

Java Assignment 1

Note: Students are requested to implement each of the following programs, run it, and confirm the output and prepare a handwritten lab report by hand-writing the source-code and corresponding output in A4 size papers.

1. Write a program in Java to:
 - a. create a class named “Student” with its member variables and member functions.
 - b. Create its objects.
 - c. Show how the member variables and functions can be accessed.
2. Write a program in Java to demonstrate the usage of access modifiers: public, private, protected and default.
3. Write a program in Java to demonstrate encapsulation or data hiding: demonstrate how getter and setter methods can be used to access and manipulate the private variables.
4. Write a program in Java to create a java package.
5. Write a program in Java to access or import and use the classes of a package and in another package.
6. Write a program in Java to demonstrate default (no-arg) constructor.
7. Write a program in Java to demonstrate parameterized constructor.
8. Write a program in Java to demonstrate object destruction using finalize() method.
9. Write a program in Java to implement the chain of constructors.
10. Write a program in Java to implement single inheritance
11. Write a program in Java to implement hierarchical inheritance.
12. Write a program in Java to implement multilevel inheritance.
13. Write a program in Java to demonstrate method overriding.
14. Write a program in Java to demonstrate final methods and final variables.
15. Write a program in Java to demonstrate the final class.
16. Write a program in Java to demonstrate nested classes in Java (Inner class concept).
17. Write a program in Java to demonstrate the abstract class in java.
18. Write a program in Java to demonstrate interface in Java.
19. Write a program in Java to show how multiple inheritance by using interface.
20. Write a program in Java to show method overloading by changing no. of parameters.

21. Write a program in Java to show method overloading by changing datatype of parameters.
22. Write a program in Java to show the concept of up-casting in Java.
23. Write a program in Java to show the concept of down-casting in Java.

********Students should complete the assignment on creative way and on their own effort. Copying the source-code and outputs from friends will not be tolerable********

Deadline: Ashad 23