**UML Class Diagram:**

**Class**

|  |
| --- |
| **Person** |
| firstName (string)  middleInitial (string)  lastName (string)  phoneNumber (string)  gender (ENUM) |
| +getFirstName():String  +setFirstName(firstName:String)  +getMiddleInitial():String  +setMiddleInitial(middleInitial:String)  +getLastName():String  +setLastName(lastName:String)  +getPhoneNumber():String  +setPhoneNumber(phoneNumber:String)  +getGender():Gender  +setGender(gender:Gender) |

**Object 1**

|  |
| --- |
| **James: Person** |
| firstName: "James"  lastName: "Jones"  middleInitial: "W."  phoneNumber: "816-897-9862"  gender: Gender.Male |

**Object 2**

|  |
| --- |
| **Hans: Person** |
| firstName: “Hans”  middleInitial: “K”  gender: Gender.Male |

**Class**

|  |
| --- |
| **Customer** |
| firstName (string)  middleInitial (string)  lastName (string)  phoneNumber (string)  gender (ENUM) |
| +getFirstName():String  +setFirstName(firstName:String)  +getMiddleInitial():String  +setMiddleInitial(middleInitial:String)  +getLastName():String  +setLastName(lastName:String)  +getPhoneNumber():String  +setPhoneNumber(phoneNumber:String)  +getGender():Gender  +setGender(gender:Gender) |

**Object 1**

|  |
| --- |
| **James: Customer** |
| firstName: "James"  lastName: "Jones"  middleInitial: "W."  phoneNumber: "816-897-9862"  gender: Gender.Male |

**Class**

|  |
| --- |
| **Mechanic** |
| firstName (string)  middleInitial (string)  gender (ENUM)  serviceAmount (int)  serviceName (ENUM) |
| +getFirstName():String  +setFirstName(firstName:String)  +getMiddleInitial():String  +setMiddleInitial(middleInitial:String)  +getGender():Gender +setGender(gender:Gender)  +getServiceAmount():int  +setServiceAmount(serviceAmount:int)  +getServiceName():ServiceType  +setServiceName(serviceName:ServiceType) |

**Object 1**

|  |
| --- |
| **Hans: Mechanic** |
| firstName: “Hans”  middleInitial: “K”  gender: Gender.Male  serviceAmount: “5”  serviceName: ServiceName.DIAGNOSTICS |

**Object 2**

|  |
| --- |
| **Hans: Mechanic** |
| firstName: “Hans”  middleInitial: “K”  gender: Gender.Male  serviceAmount: “5”  ServiceName.OIL\_REPLACEMENT |

**Object 3**

|  |
| --- |
| **Hans: Mechanic** |
| firstName: “Hans”  middleInitial: “K”  gender: Gender.Male  serviceAmount: “5”  ServiceName.OIL\_FILTER\_PARTS |

**Object 4**

|  |
| --- |
| **Hans: Mechanic** |
| firstName: “Hans”  middleInitial: “K”  gender: Gender.Male  serviceAmount: “5”  ServiceName.TIRE\_REPLACEMENT |

**Object 5**

|  |
| --- |
| **Hans: Mechanic** |
| firstName: “Hans”  middleInitial: “K”  gender: Gender.Male  serviceAmount: “5”  serviceName: ServiceName.TIRE |

**Class**

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| --- |
| **Vehicle** |
| make (ENUM)  model (ENUM)  color (string)  year (int)  vehicleID (string) |
| +getMake():ENUM  +setMake(make:ENUM)  +getModel():ENUM  +setModel(model:ENUM)  +getColor():String  +setColor(color:String)  +getYear():int  +setYear(year:int)  +getVehicleID():String  +setVehicleID(vehicleID:String) |

**Object 1**

|  |
| --- |
| **NissanAltima: Vehicle** |
| Make= Make.NISSAN  Model= Model.ALTIMA  Color= "Silver"  Year= “2014”  vehicleID= "AD-89034" |

**Class**

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| --- |
| **Service** |
| number (int)  serviceName (ENUM)  itemAmount(int)  currency (ENUM)  price (float) |
| +getNumber():int  +setNumber(number:int)  +getServiceName():ENUM  +setServiceName(serviceName:ENUM)  +getPrice():float  +setPrice(price:float) |

**Object 1**

|  |
| --- |
| **service1: Service** |
| number: “1”  serviceName: ServiceName.DIAGNOSTICS  itemAmount: “1”  currency: Currency.AED  price: “15.0” |

**Object 2**

|  |
| --- |
| **Service2: Service** |
| number: “2”  serviceName: ServiceName.OIL\_REPLACEMENT  itemAmount: “1”  currency: Currency.AED  price: “120.0” |

**Object 3**

|  |
| --- |
| **Service3: Service** |
| number: “3”  serviceName: ServiceName.OIL\_FILTER\_PARTS  itemAmount: “1”  currency: Currency.AED  price: “35.0” |

**Object 4**

|  |
| --- |
| **Service4: Service** |
| number: “4”  serviceName: ServiceName.TIRE\_REPLACEMENT  itemAmount: “2”  currency: Currency.AED  price: “100.0” |

**Object 5**

|  |
| --- |
| **Service5: Service** |
| number: “5”  serviceName: ServiceName.TIRE  itemAmount: “2”  currency: Currency.AED  price: “160.0” |

**Class**

|  |
| --- |
| **Payment** |
| total (float)  taxes (float)  discount (float)  finalAmount (float)  paymentDate (date) |
| +getTotal():float  +setTotal(total:float)  +getTaxes():float  +setTaxes(taxes:float)  +getDiscount():float  +setDiscount(discount:float)  +getFinalAmount():float  +setFinalAmount(finalAmount:float) |

**Object 1**

|  |
| --- |
| **payment1: Payment** |
| total: “451.5”  taxes: “21.5”  discount: “11.5”  finalAmount: “440.0”  paymentDate: “March 13,2022” |