

GREEN UNIVERSITY OF BANGLADESH



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Assignment

COURSE TITLE: Object Oriented Programming

COURSE CODE: CSE 201

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* <u>User defined package</u>:

User-defined packages are those packages that are designed or created by the developer to categorize classes and packages. They are much similar to the built-in that java offers. It can be imported into other classes and used the same as we use built-in packages. But If we omit the package statement, the class names are put into the default package, which has no name.

* Why do we use user-defined packages in java?:

Packages in Java are a mechanism to encapsulate a group of classes, interfaces, and sub-packages. In Java, it is used for making search/locating and usage of classes, interfaces, enumerations, and annotations easier. It can be considered data encapsulation also. In other words, we can say a package is a container of a group of related classes where some of the classes are accessible and exposed, and others are kept for internal purposes.

* Advantages of using user defined packages in Java:

- 1. Programmers can define their own packages to bundle a group of classes/interfaces, etc.
- 2. It is a good practice to group related classes implemented by you so that a programmer can easily determine that the classes, interfaces, enumerations, and annotations are related.
- 3. Java package is used to categorize the classes and interfaces so that they can be easily maintained.

- 4. Java package provides access protection.
- 5. Java package removes naming collisions.

* Steps to create User-defined Packages:

Step 1: Creating a package in java class. The format is very simple and easy. Just write a package by following its name.

Step 2: Include class in java package, But remember that class only has one package declaration.

Step 3: Now the user-defined package is successfully created, we can import it into other packages and use its functions.

* Source Code:

```
package math;
/**

* @author dulal

*/
public class Add
{
    public void add (int a ,int b)
    {
        System.out.println("Add = "+(a+b));
    }
}
```

```
}
package math;
/*
* @author dulal
*/
public class Sub
{
  public void sub(int a ,int b)
  {
     System.out.println("Sub = "+(a-b));
  }
}
package calculation;
* @author dulal
*/
```

```
import math.Add;
import math.Sub;
public class calculation
{
  public static void main(String[] args)
    Add a = new Add();
    a.add(116,98);
    Sub b = new Sub();
    b.sub(116,98);
  }
}
```

*OUTPUT:

Output - Assignment2 (run)

```
run:
Add = 214
Sub = 18
BUILD SUCCESSFUL (total time: 1 second)
```