

Implementation of a Java Program to import packages using different methods

Aim:

Write a Java program to import packages using different methods for different use cases.

PRE LAB EXERCISE

QUESTIONS

1.How to import a single class and multiple classes from a package in Java?

Single class:

Syntax:

```
import packageName.ClassName;
```

Example:

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

Multiple class:

Syntax:

```
import packageName.*;
```

Example:

```
import java.util.*;
```

Which package is always imported by default in every Java class?

java.lang package

IN LAB EXERCISE

Objective

To understand and implement the Java packages using different methods and import them.

Problem

Define a package named ‘useFul’ with a class names ‘UseMe’ having following methods:

- 1) area()- To calculate the area of given shape.
- 2) salary()- To calculate the salary given basic Salary,da,hRA.
- 3) percentage()-To calculate the percentage given total marks and marks obtained.
- 4) Develop a program named ‘Package Use’ to import the above package ‘useFul’ and use the method area().
- 5) Develop a program named ‘manager’

Source Code

```
//Package Creation:
```

```
package useFull;  
import java.util.*;  
public class UseMe  
{  
    Scanner obj=new Scanner(System.in);  
    public static void area()  
    {  
        class method{  
            void aos(int a)  
            {  
                System.out.print("\nArea of square with length "+a+" is "+(a*a));  
            }  
            void aor(int a,int b)  
            {  
                System.out.print("\nArea of reactangle with dimensions "+a+" & "+b+" is "+(a*b));  
            }  
            void aoc(int r)  
            {  
                double a=3.14*r*r;
```

```

    }

    System.out.print("\nArea of circle with radius "+r+" is "+a);

}

void aot(int a,int b)

{

float ar=(a*b)/2;

System.out.print("\nArea of triangle with dimensions "+a+" & "+b+" is "+ar);

} }

Scanner obj=new Scanner(System.in);

method m=new method();

System.out.print("\n1.Square\n2.Rectangle\n3.Circle\n4.Triangle\nSelect the shape\n");

int ch=obj.nextInt();

UseMe u=new UseMe();

switch(ch)

{

    case 1:System.out.print("\nEnter the length of side of square : ");

        int s=obj.nextInt();m-aos(s);

        break;

    case 2:System.out.print("\nEnter the dimensions of rectangle : ");

        int l=obj.nextInt();

        int b=obj.nextInt();

        m-aor(l,b);

        break;

    case 3:System.out.print("\nEnter the radius of circle : ");

        int r=obj.nextInt();

        m-aoc(r);

        break;

    case 4:System.out.print("\nEnter the dimensions of triangle : ");
}

```

```

        int ba=obj.nextInt();
        int w=obj.nextInt();
        m.aot(ba,w);
        break; } }

public void salary()
{
    int ba,da,hra;
    System.out.print("\nEnter the basic salary : ");
    ba=obj.nextInt();
    System.out.print("\nEnter the dearness allowance : ");
    da=obj.nextInt();
    System.out.print("\nEnter the house rent allowance : ");
    hra=obj.nextInt();
    System.out.print("\nThe total Gross salary of employee is : "+(ba+da+hra));
}

public void percentage()
{
    int n,sum=0;
    float p;
    System.out.print("\nEnter the total number of subjects : ");
    n=obj.nextInt();
    int m[]={};
    System.out.print("\nEnter the marks of "+n+" subjects : ");
    for(int i=0;i<n;i++)
    {
        m[i]=obj.nextInt();
    }
    for(int i=0;i<n;i++)

```

```

{
    sum=sum+m[i];
}
p=sum/n;
{
    System.out.print("\nPercentahe of student : "+p);
}
}

```

//Package Implementation-1:

```

import useFull.UseMe;
class packageUse
{
    public static void main(String args[])
    {
        UseMe o=new UseMe();o.area();
    }
}

```

Output

javac packageUse.java

java packageUse

1. Square
 2. Rectangle
 3. Circle
 4. Triangle
- Select the shape
2

Enter the dimensions of the rectangle: 10 15
Area of the rectangle with dimensions 10&15 is 150

```
<terminated> test [Java Application] C:\Users\SWETHA\p2\pool\plugins\org.eclipse.justj.openjdk.hot

1.Square
2.Rectangle
3.Circle
4.Triangle
Select the shape: 1
Enter side: 9
Area of square: 81
```

//Package Implementation-2:

```
import useFull.UseMe;
class manager
{
    public static void main(String args[])
    {
        UseMe obj=new UseMe();obj.salary();
    }
}
```

Output

```
javac manager.java
```

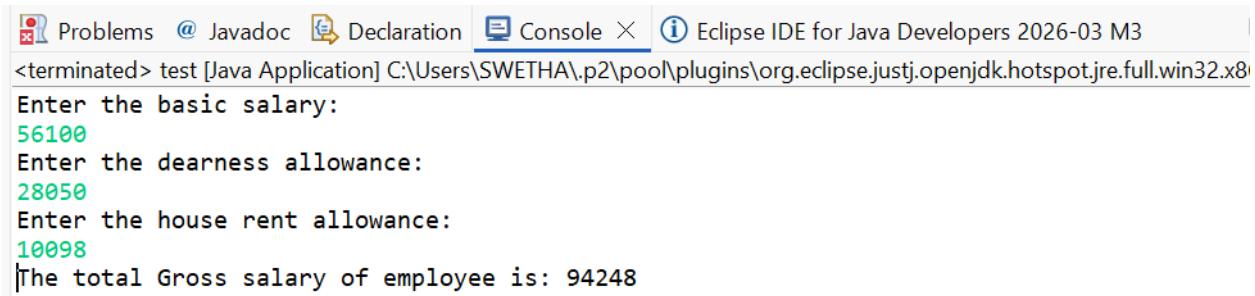
```
java manager
```

Enter the basic salary: 100000

Enter the dearness allowance: 5000

Enter the house rent allowance: 2000

The total Gross salary of employee is: 107000



```

Problems @ Javadoc Declaration Console X Eclipse IDE for Java Developers 2026-03 M3
<terminated> test [Java Application] C:\Users\SWETHA\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64
Enter the basic salary:
56100
Enter the dearness allowance:
28050
Enter the house rent allowance:
10098
The total Gross salary of employee is: 94248

```

POST LAB EXERCISE

- Find the key differences between java.util and java.lang packages.

Feature	java.lang	java.util
Import Requirement	Automatically imported	Must be imported explicitly
Purpose	Basic language support	Utility classes & collections
Contains	Core classes	Data structures & helper classes
Examples	String, System, Math, Thread, Exception	Scanner, ArrayList, HashMap, Date, Random

- List some of the subpackages of java.util

Some important subpackages include:

- java.util.concurrent
- java.util.function
- java.util.jar
- java.util.logging
- java.util.regex
- java.util.stream
- java.util.zip

ASSESSMENT

Description	Max Marks	Marks Awarded
Pre Lab Exercise	5	
In Lab Exercise	10	
Post Lab Exercise	5	
Viva	10	
Total	30	
Faculty Signature		