

**Andhra Pradesh State Council of Higher Education**  
**M.Sc. Computer Science Syllabus**  
**MCS 107: Java Programming Lab**  
**Lab Cycle**

1. Write a Java Program to define a class, describe its constructor, overload the constructors and instantiate its object.
2. Write a Java Program to define a class, define instance methods for setting and retrieving values of instance variables and instantiate its object
3. Write a java program to practice using String class and its methods
4. Write a java program to implement inheritance and demonstrate use of method overriding
5. Write a java program to implement multilevel inheritance by applying various access controls to its data members and methods.
6. Write a program to demonstrate use of implementing interfaces
7. Design a Java interface for ADT Stack. Develop two different classes that implement this interface, one using array and the other using linked-list. Provide necessary exception handling in both the implementations.
8. Write a Java program to implement the concept of importing classes from user defined package and creating packages
9. Write a program to implement the concept of threading by implementing Runnable Interface
10. write a java program to store and read objects from a file
11. Write a Java program that displays the number of characters, lines and words in a text file.
12. Write a java program to illustrate object serialization
13. Create a java program to illustrate user defined exception
14. Write a java program to create a thread using runnable interface
15. Write a Java program that creates three threads. First thread displays "Good Morning" every one second, the second thread displays "Hello" every two seconds and the third thread displays "Welcome" every three seconds
16. Write an applet To create multiple threads that correctly implements producer consumer problem using the concept of Inter thread communication
17. Write an applet To handling the mouse events
18. Write a Program That works as a simple calculator using Grid layout to arrange buttons for the digits and +, -, \* % operations. Add a text field to print the result.

19. Build and run "CelsiusConverter" sample application using swings
20. Develop an applet that receives an integer in one text field, and computes its factorial Value and returns it in another text field, when the button named "Compute" is clicked.