

**St. Joseph's College of Arts & Science (Autonomous)**

**Cuddalore-1**

**PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

**Subject:** Java Programming

**Subject Code:** CS305S

**Staff Name:** S.Antony Jones  
S.Muthukumaran

**Class:** II B.Sc (CS) (S-I & S-II)

**Unit-I**

1. Explain briefly about the evolution of Java language.
2. Discuss the features of Java BuzzWords.
3. Explain the general structure of a Java program
4. Explain the basic concept of Object-oriented Programming in detail.
5. Discuss various Data types in Java.
6. What are lexical issues in Java?
7. What are variables? Explain with example.
8. Discuss briefly about the Creation and Usage of Arrays with example.
9. Discuss about various Operators available in Java.
10. Explain the control statements with an example
11. Write down the differences between while and do-while loop.

**Unit-II**

1. What are methods? How are methods defined in Java?
2. Explain the concept of class and object in Java
3. What is a constructor? Explain it with an example
4. Explain Method overloading with relevant example.
5. Discuss about Nested and Inner Classes with example.
6. Explain about various access control used in Java
7. Explain about static data members and static methods
8. Explain the concept of inheritance in Java with an example
9. Discuss about the super class in Java with relevant example.
10. What is Method Overriding, discuss with an example.
11. Compare and Contrast overloading and overriding methods?
12. Briefly explain about abstract class.

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**Unit-III**

1. Explain the packages in detail.
2. Explain Access protection in detail with example
3. How an interface is is defined? Give an example.
4. Discuss about how the interface can be extended to another interface give example.
5. Briefly explain in detailed about the Interface.
6. What is Exception Handling? What are the Keywords used in exception handling give an example.
7. Write down the differences between Class and Interface
8. Compare and Contrast Abstract and Interface.

**Unit-IV**

1. Explain the basic instance methods in Threads.
2. What is Thread? How to create and run Threads. Explain it with example.
3. Explain life cycle of Thread.
4. What is Multithreading and illustrate it with Runnable interface
5. Explain in detail about I/O streams and File streams.
6. Discuss about Synchronization in detail.

**Unit-V**

1. State any five string built-in functions and its uses.
2. Differentiate between String and StringBuffer class with example
3. Briefly explain the Java's String handling mechanisms
4. State the difference between length keyword and length () method in string.
5. Explain the Usage of Vector class with an example.
6. Explain Java.util.Calendar class.
7. Discuss about Random Class and Date Class with example.

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**JAVA PROGRAMS**

1. Write a Java program to find the reverse of a given number.
2. Write a Java program to find the sum of individual digits sum in a given number.
3. Write a Java program to check the given number is prime or not.
4. Write a Java program to find the Area of a circle for the given Radius.
5. Write a Java program to find the area of a Rectangle.
6. Write a Java program for the following
  - i) Find the length of the Strings.
  - ii) Convert one of the Strings to Uppercase.
7. Write a Java program to arrange the numbers in ascending order.
8. Write a Java program to read 10 students marks and store them in an array. Define your own exception. Throw and catch exception when an mark is <0 or >100.
9. Write a Java program for the following
  - i) Find the length of the Strings
  - ii) To insert a String in the middle at a given position.
10. Create two objects of a class with only one data member. Write a method to check whether the two members of the objects have equal value by passing the objects as parameters.
11. Write a program to implement a STACK with PUSH() & POP() operations.
12. Write a Java program for Thread implementation using Synchronization.
13. Write a Java program to display current and

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