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Batch : H9

Code :

```
import java.util.Scanner;
```

```
enum model{  
    SEDAN,  
    SUV,  
    HATCHBACK  
}
```

```
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        Car car;  
        int count = 0;  
  
        while(true){  
            System.out.println("Welcome.");  
            if(count == 0){  
                System.out.print("Enter Car You Want to Construct : ");  
                count++;  
            }  
            else{  
                System.out.print("Enter Car You Want to Construct (Enter 'exit' to  
exit from program) : ");  
            }  
            String carName = sc.next().toUpperCase();  
            System.out.println();  
  
            if(carName.equals("EXIT")){  
                System.out.println("Exiting the Program...");  
                break;  
            }  
            car = CarFactory.constructCar(model.valueOf(carName));  
            car.construct();  
        }  
    }  
}
```

```
public class CarFactory {  
    public static Car constructCar(model name){  
        Car car = null;  
        switch (name) {  
            case SEDAN:  
                car = new Sedan();  
                break;  
            case SUV:  
                car = new SUV();  
                break;  
            case HATCHBACK:  
                car = new HatchBack();  
                break;  
            default:  
                break;  
        }  
        return car;  
    }  
}
```

```
}
```

```
public class HatchBack implements Car {
    private String carName = "HatchBack";
    private String carMaterial = "";
    private String engine = "";
    public String getCarName(){
        return carName;
    }
    Scanner sc= new Scanner(System.in);
    @Override
    public void construct() {
        System.out.println("Constructing HatchBack...");
        System.out.println();
        constructEngine();
        carFrame();
        displayInfo();
    }
    private void constructEngine(){
        System.out.println("Which Engine You Want to use.");
        System.out.println("1. Ferrari 3.9-litre twin-turbo V8");
        System.out.println("2. BMW M 3.2-litre straight-six");
        System.out.println("3. Ford 1.0-litre EcoBoost");
        System.out.println();
        System.out.print("Enter Your Choice : ");

        int choice = sc.nextInt();
        switch (choice){
            case 1:
                engine = "Ferrari 3.9-litre twin-turbo V8";
                break;
            case 2:
                engine = "BMW M 3.2-litre straight-six";
                break;
            case 3:
                engine = "Ford 1.0-litre EcoBoost";
                break;
            default:
                System.out.println("Enter Valid Choice..");
                break;
        }
        System.out.println(engine + " engine added to HatchBack.");
        System.out.println();
    }
    private void carFrame(){
        System.out.println("Which material you want use for Frame.");
        System.out.println("1. Steel");
        System.out.println("2. Carbon Fibre");
        System.out.println();
        System.out.print("Enter Your Choice : ");

        int choice = sc.nextInt();

        switch (choice){
            case 1:
                carMaterial = "Steel";
                break;
            case 2:
```

```

        carMaterial = "Carbon Fibre";
        break;
    default:
        System.out.println("Enter Valid Choice..");
        break;
    }
    System.out.println(carMaterial + " is Used to Build Car Frame.");
    System.out.println();
}

private void displayInfo(){
    System.out.println("----Car Details----");
    System.out.println("Car Name : " + getCarName());
    System.out.println("Car Engine : " + engine);
    System.out.println("Car Frame Material : " + carMaterial);
    System.out.println();
}
}

public class Sedan implements Car{
    private String carName = "Sedan";
    private String carMaterial = "";
    private String engine = "";
    public String getCarName(){
        return carName;
    }
    Scanner sc= new Scanner(System.in);
    @Override
    public void construct() {
        System.out.println("Constructing Sedan...");
        System.out.println();
        constructEngine();
        carFrame();
        displayInfo();
    }
    private void constructEngine(){

        System.out.println("Which Engine You Want to use.");
        System.out.println("1. Ferrari 3.9-litre twin-turbo V8");
        System.out.println("2. BMW M 3.2-litre straight-six");
        System.out.println("3. Ford 1.0-litre EcoBoost");
        System.out.println();
        System.out.print("Enter Your Choice : ");

        int choice = sc.nextInt();
        switch (choice){
            case 1:
                engine = "Ferrari 3.9-litre twin-turbo V8";
                break;
            case 2:
                engine = "BMW M 3.2-litre straight-six";
                break;
            case 3:
                engine = "Ford 1.0-litre EcoBoost";
                break;
            default:
                System.out.println("Enter Valid Choice..");
                break;
        }
    }
}

