

Core Paper -5 : Semester –V

CC-5 Programming Using Java

BLOCK – I

Unit-1: Java Language History, evolution, features, comparison with C and C++, java SE8, phases and block diagram of execution of java program, first java program, java program with reading input and printing output.

Unit-2: Java – Data types, variables, keywords, literals, escape sequence characters, type casting, type conversion, type promotion,

Unit-3: Operators and control statements.

BLOCK-II

Unit-4: Java classes, objects, new operator, object references, methods, box class, types of constructors, this key word, instance variable hiding, garbage collection, finalize method, stack class,

Unit-5: overloading methods and constructors, access controls, final method, static method, static variables nested and inner classes, string class, command line arguments with vararg

Unit-6: Inheritance – member access & inheritance, subclass and super class, second use for super, multi-level hierarchy, method overriding, dynamic method dispatching, abstract classes, using final with inheritance

BLOCK-III

Unit-7: Packages –defining package, setting class path, access protection, importing packages. Interfaces – defining, implementing, nested interfaces, applying interfaces, default interface methods, use static method in an interface

Unit-8: Java Exception Handling – frame work, types of exceptions, uncought exceptions, try and catch, nested catch, multiple try, throw, throws, finally, java built-in exceptions, user-defined exceptions, chained exceptions, recently added 3 exceptions

Unit-9 : Java Applet basics – creating applets, including an applet on a web page, applet tag, passing paramentrs to applets. Java- animation – painting, re-painting, starting, stopping, reducing animation flicker

BLOCK-IV

Unit-10 : Java database connectivity – JDBC definition, JDBC structure, registering and calling JDBC drivers, JDBC URL and the connection, using JDBC drivers, installing JDBC-ODBC bridge, setting up ODBC drivers, Accessing ODBC services through JDBC, ODBC URL, JDBC to ODBC calls

Unit-11: Java Event Hanling – event handling mechanism, event classes, key event class, source of events, event listener interfaces, using delegation event model, adaptor classes, inner classes

Unit-12 Introducing Visual programming with Swing – Sewing is built on AWT, MVC connection,swing packages, swing event handling, JLabel and Image icon, JTextField, swing buttons, JTabbedPane, JScrollPane, JList, JComboBox, JTable, JTree

PRACTICALS:

Unix / Linux/ Ubuntu

<http://www.ee.surrey.ac.uk/Teaching/Unix/unix6.html>

<https://www.includehelp.com/cpp-programs/cpp-programs-classes-and-objects-solved-programs.aspx>

1. Write java program to find largest number in an array
2. Write java program to add two mataices
3. Write java program to demonstrate bit wise operators
4. Write java program to demonstrate java applets
5. Write java program to demonstrate all types of construcotrs
6. Write java program to demonstrate static methods and static variables
7. Write java program to demonstrate multiple inheritance in java
8. Write java program to demonstrate JDBC and ODBC connectivity with mysql or MS-Acess and write sql database queries

9. Write java program to demonstrate exception handling with nested try and multiple catch
10. Draw login form with swing and connect and validate the user id and password from student database
11. Design student data entry form with all GUI controls and enter all details into student database
12. Write java program to demonstrate event handling