



Artificial Intelligence and Data Science Department.

OOPM / Odd Sem 2021-22 / Experiment 10.

YASH SARANG.

47 / D6AD.

EXPERIMENT - 10.

AIM / THEORY:

Experiment No. 10

Aim: Write a program to demonstrate user defined packages.

Theory: A package is a group of similar types of class, interface & sub-packages.

Packages in java can be sub-categorized in two types:

- Built-in packages -

Eg. java, lang, awt, javax, swing, net, io, util, sql.

- User defined packages -

Syntax -

```
import package.name Class; //import single class.  
import package.name.*; //import whole pack.
```

Eg. `import java.util.Scanner;`

Advantages:

- Packages is used to categorize the classes & interfaces so that they can be easily maintained.
- Packages provide access protection.
- Packages avoid naming collision.
 - Two packages can have same class names

Program 1:

Program Code:

Package Creation

```
package calculatorpackage;

public class Calculator{

    public int add(int x, int y){
        return x+y;
    }

    public int subtract(int x,int y){
        return x-y;
    }

    public int multiply(int x,int y){
        return x*y;
    }

    public float divide(float x, float y){
        return x/y;
    }

}
```

Importing custom package

```
import calculatorpackage.*;

class Calc{

    public static void main(String[] args){

        calculatorpackage.Calculator c = new calculatorpackage.Calculator();

        System.out.println("Sum :"+c.add(4,5));
        System.out.println("Difference :"+c.subtract(4,5));
        System.out.println("Product :"+c.multiply(4,5));
        System.out.println("Quotient :"+c.divide(4,5));

    }

}
```


The output of the program :

```
C:\java>javac Calc.java  
C:\java>java Calc.java  
Sum :9  
Difference :-1  
Product :20  
Quotient :0.8
```

Conclusion:

We have studied & learned about program Packages, types of packages, built-in packages in java. We also learned about creating custom packages & importing them.
