```java
package assignment10new;
import java.util.Scanner;
abstract class car_factory
{
    String company,car_name;
    double budget;

    abstract void getprice(double price);
    abstract void detail(String company_name,String
car_name);
    abstract void accessories();

    void input()
    {
        Scanner scan=new Scanner(System.in);
        System.out.println("COMPANY :");
        company=scan.next();
        System.out.println("CAR NAME :");
        car_name=scan.next();
        System.out.println("ROUGH BUDGET :");
        budget=scan.nextDouble();
    }
    void display(car_factory ob1)
    {
        ob1.getprice(budget);
        System.out.println("\n");
        ob1.detail(company, car_name);
        System.out.println("\n");
        ob1.accessories();
        System.out.println("\n");
    }
}
```

```java
package assignment10new;
import java.util.Scanner;
public class factorydp
{
    public static void main(String args[])
    {
        Scanner scan=new Scanner(System.in);
        int ch;
        car_factory obj;
        while(true)
        {
            System.out.println("WHICH CAR YOU WANT TO SEE :");
            System.out.println("\n1.SMALL CAR \n2.SEDAN CAR \n3.LUXURY CAR \n4.EXIT");
            ch=scan.nextInt();

            switch(ch)
            {
            case 1:
                obj=new Smallcar();
                obj.input();
                obj.display(obj);
                break;

            case 2:
                obj=new sedancar();
                obj.input();
                obj.display(obj);
                break;

            case 3:
                obj=new luxury();
                obj.input();
                obj.display(obj);
                break;

            case 4:
                System.out.println("\n");
                    return;

            default:
                System.out.println("INVALID CHOICE !!!!");
                break;
            }
        }
    }

}
```

```java
package assignment10new;
public class luxury extends car_factory
{
    String Ans;
    public void getprice(double price)
    {
        if(price>10 && price<15)
            Ans="no";
        else
            Ans="yes";
    }

    public void detail(String company_name,String car_name)
    {
        System.out.println("COMPANY :"+company_name);
        System.out.println("NAME OF CAR :"+car_name);
        System.out.println("COLOUR - BALCK/WHITE/RED/BLUE");
        System.out.println("fuel - DIESEL ");
        System.out.println("GEARS - AUTO");
    }

    public void accessories()
    {
        System.out.println("TYPE OF TYRES : ALLOY WHEELS");
        System.out.println("AIR BAGS- YES");
        System.out.println("BACK WIPER-YES");
        System.out.println("SIDE MIRROR - TWO");
        System.out.println("TOUCH SCREEN MUSIC PALYER -
YES");
        System.out.println("ROOF WINDOW : - YES");
        System.out.println("AUTOMATIVE GARBAGE CAN :"+Ans);
        System.out.println("AUTOMATIVE AIR FRESHNER :"+Ans);
        System.out.println("BUTTON START :"+Ans);
    }
}
```

```java
package assignment10new;
public class sedancar extends car_factory
{
    String Ans;
    public void getprice(double price)
    {
        if(price>6 && price<10)
            Ans="no";
        else
            Ans="yes";
    }


    public void detail(String company_name,String car_name)
    {
        System.out.println("COMPANY :"+company_name);
        System.out.println("NAME OF CAR :"+car_name);
        System.out.println("COLOUR - BALCK/WHITE/RED/BLUE");
        System.out.println("fuel - PETROL/DIESEL ");
        System.out.println("GEARS - MANUAL/AUTO");
    }


    public void accessories()
    {
        System.out.println("TYPE OF TYRES : ALLOY WHEELS");
        System.out.println("AIR BAGS- YES");
        System.out.println("BACK WIPER-YES");
        System.out.println("SIDE MIRROR - TWO");
        System.out.println("TOUCH SCREEN MUSIC PALYER -
YES");
        System.out.println("ROOF WINDOW :"+Ans);
    }
}
```

```java
package assignment10new;
public class Smallcar extends car_factory
{
    String Ans;
    public void getprice(double price)
    {
        if(price>2 && price<5)
            Ans="no";
        else
            Ans="yes";
    }

    public void detail(String company_name,String car_name)
    {
        System.out.println("COMPANY :"+company_name);
        System.out.println("NAME OF CAR :"+car_name);
        System.out.println("COLOUR - BALCK/WHITE/RED/BLUE");
        System.out.println("fuel - PETROL ");
        System.out.println("GEARS - MANUAL");
    }

    public void accessories()
    {
        System.out.println("TYPE OF TYRES : ALLOY WHEELS");
        System.out.println("AIR BAGS"+Ans);
        System.out.println("BACK WIPER"+Ans);
        System.out.println("SIDE MIRROR - TWO");
        System.out.println("TOUCH SCREEN MUSIC PALYER
"+Ans);
    }
}
```