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| *A close up of a logo  Description automatically generated* | *DEPARTMENT OF COMPUTER ENGINEERING* |

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| Semester | S.E. Semester III – Computer Engineering |
| Subject | Object Oriented Programming Using Java (Skill Based Lab) |
| Subject Professor In-charge | Prof. Indu Anoop |
| Laboratory | Online Lab |

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| Roll Number | 20102A0004 | |
| Grade and Subject Teacher’s Signature |  |  |

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| Experiment | 5 | |
| Problem Statement | WAP in java to demonstrate packages | |
| Resources / Apparatus Required | Hardware: Computer System | Software: jdk 1.8, Eclipse / Notepad++/IntelliJ IDEA |
| Details | *A JAVA PACKAGE is a group of similar types of classes, interfaces and sub-packages.*  **Packages in java:**  A package as the name suggests is a pack (group) of classes, interfaces and other packages. In java we use packages to organize our classes and interfaces. We have two types of packages in Java: built-in packages and the packages we can create (also known as user defined package). In this guide we will learn what packages are, what are user-defined packages in java and how to use them.  There are many built-in packages such as java, lang, awt, javax, swing, net, io, util, sql etc.  **Advantages of using a package in Java :**  1. Reusability  2. Better Organization  3. Name Conflicts  **Types of packages in Java :**  1. Built-in Packages:  These packages consist of a large number of classes which are a part of Java API. Some of the commonly used built-in packages are:  1) java.lang: Contains language support classes(e.g classed which defines primitive data types, math operations). This package is automatically imported.  2) java.io: Contains classed for supporting input / output operations.  3) java.util: Contains utility classes which implement data structures like Linked List, Dictionary and support ; for Date / Time operations.  4) java.applet: Contains classes for creating Applets.  5) java.awt: Contain classes for implementing the components for graphical user interfaces (like button , ;menus etc).  6) java.net: Contain classes for supporting networking operations.  2. **User-defined packages:**  These are the packages that are defined by the user. First we create a directory myPackage (name should be same as the name of the package). Then create the MyClass inside the directory with the first statement being the package names.  3. **Sub-Packages:**  A package inside another package is known as sub package. For example If I create a package inside letmecalculate package then that will be called sub package.1 | |
| Code | package com.myproject.spares;//this is a user-defined package  import java.util.Scanner;//this is an in built package in java  public class A {  public static void main(String[] args) {  Scanner s=new Scanner(System.in);  String name=s.next();  System.out.println("Value from Scanner class which is part of built in package-->"+name);  s.close();    A objt=new A();  objt.display();      }    public void display() {  System.out.println("You are printing from A class in package1");  }  }  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  package com.myproject.sales;  import com.myproject.spares.A;  public class B {  public static void main(String[] args) {  A objt=new A();  objt.display();  }  } | |
| Output |  | |
| Conclusion | Through this experiment, students easily utilized packages and learnt how they can be used in a wide range of applications. They were able to successfully import classes from other packages. | |