------------------Diagram for Exp No.1----------------------------------
1)JAVA compiler and interpreture diagram
2)Structure of JAVA program

------------------Que for Exp No.1-------------------------------------
1)What are the features of JAVA programming?
2)why do we learn and use the JAVA programming for development of software application?
3)what is the structure of JAVA program and explain each statement in detail.
4)what are difference in JVM, JRE and JDK?
5)what are the commands for compilation and execution of JAVA program?
6)what are difference between JAVA, C and C++?
7)what are the valid signature of main method?
8)Explain the significance of System.out.println?
9)why main method is static and public?
10)what is the package and how to declare that?
11)How to import any inbuilt class in JAVA?

------------------Diagram for Exp No.2----------------------------------
1)Table of different data types with size and range

------------------Que for Exp No.2-------------------------------------
1)What are different tokens in JAVA programming?
2)What are the different data types in JAVA programming and
  explain size and range of each data types.
3)How to getting variable value from the user for differnt data types?
4)How to check the user variables values are correct or not?
5)what are the different type of variables in JAVA programming?
6)What are the default values of different data types.
7)what are the different backslash constant in JAVA program.
  explain in deatil.
8)what are the differnt types of typecasting.
9)How to perform the widening and narrow typecasting, explain with example.
10)What are the different type of operators in JAVA program.

------------------Diagram for Exp No.3----------------------------------
1) Access Specifier table

------------------Que for Exp No.3-------------------------------------
1) what is class and object in OOP?
2) How to define any class in JAVA? Explain the every class component in detail.
3) what are the different access specfiers in JAVA and explain in details with example.
4) what is package and interface?
5) what is the signature for subclass and class have implementation of interface.
6) what is the signature of method in JAVA and explain each component of method in detail.
7) How to crate and initialize the object in JAVA?
8) How to access the members of class using object?
9) what is the difference between C++ and JAVA class.

10) can we create the object for main method class.
------------------Diagram for Exp No. 4----------------------------------
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Exp No. 4:- Demonstrate the methods and constructor overloading in JAVA programming.
1) Signature of method component and method overloading
2) Signature of different constructor and constructor overloading
------------------Que for Exp No .4----------------------------------
Exp No. 4:- Demonstrate the methods and constructor overloading in JAVA programming.
1) What is signature for methods in JAVA programming?
2) what are the different access specifiers for methods?
3) How to invoke any class method in JAVA program?
4) What is method overloding?
5) what are the way to perform the method overloading in JAVA programming?
6) what is constructor?
7) what are the different type of constructor in JAVA programming?
8) How constructors are different from method in JAVA?
9) what are the rules to define the constructor?
10) what is construtor overloading and explain the constructor overloading using default and parameterized constructor?
11)can we give the access modifiers to constructor?
12) can we make constructor as astract, final and static?
----------------------Exp No 5--

Diagram:- Syntax :- 1 D array creation Diagram (refer E Balagurusamy book chapter no. 9, Fig 9.1)
Questions:-
1) How to create an array in JAVA programming?
2) How to create string type of array in JAVA?
3) How to initialize the array elements in JAVA?
4) How to display the array elements in JAVA?
5) How to sort the array elements in JAVA?
6) what are the inbuilt methods to sort out the array elements?
7) How to create an array of different type of elements?
8) How to create dynamic type of an array?
9) what is the difference between int and Integer type of data
10)what is the differene between String s and String s=new String?
----------------------Exp No 6--

Diagram:- Syntax for 2D array and representation of two dimensional array in memory (fig 9.2, chapter 9 E.Balagurusamy)
Questions:-
1) How to create multidimensional array in JAVA?
2) How to initialize and display the multidimensional array elements in JAVA?
3) How to perform the mathematical operation on 2D array or matrix?
4) What is wrapper class? How are wrapper classes useful?
5) What are the inbuilt methods in string class?
6) How does the string class is differ from the StringBuffer and StringBuilder class?
7) what is vector in JAVA?
8) How to use vectors to store a list of objects that may vary in size?

9) what is autoboxing and unboxing in JAVA programming? Explain with example.

---------- Exp No 7----------

Title :- Demonstrate the concept of inheritance in JAVA by designing a Player class. Inherit the Player class to Cricket_player, Football_player and Hockey_player.

Diagram:- 1) Syntax for sub class
2) Diagram for type of inheritance(Single, Multilevel, Hierarchical)

Questions:-
1) What is the inheritance? explain with example.
2) what are the advantages of inheritance concepts.
3) How to define the super class and sub class.
4) What are the different types of inheritance in JAVA and explain with example.
5) How to perform the multiple inheritance in JAVA?
6) What is the use of super keyword in JAVA programming?
7) what are the difference between the method overloading and method overriding?
8) How to invoke the super class constructor using sub class object?
9) what is the difference between this and super keyword?
10) what happened when we declare a method and class as an abstract?

----------Exp No 8----------

Title:- Build the concept of multiple inheritance by implementing interface features of JAVA programming. (Implement the queue data structure using JAVA programming)

Diagram:- Draw the diagram for implementation of interface using different techniques

Que:-
1) what is the multiple inheritance?
2) why we does not implement the concept of multiple inheritance using classes in JAVA?
3) what is interface?
4) what are the contents in the interface?
5) How to implements the interface? Explain every method using example.
6) can we inheriated the interface?
7) what are differences between class and interface?
8) Explain the concept default method in the interface?
9) Explain the concept of static method in the interface?
10)what is the difference between the abstract class and interface.

----------Exp No 9----------

Title:- Implement the exception handling using try and catch statements to solve runtime errors.
Diagram:- table of different type of exceptions and there cause
Question:-
1) what are the different type of error in JAVA programming
2) what is the difference between compile time error and run time error?

3) What are the different types of exception (run time errror) in JAVA programming?
4) How to handle the run time exception in JAVA programming?
5) How to implement the try, catch and throw statments.
6) Explain the concept of multiple catch blocks in JAVA programming? with example
7) what is significance of finally method?
8) what is the concept of multithreading? How to imlement in the JAVA programming?
9) what is the applet code and explain the life cycle of applet?
10)Explain the life cycle of thread.

----------Exp No 10----------

Title:- Perform the file handling operation to read from one file and write to another file line by line using JAVA programming.
Diagram:- Table for io package and File class method
Questions:
1) How to handle file operation in JAVA programming?
2) what are the packages and classes requried for file handling?
3) What is the requirement of file handling
4) what is stream and explain the different type of stream
5) what are the subclasses are present under Inputstream and Outputstream classes
6) what are the method present in the Inputstream and Outstream class
7) Explain the byte strem and char stream
8) Explain the description of all methods which are present in the File class
9) How to creat a file using JAVA programming?
10) How to perform the read and write operation on file
11) Explain the concept of random access file in JAVA
12) Explain the concept of concatenating and buffering of file .

----------Exp No 11----------

Title:- Draw different geometrical figures like oval, rectangle, line, text using graphics class.
Diagram :- Life cycle of applet, HTML file tag (different section)
Question:-
1) what is applet programming?
2) what are the differences between stand alone application and web application of JAVA.
3) what are application of applet programming?
4) what is procedure of writing applet program?(Structure of applet program)
5) what are the steps to execute the applet program?
6) what are the different section in HTML coding and explain in detail.
7) what are the methods are present in the Applet class and Graphics class and explain the decription of every method.
8) Describe the life cycle of applet.
9) How to take input from the user for applet programming.
10) Explain the use of differnt classes which are present in the awt package.