**CLASS DIAGRAMS:**

**Namespace: MRRC\_Management**

public class Vehicle

|  |
| --- |
| **Vehicle** |
| - VehicleGrade: enum  - TransmissionType: enum  - FuelType: enum  - vehicleRego: string  - vehicleGrade: VehicleGrade  - vehicleMake: string  - vehicleModel: string  - vehicleYear: int  - vehicleSeats: int  - vehicleTransmission: TransmissionType  - vehicleFuel: FuelType  - vehicleGPS: bool  - vehicleSunroof: bool  - vehicleRate: double  - vehicleColour: string  - stringRego: string  - stringGrade: string  - stringMake: string  - stringModel: string  - stringYear: string  - stringSeats: string  - stringTransmission: string  - stringFuel: string  - stringGPS: string  - stringSunroof: string  - stringRate: string  - stringColour: string |
| + ToCSVString()  + ToString()  + GetAttributeList() |

public class Customer

|  |
| --- |
| **Customer** |
| - Gender: enum  - customerID: int  - customerTitle: string  - customerFN: string  - customerLN: string  - customerGender: Gender  - customerDOB: DateTime |
| + ToCSVString()  + ToString() |

public class Fleet

|  |
| --- |
| **Fleet** |
| - FLEET\_CSV\_HEADER: string  - RENTALS\_CSV\_HEADER: string  - fleet\_file\_path: string  - rentals\_file\_path: string  - vehicles: List<Vehicle>  - rented: List<Vehicle>  - rentals: Dictionary<string, int> |
| + AddVehicle()  + ModifyVehicle()  + RemoveVehicle()  + ModifyRentals()  + GetFleet()  + GetVehicle()  + IsRented()  + IsRenting()  + RentedBy()  + GetRate()  + RentVehicle()  + ReturnVehicle()  + SaveVehiclesToFile()  + SaveRentalsToFile()  + LoadVehiclesFromFile()  + LoadRentalsFromFile() |

public class CRM

|  |
| --- |
| **CRM** |
| - CUSTOMERS\_CSV\_HEADER: string  - customers\_file\_path: string  - customers: List<Customer> |
| + AddCustomer()  + ModifyCustomer()  + RemoveCustomer()  + GetCustomers()  + GetCustomer ()  + SaveToFile()  + LoadFromFile() |

class Reference\_Entry\_Point

|  |
| --- |
| **Reference\_Entry\_Point** |
|  |
|  |

**Namespace: MRRC**

public class CLI\_Menus

|  |
| --- |
| **CLI\_Menus** |
| - customers: List<Customer>  - vehicles: List<Vehicle>  - rentals: Dictionary<string, int>  - TYPE\_ICON: string  - VALIDITY\_CATCH: string  - COMMANDS\_DISABLED: string  - COMMANDS\_ENABLED: string  - BLANK\_FIELDS: string  - MAIN\_MENU: string  - CUSTOMER\_MENU: string  - FLEET\_MENU: string  - RENTAL\_MENU: string  - CUSTOMER\_ATTRIBUTES: string  - VEHICLE\_ATTRIBUTES: string  - RENTAL\_ATTRIBUTES: string  - textInput: string  - optionCount: int  - validFields: int  - inputValid: bool  - titleInput: string  - FNInput: string  - LNInput: string  - genderInput: string  - DOBInput: string  - genderInputConverted: Gender  - DOBInputConverted: DateTime  - generatedID: int  - titleModded: bool  - FNModded: bool  - LNModded: bool  - genderModded: bool  - DOBModded: bool  - regoInput: string  - gradeInput: string  - makeInput: string  - modelInput: string  - yearInput: string  - seatsInput: string  - transmissionInput: string  - fuelInput: string  - GPSInput: string  - sunroofInput: string  - rateInput: string  - colourInput: string  - gradeInputConverted: VehicleGrade  - yearInputConverted: int  - seatsInputConverted: int  - transmissionInputConverted: TransmissionType  - fuelInputConverted: FuelType  - GPSInputConverted: bool  - sunroofInputConverted: bool  - rateInputConverted: double  - regoModded: bool  - gradeModded: bool  - makeModded: bool  - modelModded: bool  - yearModded: bool  - seatsModded: bool  - transmissionModded: bool  - fuelModded: bool  - GPSModded: bool  - sunroofModded: bool  - rateModded: bool  - colourModded: bool  - IDInput: string  - rentalTimeInput: string  - IDInputConverted: int  - rentalTimeInputConverted: double |
| + Menu\_Text()  + Make\_Menu()  + Menu\_Header()  + Main\_Menu()  + Customer\_Mangement\_Menu()  + Display\_Customers()  + New\_Customer()  + Modify\_Customer()  + Delete\_Customer()  + Fleet\_Management\_Menu()  + Display\_Fleet()  + New\_Vehicle()  + Modify\_Vehicle()  + Delete\_Vehicle()  + Rental\_Management\_Menu()  + Display\_Rentals  + Search\_Vehicles()  + Rent\_Vehicle()  + Return\_Vehicle() |

public class CLI\_Inputs

|  |
| --- |
| **CLI\_Inputs** |
|  |
| + Escape\_Program()  + Check\_Key\_Press() |

public class CLI\_Tables

|  |
| --- |
| **CLI\_Tables** |
|  |
| + Create\_Customers\_Table()  + Create\_Vehicles\_Table()  + Create\_Rentals\_Table() |

public class CLI\_Modifiers

|  |
| --- |
| **CLI\_Modifiers** |
| - FILL\_FIELDS: string  - BLANK\_FIELDS: string  - TTILE: string  - FIRST\_NAME: string  - LAST\_NAME: string  - GENDER: string  - DOB: string  - REGO: string  - GRADE: string  - MAKE: string  - MODEL: string  - YEAR: string  - NUM\_SEATS: string  - TRANSMISSION: string  - FUEL: string  - GPS: string  - SUNROOF: string  - DAILY\_RATE: string  - COLOUR: string  - ID: string  - RENTAL\_TIME: string |
| + Customer\_Attributes\_All()  + Customer\_Attributes\_Singular()  + Generate\_ID()  + Vehicle\_Attributes\_All()  + Vehicle\_Attributes\_Required()  + Vehicle\_Attributes\_Singular()  + Rental\_Attributes\_Rent() |

public class CLI\_Search

|  |
| --- |
| **CLI\_Search** |
|  |
| + Query\_Search() |

class Main\_Program

|  |
| --- |
| **Main\_Program** |
|  |
| + Main() |

**Namespace: MRRCSearchAlgorithm**

public class IToken

|  |
| --- |
| **IToken** |
|  |
| + IToken interface |

public class Operator\_Token

|  |
| --- |
| **Operator\_Token** |
| - operatorName: string  - Precedence: int  - Function: Func<bool, bool, bool> |
| + ToString()  + Evaluate() |

public class Attribute\_Token

|  |
| --- |
| **Attribute\_Token** |
| - Attribute: string |
| + ToString() |

public class Left\_Parenthesis\_Token

|  |
| --- |
| **Left\_Parenthesis\_Token** |
|  |
| + ToString() |

public class Right\_Parenthesis\_Token

|  |
| --- |
| **Right\_Parenthesis\_Token** |
|  |
| + ToString() |

class Reference\_Entry\_Point

|  |
| --- |
| **Reference\_Entry\_Point** |
|  |
|  |

class Search

|  |
| --- |
| **Search** |
|  |
| + ParseText()  + ShuntingYard()  + Results() |