

**BCSE-506L (Performance Analysis of Programming Languages Lab)****EXPERIMENT NO. 7**

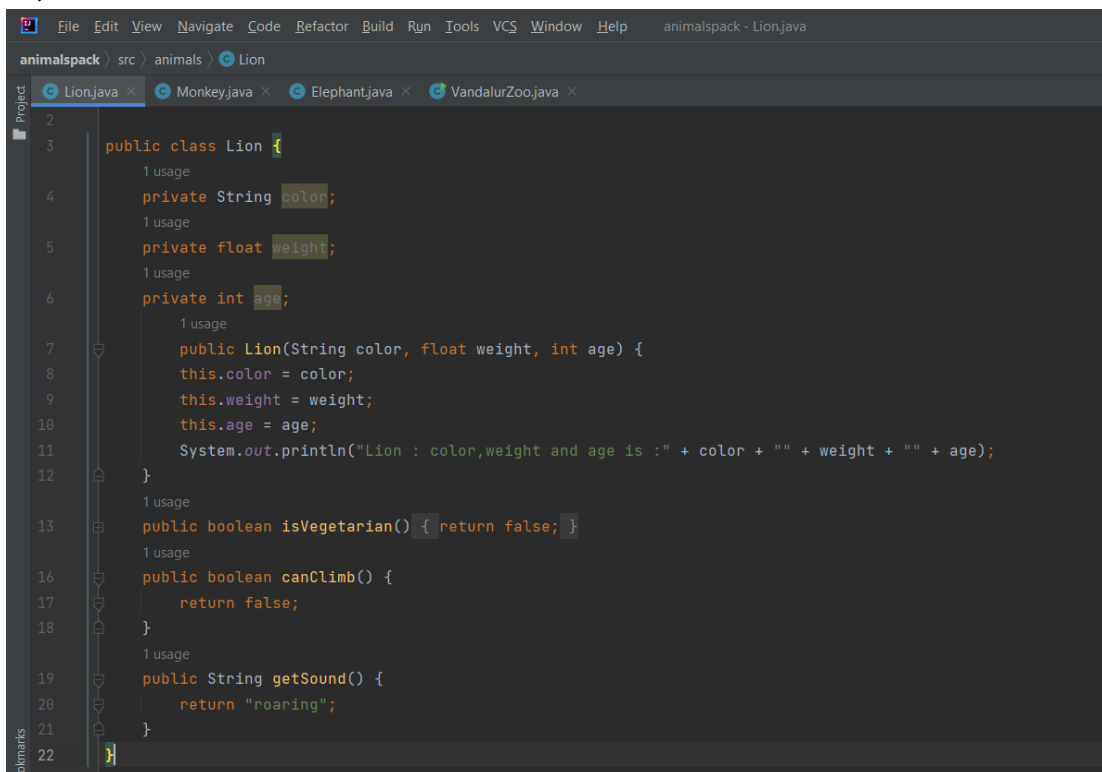
**AIM:** Demonstrate the concept of user defined Package using following scenario: Create a new project in which create a package named org.animals. In that create various classes like: Lion, Monkey and Elephant.

In each class create data members like color, weight and age. Create methods like isVegetarian, canClimb, getSound.

Create another project and in that create a package called zoo and create a class called VandalurZoo and create objects for the animals that are existing in zoo and print the characteristic of each animal.

**Lion.java**

```
package animals;
public class Lion {
    private String color;
    private float weight;
    private int age;
    public Lion(String color, float weight, int age) {
        this.color = color;
        this.weight = weight;
        this.age = age;
        System.out.println("Lion : color,weight and age is :" + color + " " +
weight + " " + age);
    }
    public boolean isVegetarian() {
        return false;
    }
    public boolean canClimb() {
        return false;
    }
    public String getSound() {
        return "roaring";
    }
}
```



### **Monkey.java**

```
package animals;

public class Monkey {
    private String color;
    private float weight;
    private int age;
    public Monkey(String color,float weight,int age)
    {
        this.color=color;
        this.weight=weight;
        this.age=age;
        System.out.println("Monkey color,weight and age is
:"+color+" "+weight+" "+age);
    }
    public boolean isVegetarian()
    {
        return false;
    }
    public boolean isOmniverse()
    {
        return true;
    }
    public boolean canClimb(){
        return true;
    }
    public String getSound(){
        return "chatter";
    }
}
}
```

