1.Explain about the main method in java?

- ***main():*** It is a default signature which is predefined in the JavaMethod . It is called by JavaMethod to execute a program line by line and end the execution after completion of this method. We can also overload the main() method.
- ***String args[]:*** The main() method also accepts some data from the user.

Main(String args[])

2.What are the different Control flow Statements available in java?

- Java application code is normally executed sequentially from top to bottom in the order that the code appears. To apply business logic, we may need to execute code on conditional basis. **Control flow statements** helps in this conditional execution of code blocks.

- All control flow statements are associated with a business condition – when **true**, the code block executes; when **false** it is skipped.

Java supports following **control statements.**

- If-else Statement
- Switch Statement
- While Loop
- Do-While Loop
- For Loop
- Enhanced For-each Loop
- Labeled Statement

3.What is the Difference betweeen break and continue statements?

- **break statement:** This statement terminates the smallest enclosing loop (i.e., **while**, do-while, for loop, or switch statement). Below is the program to illustrate the same:
- The Break statement is used to exit from the loop constructs.
- The break statement is usually used with the switch statement, and it can also use it within the while loop, do-while loop, or the for-loop.

- **Syntax:**
  break;

❖ **continue statement:** This statement skips the rest of the loop statement and starts the next iteration of the loop to take place. Below is the program to illustrate the same:

- The continue statement is not used to exit from the loop constructs.
- The continue statement is not used with the switch statement, but it can be used within the while loop, do-while loop, or for-loop.
- **Syntax:**
  continue;

4.What is an Array? How will you declare an array in java?

- An **array** is a collection of data objects of the same type. It is one of the fundamental data structures in Java and is incredibly useful for solving programming problems.
- The values stored in the array are referred to as **elements** and each element is present at a particular index of the array.

Declaring an Array:

- datatype: The of Objects that will be stored in the array eg.int,char etc.
- **[ ]:** Specifies that the declared variable points to an array
- **arrayName:** Specifies the name of the array

5.When will you get ArrayIndexOutOfBoundsException?

- ArrayIndexOutOfBoundsException occurs when we access an array, or a Collection**,** that is backed by an array with an invalid index. This means that the index is either less than zero or greater than or equal to the size of the array.
- Additionally, bound checking happens at runtime.

6.Define the Syntax to create an object for a class?

- When we create an instance of the class by using the new keyword, it allocates memory (heap) for the newly created **object** and also returns the **reference** of that object to that memory. The new keyword is also used to create an array. The syntax for creating an object is:

ClassName object = new ClassName();

- Using **new** Keyword
- Using **clone()** method
- Using **newInstance()** method of the **Class** class
- Using **newInstance()** method of the **Constructor** class
- Using **Deserialization**

✓ **What are the naming conventions to be followed while creating a class, method and a variable .Explain with examples:**

Class: Names should be in CamelCase . Try to use nouns because a class is normally representing something in the real world:

class Customer class Account

Method: Names should be in mixed case. Use verbs to describe what the method does:

void calculateTax() string getSurname()

Variable: Names should be in mixed case. The names should represent what the value of the variable represents:

string firstName int orderNumber

7.What is Variable?How will you declare a variables in java?

A variable is a name given to a memory location.

- The value stored in a variable can be changed during program execution.
- A variable is only a name given to a memory location, all the operations done on the variable effects that memory location.
- **Syntax:**

type variableName = value;

8.What is String in java? Is it a Data Type?

- **String is a class in java and reference data type**. String is a array of character so it is not a primitive data type.

Data Type:

- Primitive Data Type
- Non-Primitive Data Type

9.What are the different ways to create the String Object in java?

- In Java, a string is an object that represents a sequence of characters or char values. The java.lang.Strin*g* class is used to create a Java string object.

There are two ways to create a String object:

- **string literal** : Java String literal is created by using double quotes.

String s="Welcome";

- **new keyword** : Java String is created by using a keyword "new".

String s=new String("Welcome");

10.What is the Difference between .Equals and ==?

- **== :-**
  Is a reference comparison, i.e. both objects point to the same memory location

- **.equals() :-**
  Evaluates to the comparison of values in the objects