UML Use Case Diagrams

This section discusses the actors relevant to this system and their interactions with it.

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| Description Table for Car Dealership Chatbot System | | |
| Type | Actor | Goal Description |
| Primary | Buyer | The buyer wants to buy a car. The buyer may know what car they want to purchase, or they may not know what car they want to purchase and need recommendations |
| Primary | Existing customer | An existing customer already purchased a car from the dealership and need the car to be serviced. |
| Primary | Car Salesman | The car salesman want to be able to make a sale, and wants the buyer to have a car picked out before making a sale. |
| Supporting | Finance Specialist | The finance specialist provides financing options for buyers who need a loan for their car. They need to know how much money the buyer must loan |
| Supporting | Vehicle service provider | The vehicle service provider repairs the vehicle. They need to know what time the car will be dropped off at the service plaza and who the car is registered to. |
| Offstage | Dealership owner | The dealership owner wants his employees to be more productive and make more sales. He believes that this chatbot will streamline the sales process. |
| Offstage | Regulation committees | AI is under regulatory control for privacy and security |

Use Cases

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| --- | --- |
| Use Case Section | Comment |
| Use Case Name | Informed buyer wants to buy a car |
| Scope | Car sales chatbot system |
| Level | Sub function |
| Primary Actor | Buyer |
| Stakeholder and Interests | Car Salesman |
| Preconditions | Website can host the chatbot system, buyer opened chatbot on the website, all cars on website are available for purchase |
| Success Guarantee | Buyer requests a quote on the car |
| Main Success Scenario | 1. Buyer opens website and clicks on chatbot 2. Buyer queries the chatbot for the car they have in mind 3. Chatbot finds car options and provides buyer with links 4. Buyer picks a car that they like and requests a quote 5. Chatbot requests contact information from buyer 6. Chatbot emails car salesman notifying that the buyer is interested and provides contact information |
| Extensions | 2.a Chatbot cannot find a car that meets the buyer’s specifications, so it provides similar options  2.b Chatbot cannot understand buyer’s query so it asks for clarification  4.a buyer does not see a car option they like and requests other options |
| Special Requirements | N/a |

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| --- | --- |
| Use Case Section | Comment |
| Use Case Name | Undecided buyer wants to buy a car |
| Scope | Car sales chatbot system |
| Level | Sub function |
| Primary Actor | Buyer |
| Stakeholder and Interests | Car Salesman |
| Preconditions | Website can host the chatbot system, buyer opened chatbot on the website, all cars on website are available for purchase |
| Success Guarantee | Buyer requests a quote on the car |
| Main Success Scenario | 1. Buyer opens website and clicks on chatbot 2. Buyer queries that they need recommendations for what car they should buy 3. Chatbot requests for details on what the customer needs 4. Customer provides details of their car needs 5. Chatbot suggests 5 cars from the company website that meet given specifications, and requests if there are more specifications 6. Repeat steps 3 to 5 until user selects a car 7. Buyer picks a car that they like and requests a quote 8. Chatbot requests contact information from buyer 9. Chatbot emails car salesman notifying that the buyer is interested and provides contact information |
| Extensions | 4.a Customer provides uninterpretable query  4.b Chatbot notes query is uninterpretable and requests a new query from the buyer  5.a If chatbot cannot find a car with given specifications, tell user that a car with those specifications cannot be found and request for a different query |
| Special Requirements | N/a |

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| --- | --- |
| Use Case Section | Comment |
| Use Case Name | Buyer wants to finance a car |
| Scope | Car sales chatbot system |
| Level | Sub function |
| Primary Actor | Buyer |
| Stakeholder and Interests | Car salesman, finance specialist |
| Preconditions | Website can host the chatbot system, buyer opened chatbot on the website |
| Success Guarantee | Buyer decides to finance the car or buyer decides not to finance the car |
| Main Success Scenario | 1. Buyer opens website and clicks on chatbot 2. Buyer queries for financing options on a car they have picked 3. Chatbot requests for financial details on what the customer needs and desired car 4. Customer provides financial details and car information 5. Chatbot emails car salesman notifying that the buyer is interested and provides contact information 6. Chatbot emails finance specialist notifying that the buyer is interested and provides contact information |
| Extensions | 4.a Car is not found on website or is no longer for sale |
| Special Requirements | N/a |

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| --- | --- |
| Use Case Section | Comment |
| Use Case Name | Existing customer wants to get car repaired |
| Scope | Car sales chatbot system |
| Level | Sub function |
| Primary Actor | Existing customer |
| Stakeholder and Interests | Vehicle service provider |
| Preconditions | Website can host the chatbot system, buyer opened chatbot on the website |
| Success Guarantee | Car repair appointment is scheduled and vehicle service provider is notified |
| Main Success Scenario | 1. Existing customer opens website and clicks on chatbot 2. Existing customer queries for car repairs on a car they own 3. Chatbot checks records for customer’s information and car’s record, and queries date and time for car dropoff, 4. Customer provides date and time for dropoff of repair 5. Chatbot queries customer for reasons for dropoff 6. Customer provides reason for dropoff 7. Chatbot schedules appointment for decided date and time, and emails vehicle service provider with details of reason for dropoff, date and time for repair, and customer information |
| Extensions | 3.a customer does not exist in database yet  3.b chatbot request for more information from customer to register  4.a customer date and time options are not available  4.b chatbot requests different date and time for dropoff |
| Special Requirements | N/a |

**Use case diagram:**

A diagram of a car sales

Description automatically generated