the person that has an ID of 1 | Shows the person that has an ID of 1 | Pass |
| User can search for people by Name | User enters an existing Name = “a” | Shows the people that have a name of “a” | Shows the people that have a name of “a” | Pass |
| User can search for people by Date of birth | User enters an existing Date of birth = 25/5/1988 | Shows the people that have a date of birth of 25/5/1988. | Shows the people that have a date of birth of 25/5/1988. | Pass |

Rental Management:

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| Requirement | Input | Expected Outcome | Actual Outcome | Result |
| User can search rental records | User selects option = ‘Overdue cars’ from given dropdown menu. | Shows a list of overdue cars with details. | Shows a list of overdue cars with details. | Pass |
| User selects option = ‘Available cars’ from given dropdown menu. | Shows a list of available cars with details. | Shows a list of available cars with details. | Pass |
| User selects option = ‘Rented cars’ from given dropdown menu. | Shows a list of rented cars with details. | Shows a list of rented cars with details. | Pass |
| User selects option = ‘Dates’ from given dropdown menu and picks any date. | Shows a list of cars with details between selected dates. | Shows a list of cars with details between selected dates. | Pass |
| User can rent cars out to new customer | User leaves fields empty. | Shows error message | Shows error message | Pass |
| User selects invalid rent start date = ‘1/1/2014’ and rent end date = ‘2/2/2000’ | Shows error message | Shows error message | Pass |
| User enters valid values but doesn’t select a car. | Shows error message | Shows error message | Pass |
| User enters and selects valid values. Name = “a”, Id = 1, address = “asdf 1”, date of birth = 25/5/1988, telephone no = 11111, License number =”qqq1”, License expiry date =”1/1/2018” | Selected car gets returned. | Selected car gets returned. | Pass |
| User enters invalid values. ”, Id = -1, date of birth = 25/5/2018, telephone no = -11111, License expiry date =”1/1/2011” | Shows error message | Shows error message | Pass |
| User double clicks a customer name. | Customer details shows up. | Customer details shows up. | Pass |
| User double clicks a car name. | Car details shows up. | Car details shows up. | Pass |
| User enters valid values but an existing licence number = “qqq1” | Shows error message | Error message shows up. | Pass |
| User enters a valid values, but an existing ID number = 1 | Shows error message | Error message shows up. | Pass |
| User can rent cars out to old customer | User selects customer = ‘Sadia’ and car =’car1:1566’, ‘car2:44554’ and selects valid rent start date = ‘1/1/2017’ and rent end date = ‘2/2/2017’ | Shows message that cars have been rented out. | Shows message that cars have been rented out. | Pass |
| User selects customer = ‘Sadia’ and car =’car1:1566’, ‘car2:44554’ and selects invalid rent start date = ‘1/1/2015’ and rent end date = ‘2/2/2015’ | Shows error message | Shows error message | Pass |
| User enters valid values but doesn’t select a car. | Shows error message | Shows error message | Pass |
| User enters valid values but doesn’t select a customer. | Shows error message | Shows error message | Pass |
| User can return cars to car yard. | User clicks “Receive returned car” button and selects cars that need to be returned and clicks return button. | Selected car gets returned. | Selected car gets returned. | Pass |