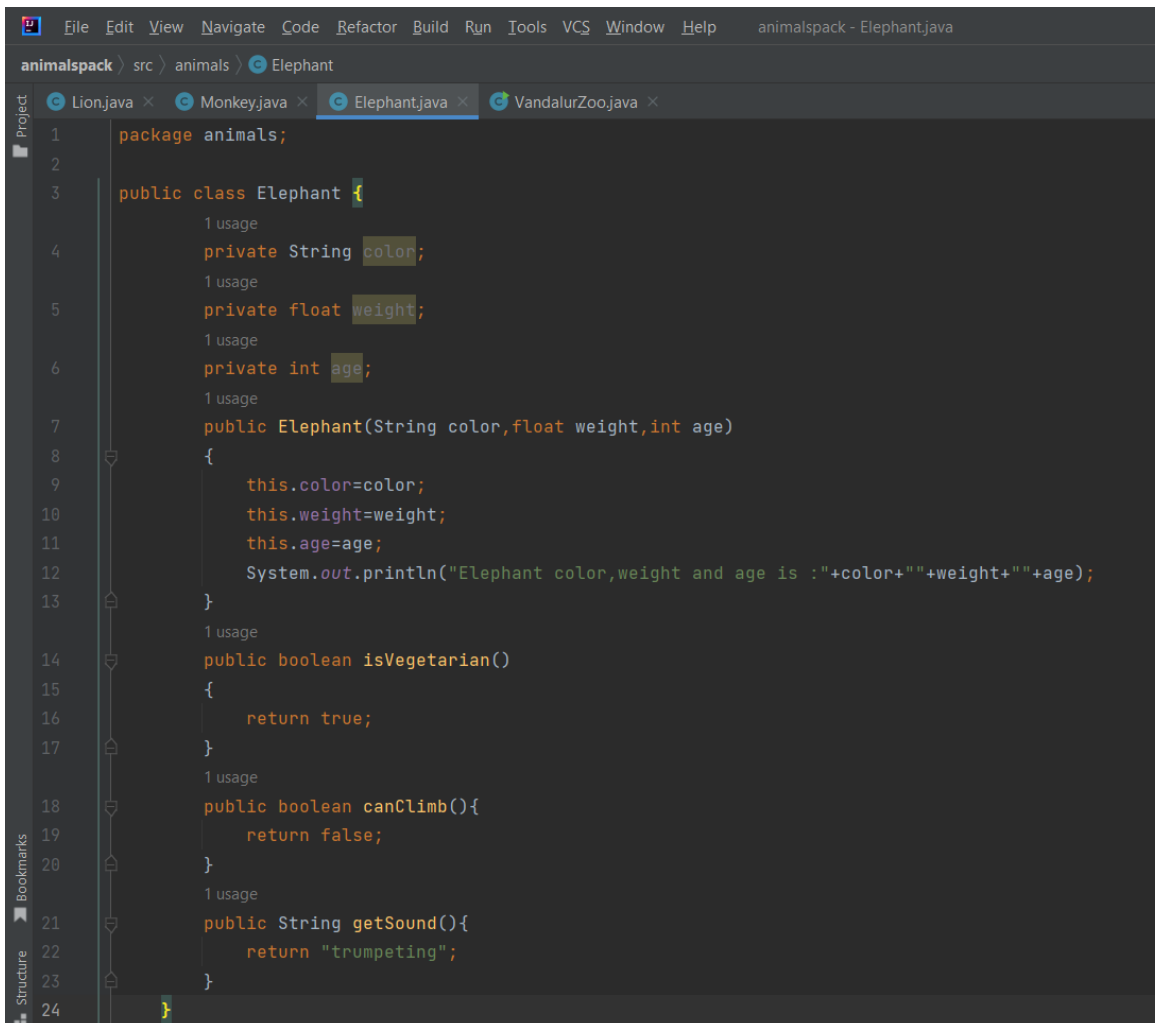
```
package animals;

public class Monkey {
    1 usage
    private String color;
    1 usage
    private float weight;
    1 usage
    private int age;
    1 usage
    public Monkey(String color,float weight,int age)
    {
        this.color=color;
        this.weight=weight;
        this.age=age;
        System.out.println("Monkey color,weight and age is :"+color+" "+weight+" "+age);
    }
    public boolean isVegetarian()
    {
        return false;
    }
    1 usage
    public boolean isOmniverse()
    {
        return true;
    }
    1 usage
    public boolean canClimb(){
        return true;
    }
}
```

