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Aim: Design and develop a context for given case study and implement an interface for Vehicles Consider the example of vehicles like bicycle, car, and bike. All Vehicles have common functionalities such as Gear Change, Speed up and apply breaks. Make an interface and put all these common functionalities. Bicycle, Bike, Car classes should be implemented for all these functionalities in their own class in their own way.

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Program:

interface Vehicles{

public void gearChange();

public void speedUp();

public void applyBreaks();

}

class Bicycle implements Vehicles {

public void gearChange(){

System.out.println("Gear Changed for Bicycle");

}

public void speedUp(){

System.out.println("SpeedUp for Bicycle");

}

public void applyBreaks(){

System.out.println("Applied Breaks for Bicycle");

}

}

class Bike implements Vehicles {

public void gearChange(){

System.out.println("Gear Changed for Bike");

}

public void speedUp(){

System.out.println("SpeedUp for Bike");

}

public void applyBreaks(){

System.out.println("Applied Breaks for Bike");

}

}

class Car implements Vehicles {

public void gearChange(){

System.out.println("Gear Changed for Car");

}

public void speedUp(){

System.out.println("SpeedUp for Car");

}

public void applyBreaks(){

System.out.println("Applied Breaks for Car");

}

}

public class Interface {

public static void main(String args[]){

Vehicles v;

v = new Bicycle();

v.gearChange();

v.speedUp();

v.applyBreaks();

v = new Bike();

v.gearChange();

v.speedUp();

v.applyBreaks();

v = new Car();

v.gearChange();

v.speedUp();

v.applyBreaks();

}

OUTPUT:

Gear Changed for Bicycle

SpeedUp for Bicycle

Applied Breaks for Bicycle

Gear Changed for Bike

SpeedUp for Bike

Applied Breaks for Bike

Gear Changed for Car

SpeedUp for Car

Applied Breaks for Car