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ROLL NO: 54
DIV:2 BATCH:C



Experiment No. 6
Packages
Date of Performance:1/9/23
Date of Submission:5/9/23

Aim :-To use packages in java.

Objective :- To use packages in java to use readymade classes available in them using square root method in math class.

Theory: - A java package is a group of similar types of classes, interfaces and sub-packages. Packages are used in Java in order to prevent naming conflicts, to control access, to make searching/locating and usage of classes, interfaces, enumerations and annotations easier, etc.

There are two types of packages-

1. Built-in package: The already defined package like java.io.*, java.lang.* etc are known as built-in packages.
2. User defined package: The package we create for is called user-defined package.

Programmers can define their own packages to bundle group of classes/interfaces, etc. While creating a package, the user should choose a name for the package and include a package statement along with that name at the top of every source file that contains the classes, interfaces, enumerations, and annotation types that you want to include in the package. If a package statement is not used then the class, interfaces, enumerations, and annotation types will be placed in the current default package.

Code:- To use packages in java to use readymade classes available in them using square root method in math class.

Code :-

1) Package Name: letmecal Class Name: Calculator
Implementation Class: CalculatorTest

```
package letmecal;
```

```
public class Calculator{  
    public int add(int a , int b ){  
        return a+b ;  
    }  
    public static void main(String args[]){
```



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```
Calculator obj = new Calculator();  
System.out.println(obj.add(10,20));  
}  
}
```

```
import letmecal.Calculator;
```

```
public class CalculatorTest{  
  
    public static void main(String args[]){  
  
        Calculator obj = new Calculator();  
        System.out.println(obj.add(100,200));  
    }  
}
```

```
C:\Users\GAURAV\OneDrive>cd Desktop  
C:\Users\GAURAV\OneDrive\Desktop>cd Java  
C:\Users\GAURAV\OneDrive\Desktop\java>java CalculatorTest  
300
```

2) Package Name: treepackage Class Name: Tree
Implementation Class: UserDefinedDemo

```
package treepackage;
```

```
public class Tree {  
    public static void main (String args[]){
```

```
        Tree obj = new Tree();  
        obj.Tree1();
```

```
    }
```

```
    public void Tree1(){  
        int i,j;  
        for(i=1;i<=5;i++){
```

```
            for(j=5;j>=i;j--){
```

```
                System.out.print(" ");
```

```
            }
```

```
            for(j=1;j<=i;j++){
```

```
                System.out.print(" * ");
```

```
            }
```



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```
System.out.println();
```

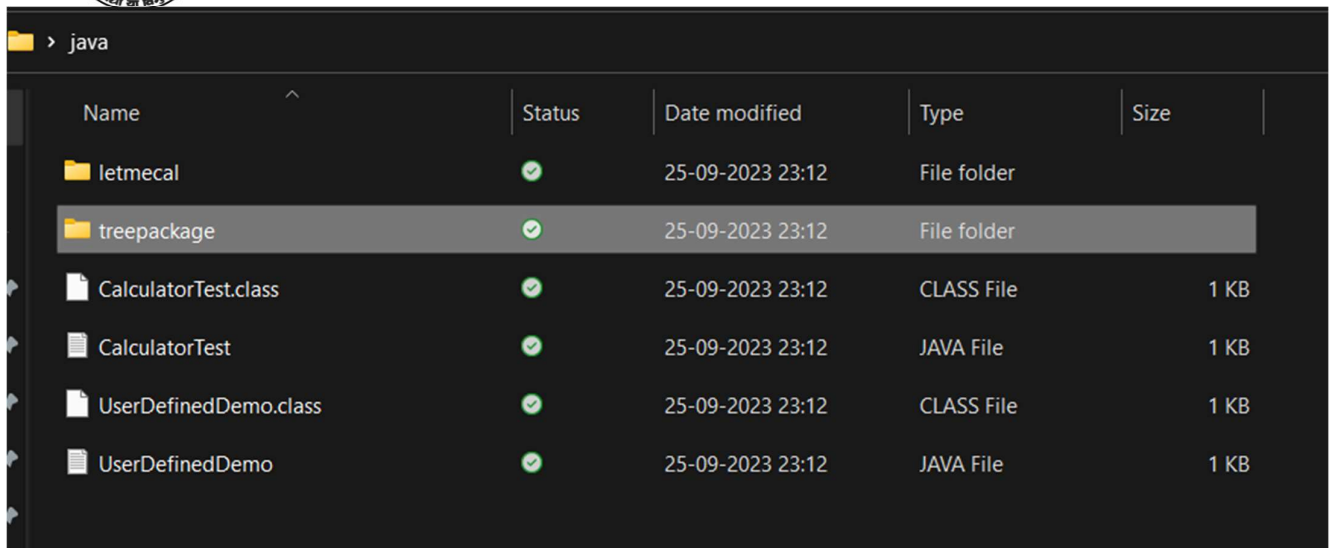
```
}  
for(i=1;i<=5;i++){  
  
    for(j=5;j>=i;j--){  
  
        System.out.print(" ");  
    }  
    for(j=1;j<=i;j++){  
  
        System.out.print(" * ");  
    }  
    System.out.println();  
}  
  
}
```

```
import treepackage.Tree;
```

```
public class UserDefinedDemo {  
  
    public static void main(String args[]){  
  
        Tree obj = new Tree();  
        obj.Tree1();  
    }  
  
}
```

```
C:\Users\GAURAV\OneDrive\Desktop\java>java UserDefinedDemo
```

```
      *  
     * *  
    * * *  
   * * * *  
  * * * * *  
      *  
     * *  
    * * *  
   * * * *  
  * * * * *  
 * * * * *
```



Name	Status	Date modified	Type	Size
letmecal	✓	25-09-2023 23:12	File folder	
treepackage	✓	25-09-2023 23:12	File folder	
CalculatorTest.class	✓	25-09-2023 23:12	CLASS File	1 KB
CalculatorTest	✓	25-09-2023 23:12	JAVA File	1 KB
UserDefinedDemo.class	✓	25-09-2023 23:12	CLASS File	1 KB
UserDefinedDemo	✓	25-09-2023 23:12	JAVA File	1 KB

Conclusion:-

Java packages are a way to organize and structure code in Java. They are similar to folders that contain related files, such as classes, interfaces, and sub-packages. Packages help in avoiding naming conflicts and make it easier to manage and maintain code. In conclusion, Java packages are an essential part of Java programming. They provide a way to group related classes and organize code. By using packages, developers can create modular and reusable code that is easier to understand and maintain.