***Traffic Management System (TMS) Code Artifact:***

* ***User Authentication and Main Menu:***

The user authentication checks the entered email and password. If they are correct, it clears the console and displays a welcome message along with the members of the project. If the password is incorrect, it prompts an error message and exits the program.

* ***Displaying Modules:***

This section lists the available modules in the Traffic Management System, including:

* Road
* Traffic Sign Board
* Challan
* Service Information System
* Vehicles
* Driver

* + ***Vehicle Management Functions:***
  + ***Creating a Vehicle:***

This function allows the user to create a vehicle. It checks if the current vehicle count is less than 100. If so, it prompts the user for the vehicle’s name, model, and year, stores this information in an array, increments the vehicle count, and displays a success message. If the maximum number of vehicles is reached, it outputs an error message.

* + ***Reading Vehicle Information:***

This function reads and displays information about the vehicles. It checks if there are any vehicles available. If so, it prints a list of vehicles, displaying their make, model, and year. If no vehicles are available, it outputs a message indicating this.

* + ***Updating Vehicle Information:***

This function allows the user to update the details of a specific vehicle. It prompts the user for the index of the vehicle to update and checks if the index is valid. If valid, it allows the user to enter new values for the vehicle’s make, model, and year, and outputs a success message. If the index is invalid, it displays an error message.

* + *Deleting a Vehicle:*

This function deletes a vehicle from the array. It first checks if there are any vehicles available. If not, it outputs a message indicating this. If vehicles are available, it prompts the user for the index of the vehicle to delete. It checks if the index is valid, shifts the remaining vehicles left in the array to fill the gap, decrements the vehicle count, and displays a success message. If the index is invalid, it shows an error message.

* + ***Emergency Services Management:***

This section manages emergency services by creating instances for police and fire departments, storing their contact information. It prompts the user to enter their choice for accessing emergency service information. Based on the user’s choice, it displays the respective emergency service contact details or an error message if the choice is invalid.

* + ***Summary***:

The Traffic Management System provides functionalities for user login, vehicle management, and emergency service information. It includes functions for creating, reading, updating, and deleting vehicle records while ensuring input validation and providing user feedback for various operations.