```

```

    }
    System.out.println(engine + " engine added to SUV.");
    System.out.println();
}
private void carFrame(){
    System.out.println("Which material you want use for Frame.");
    System.out.println("1. Steel");
    System.out.println("2. Carbon Fibre");
    System.out.println();
    System.out.print("Enter Your Choice : ");

    int choice = sc.nextInt();
    switch (choice){
        case 1:
            carMaterial = "Steel";
            break;
        case 2:
            carMaterial = "Carbon Fibre";
            break;
        default:
            System.out.println("Enter Valid Choice..");
            break;
    }
    System.out.println("Car Material : " + carMaterial);
    System.out.println();
}
private void displayInfo(){
    System.out.println("----Car Details----");
    System.out.println("Car Name : " + getCarName());
    System.out.println("Car Engine : " + engine);
    System.out.println("Car Frame Material : " + carMaterial);
    System.out.println();
}
}
import java.util.Scanner;

public class SUV implements Car{
    private String carName = "SUV";
    private String carMaterial = "";
    private String engine = "";
    public String getCarName(){
        return carName;
    }
    Scanner sc= new Scanner(System.in);
    @Override
    public void construct() {
        System.out.println("Constructing SUV...");
        System.out.println();
        constructEngine();
        carFrame();
        displayInfo();
    }
    private void constructEngine(){
        System.out.println("Which Engine You Want to use.");
        System.out.println("1. Ferrari 3.9-litre twin-turbo V8");
        System.out.println("2. BMW M 3.2-litre straight-six");
        System.out.println("3. Ford 1.0-litre EcoBoost");
        System.out.println();
        System.out.print("Enter Your Choice : ");
    }
}

```

```

        int choice = sc.nextInt();
        switch (choice){
            case 1:
                engine = "Ferrari 3.9-litre twin-turbo V8";
                break;
            case 2:
                engine = "BMW M 3.2-litre straight-six";
                break;
            case 3:
                engine = "Ford 1.0-litre EcoBoost";
                break;
            default:
                System.out.println("Enter Valid Choice..");
                break;
        }
        System.out.println(engine + " engine added to SUV.");
        System.out.println();
    }
    private void carFrame(){
        System.out.println("Which material you want use for Frame.");
        System.out.println("1. Steel");
        System.out.println("2. Carbon Fibre");
        System.out.println();
        System.out.print("Enter Your Choice : ");

        int choice = sc.nextInt();
        switch (choice){
            case 1:
                carMaterial = "Steel";
                break;
            case 2:
                carMaterial = "Carbon Fibre";
                break;
            default:
                System.out.println("Enter Valid Choice..");
                break;
        }
        System.out.println("Car Material : " + carMaterial);
        System.out.println();
    }
    private void displayInfo(){
        System.out.println("----Car Details----");
        System.out.println("Car Name : " + getCarName());
        System.out.println("Car Engine : " + engine);
        System.out.println("Car Frame Material : " + carMaterial);
        System.out.println();
    }
}

```

Output :

Welcome.

Enter Car You Want to Construct : Sedan

Constructing Sedan...

Which Engine You Want to use.

1. Ferrari 3.9-litre twin-turbo V8
2. BMW M 3.2-litre straight-six

3. Ford 1.0-litre EcoBoost

Enter Your Choice : 1

Ferrari 3.9-litre twin-turbo V8 engine added to SUV.

Which material you want use for Frame.

1. Steel

2. Carbon Fibre

Enter Your Choice : 2

Car Material : Carbon Fibre

----Car Details----

Car Name : Sedan

Car Engine : Ferrari 3.9-litre twin-turbo V8

Car Frame Material : Carbon Fibre

Welcome.

Enter Car You Want to Construct (Enter 'exit' to exit from program) : SUV

Constructing SUV...

Which Engine You Want to use.

1. Ferrari 3.9-litre twin-turbo V8

2. BMW M 3.2-litre straight-six

3. Ford 1.0-litre EcoBoost

Enter Your Choice : 3

Ford 1.0-litre EcoBoost engine added to SUV.

Which material you want use for Frame.

1. Steel

2. Carbon Fibre

Enter Your Choice : 1

Car Material : Steel

----Car Details----

Car Name : SUV

Car Engine : Ford 1.0-litre EcoBoost

Car Frame Material : Steel

Welcome.

Enter Car You Want to Construct (Enter 'exit' to exit from program) : exit

Exiting the Program...