## Elephant.java

```
package animals;

public class Elephant {
    private String color;
    private float weight;
    private int age;
    public Elephant(String color,float weight,int age)
    {
        this.color=color;
        this.weight=weight;
        this.age=age;
        System.out.println("Elephant color,weight and age is
:"+color+" "+weight+" "+age);
    }
    public boolean isVegetarian()
    {
        return true;
    }
    public boolean canClimb(){
        return false;
    }
    public String getSound(){
        return "trumpeting";
    }
}
```



## VandalurZoo.java

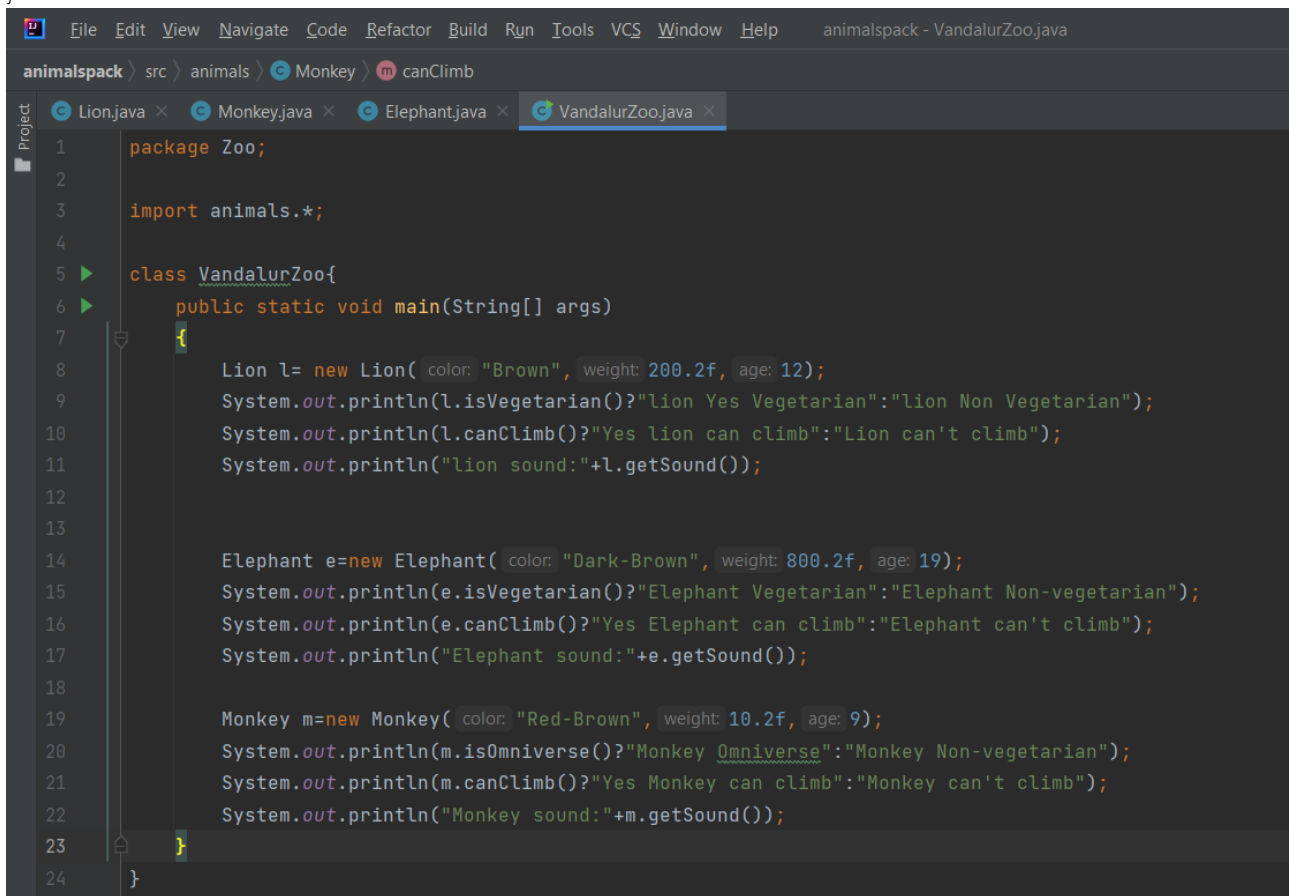
```
package Zoo;

import animals.*;

class VandalurZoo{
    public static void main(String[] args)
    {
        Lion l= new Lion("Brown",200.2f,12);
        System.out.println(l.isVegetarian()?"lion Yes Vegetarian":"lion Non
Vegetarian");
        System.out.println(l.canClimb()?"Yes lion can climb":"Lion can't
climb");
        System.out.println("lion sound:"+l.getSound());

        Elephant e=new Elephant("Dark-Brown",800.2f,19);
        System.out.println(e.isVegetarian()?"Elephant Vegetarian":"Elephant
Non-vegetarian");
        System.out.println(e.canClimb()?"Yes Elephant can climb":"Elephant can't
climb");
        System.out.println("Elephant sound:"+e.getSound());

        Monkey m=new Monkey("Red-Brown",10.2f,9);
        System.out.println(m.isOmniverse()?"Monkey Omniverse":"Monkey
Non-vegetarian");
        System.out.println(m.canClimb()?"Yes Monkey can climb":"Monkey can't
climb");
        System.out.println("Monkey sound:"+m.getSound());
    }
}
```

