**CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY**

**Chandubhai S Patel Institute of Technology**

**U & P U. Patel Department of Computer Engineering**

**Subject Name:** Advanced Web Technology

**Subject Code:** CE354

**Semester:** 5th **Academic Year:** 2023-24

Practical 5

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| **Aim:** | **Define a class representing a vehicle with properties like make, model, and year. Implement methods to display the vehicle details and calculate the mileage.**  **Create child classes like Car and Motorcycle that inherit from the Vehicle class and add specific properties and methods.** |
| **Code:** | class Vehicle {      constructor(*make*, *model*, *year*) {  **this**.make = *make*;  **this**.model = *model*;  **this**.year = *year*;  **this**.mileage = 0; *// Initialize mileage to 0*      }        displayDetails() {        return `Make: ${**this**.make}, Model: ${**this**.model}, Year: ${**this**.year}`;      }        calculateMileage(*milesDriven*, *fuelConsumed*) {        if (*fuelConsumed* <= 0) {          return 0;        }        return *milesDriven* / *fuelConsumed*;      }    }      class Car extends Vehicle {      constructor(*make*, *model*, *year*, *numDoors*) {  **super**(*make*, *model*, *year*);  **this**.numDoors = *numDoors*;      }        displayDetails() {        return `${**super**.displayDetails()}, Number of Doors: ${**this**.numDoors}`;      }    }      class Motorcycle extends Vehicle {      constructor(*make*, *model*, *year*, *engineSize*) {  **super**(*make*, *model*, *year*);  **this**.engineSize = *engineSize*;      }    }      const car1 = new Car("Toyota", "Camry", 2023, 4);    const motorcycle1 = new Motorcycle("Honda", "CBR500R", 2023, "500cc");      console.log(car1.displayDetails());    console.log(motorcycle1.displayDetails()); |
| **Output:** |  |