**Assignment -1**

**Objective of the assignment: To understand Java compilation and execution**

Assignment : Create a class named as HelloWorld. Inside main method print HelloWorld using System.out.println method.

**Assignment -2**

**Objective of the assignment: To understand Java variables and loop**

Assignment : Print all the prime numbers between 1 and 100.

**Assignment -3**

**Objective of the assignment: To understand Java methods**

Assignment : Create a method to perform the addition of two numbers and call the method from another Test class to perform addition.

**Assignment -4**

**Objective of the assignment: To understand Java Arrays**

Assignment : Create a method to perform the sorting of integer numbers stored in Array. Call the method from another Test class to show the result.

**Assignment -5**

**Objective of the assignment: To understand Class and object.**

Assignment : create a class person with all suitable data members and their getter and setter methods. Create the object of Person class in another class and call the getter and setter methods from Client class.

**Assignment -6**

**Objective of the assignment: To understand Constructor.**

Assignment : Modify the class person and add all suitable constructors. Create the object of Person class using constructor in another class and call the getter and setter methods from Client class.

**Assignment -7**

**Objective of the assignment: To understand the Overloading process**

1. Assignment : Create a class named as Box. It should have parameters like width, height and length. Define constructors in the class. Overload the constructors and create 3 boxes with different constructors. Using **this**, call the second constructor inside the first one. You should display the parameters of this Box class with a method named as Show().

**Assignment -8**

**Objective of the assignment: To understand the Method Overloading**

Assignment : Overload the show method of previos assignment to display the box with different parameters.

**Assignment -9**

**Objective: To understand Inheritance**

Assignment : Create a class Person and declare the necessary variables. Inherit the class Person and create a child class Manager.

**Assignment -10**

**Objective: To understand Method Overriding in Inheritance**

Assignment : Now Manager class should override a show method declared in Person class to display the Manager data members. Run the program to check its correctness

**Assignment -11**

**Objective : To understand the Constructor calling using super**

Assignment: In the above assignment, create the constructors in Person and the manager class. Call Persons constructor from manager class using super.

**Assignment -12**

**Objective: To understand the use of final**

Assignment: Create a final method in the class Person and show that it cannot be overridden in Manager class. Also create a final class and show that you cannot create a child of the final class.

**Assignment -13**

**Objective: Understand the Abstract class**

Assignment : create a class which has an abstract method and then create a child class to extend the abstract class. Override the abstract method and demonstrate its execution.

**Assignment -14**

**Objective : To understand the Dynamic Method Dispatch(DMD)**

Assignment : Create a super class First and a subclass second. Create a subclass of second and name it as third. Declare a methods display in First, Second and Third class. Now create a main method in another class DemoDMD. In the main method create a reference of First and then assign the object of Second and Third class. Call the display method from First reference and show how DMD works.

**Assignment -15**

**Objective: Understand the Interface**

Assignment : Create an interface Shape with a method called area(). Implement the shape in to three classes named as Circle, Rectangle and Triangle. Create a client class CalculateArea and create the object of all the three child and call the area() method from the interface reference.

**Assignment -16**

**Objective: Understand the try-catch in Exception Handling**

Assignment : Create a class and define a method to produce a DivideByZero exception. Call the method using try and catch to demonstrate Exception handling.

**Assignment -17**

**Objective: Understand the throw and throws in Exception Handling**

Assignment : Create a class and define a method to produce a checked exception. Declare the method with appropriate throws and call the method using try and catch to demonstrate Exception handling.

**Assignment -18**

**Objective: Understand the User Defined Exception**

Assignment : Create your own exception and throw it when a given condition is satisfied in a client class.

**Assignment -19**

* **Objective:** To Understand Package

**Assignment:** Create a package named as MyPack and create a class inside the package. Compile and execute your class

**Assignment -20**

* **Objective :** To understand access modifier- Protected and Default

**Assignment:** Create two packages Pack1 and Pack2. Create a class as “SuperClass” in Pack1 and then create another class as “childClass” in pack2.(Import Pack1 in childclass). Now declare some protected and default modifier based variables in SuperClass and try accessing them in the childClass of Pack2.

ChildClass

Super Class

Pack1 Pack2