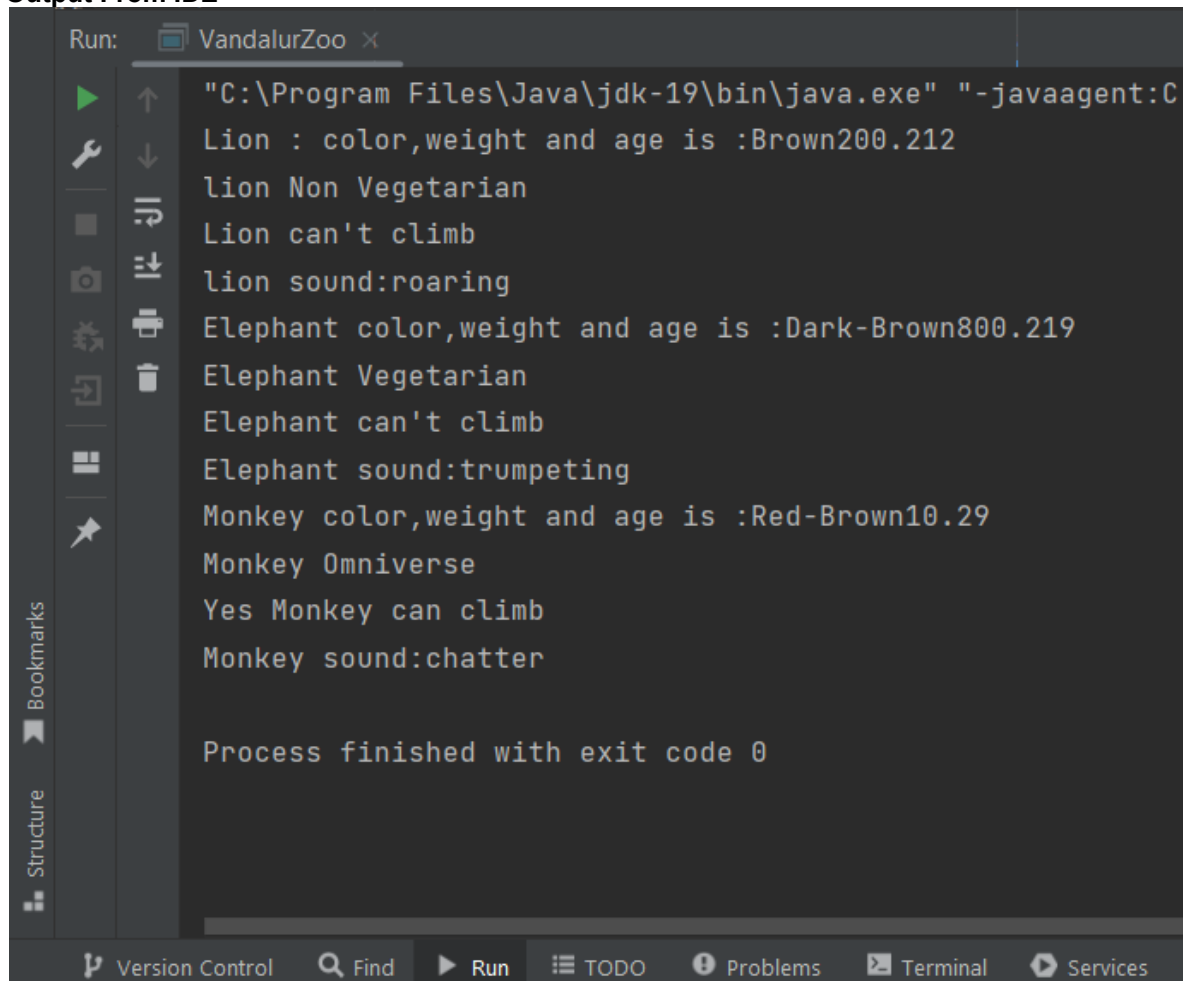


```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help animalspack - VandalurZoo.java
animalspack > src > animals > Monkey > canClimb
Project
Lion.java x Monkey.java x Elephant.java x VandalurZoo.java x
1 package Zoo;
2
3 import animals.*;
4
5 class VandalurZoo{
6     public static void main(String[] args)
7     {
8         Lion l= new Lion( color: "Brown", weight: 200.2f, age: 12);
9         System.out.println(l.isVegetarian()?"lion Yes Vegetarian":"lion Non Vegetarian");
10        System.out.println(l.canClimb()?"Yes lion can climb":"Lion can't climb");
11        System.out.println("lion sound:"+l.getSound());
12
13
14        Elephant e=new Elephant( color: "Dark-Brown", weight: 800.2f, age: 19);
15        System.out.println(e.isVegetarian()?"Elephant Vegetarian":"Elephant Non-vegetarian");
16        System.out.println(e.canClimb()?"Yes Elephant can climb":"Elephant can't climb");
17        System.out.println("Elephant sound:"+e.getSound());
18
19        Monkey m=new Monkey( color: "Red-Brown", weight: 10.2f, age: 9);
20        System.out.println(m.isOmniverse()?"Monkey Omniverse":"Monkey Non-vegetarian");
21        System.out.println(m.canClimb()?"Yes Monkey can climb":"Monkey can't climb");
22        System.out.println("Monkey sound:"+m.getSound());
23    }
24 }
```

