/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
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Date:20210225  
  
Notes:this was hard  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  
  
class Car  
{  
 private String make; //tacomobile!!  
 private String model;   
 private int topspeed;   
 private int speed;   
   
 // constructor for tacomobile  
   
 public Car(String userModel)  
 {  
   
 model = userModel;   
   
 make = "tacomobile";   
   
 speed = 0;  
   
 setTopSpeed(999);  
 }  
  
 public Car(String userMake, String userModel)  
 {  
   
 make = userMake;   
   
 model = userModel;   
   
 speed = 0;   
   
 setTopSpeed(999);  
   
 }  
   
 // Class method  
   
 public void accelerate()  
 {  
   
 accelerate (5);   
   
 }  
   
 public void accelerate(int speedIncrease)  
 {  
   
 speed = speed + Math.abs(speedIncrease);   
   
 if (speed > topSpeed)  
 {  
 speed = topSpeed;   
 }   
   
 }  
   
 public void decellerate(int speedDecrease)  
 {  
   
 speed = speed - Math.abs(speedDecrease);   
   
 if (speed < 0)  
 {  
 speed = 0;   
 }  
 }  
   
 public void setTopSpeed(int carTopSpeed)  
 {  
   
 topSpeed = carTopSpeed;   
   
 }  
  
 public int getSpeed();  
 {  
 return speed;   
   
 }  
   
 public int getSpeedInKPH()  
 {  
   
 return car.covertMPHtoKPH(speed);   
   
 }  
   
 public void showVehicleInfo()  
 {   
   
 System.out.println("Make: " + make);  
 System.out.println("Model: " + model);   
 System.out.println("Top Speed " + topSpeed + " mph (" + Car.convertMPHtoKPH(topSPeed) + "KPH)");  
 System.out.println("Current Speed: " + speed + "mph (" + getSpeedinKPH() + "kph)\n");  
   
 }   
   
 // class static method  
   
 public static int convertMPHtoKPH(int speedMPH)  
 {  
   
 double speedKPH = (double)speedMPH \* 1.60934;   
   
   
 return (int)Math.round(speedKPH);  
   
 }  
 public static double convertMPHtoKPH(double speedMPH)  
 {  
   
 double speedKPH = speedMPH \* 1.60934;   
   
 return speedKPH;   
   
 }  
}  
  
public class CarObject   
{  
   
 public static void main(String[] args)  
 {  
   
 System.out.prinln("''''''Example Java Objectr Usage'''''\n");   
   
 // Car #1  
 Car myDreamCar = new Car("Rolls Royce", "Phantom");   
 myDreamCar.setTopSpeed(150);   
 myDreamCar.accelerate (200);   
 myDreamCar.showVehicleInfo();   
   
 // Car #2  
   
 Car myRetirementCar = new Car("Tesla", "Roadster");   
 myRetirementCar.setTopSpeed(200);   
 myRetirementCar.accelerate(400);   
 myRetirementCar.decelerate();  
 myRetirementCar.decelerate(25);  
 myRetirementCar.showVehicleInfo();  
   
 //Car #3   
   
 Car myEcoCar = new Car("Feet", "shoes");  
 myEcoCar.setTopSpeed(22);   
 myEcoCar.accelerate(10);   
 myEcoCar.decelerate();   
 myEcoCar.showVehicleInfo();   
   
 // Car #4  
   
 Car myCurrentCar = new Car("Chevy", "Tahoe");   
 myCurrentCar.setTopSpeed(120);  
 myCurrentCar.accelerate(70);   
 myCurrentCar.decelerate();  
 myCurrentCar.decelerate(50);  
 myCurrentCar.showVehicleInfo();  
   
 // Car #5  
   
 Car myRealityCar = new Car("Ford", "Transit");  
 myRealiyCar.setTopSpeed(120);  
 myRealityCar.accelerate(50);  
 myRealityCar.decelerate();   
 myRealityCar.decelerater(20);  
   
 System.out.println("'''''Example Stratic Method Usage'''''\n");  
   
 // example of a static method usage --> the convertMPHtoKPH(int speedMPH) method is used  
 Sytem.out.println("A speed limit of 65 miles per hour translastes to" + Car.convertrMPHtoKPH(65) + "kilometers per hour.\n");  
   
 // example of static method usage --> the convertMPHtoKPH(double speedMPH) method is used  
 System.out.println("A speed limit of 80.5 miles per hour translates to" + Car.convertMPHtoKPH(80.5) + "kilometers per hour.");  
   
 }  
}