**Output:**

```
"C:\Program Files\Java\jdk-19\bin\java.exe" "-javaagent:C:\Program
Files\JetBrains\IntelliJ IDEA Community Edition
2022.2.3\lib\idea_rt.jar=50408:C:\Program Files\JetBrains\IntelliJ IDEA
Community Edition\2022.2.3\bin" -Dfile.encoding=UTF-8
-Dsun.stdout.encoding=UTF-8 -Dsun.stderr.encoding=UTF-8 -classpath "E:\Java
Project\animalspack\out\production\animalspack" Zoo.VandalurZoo
Lion : color,weight and age is :Brown200.212
lion Non Vegetarian
Lion can't climb
lion sound:roaring
Elephant color,weight and age is :Dark-Brown800.219
Elephant Vegetarian
Elephant can't climb
Elephant sound:trumpeting
Monkey color,weight and age is :Red-Brown10.29
Monkey Omniverse
Yes Monkey can climb
Monkey sound:chatter
```

Process finished with exit code 0

**Output From IDE**The image shows a screenshot of the IntelliJ IDEA IDE's Run console. The console title bar says 'Run: VandalurZoo x'. The output text is identical to the one in the first block, showing the execution of the Zoo.VandalurZoo class. The IDE interface includes a left sidebar with icons for Run, Structure, and Bookmarks. At the bottom, there is a toolbar with buttons for Version Control, Find, Run, TODO, Problems, Terminal, and Services.

```
Run: VandalurZoo x
"C:\Program Files\Java\jdk-19\bin\java.exe" "-javaagent:C
Lion : color,weight and age is :Brown200.212
lion Non Vegetarian
Lion can't climb
lion sound:roaring
Elephant color,weight and age is :Dark-Brown800.219
Elephant Vegetarian
Elephant can't climb
Elephant sound:trumpeting
Monkey color,weight and age is :Red-Brown10.29
Monkey Omniverse
Yes Monkey can climb
Monkey sound:chatter

Process finished with exit code 0
```

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