Topics to cover:

1. Command Line Arguments
2. Programming practice

1. Command line arguments

1.1 What is command line argument in Java?

Java command-line argument is an argument i.e. passed at the time of running the Java program. In Java, the command line arguments passed from the console can be received in the Java program and they can be used as input. The users can pass the arguments during the execution bypassing the command-line arguments inside the main() method.

1.2 How does command line argument work?

We need to pass the arguments as space-separated values. We can pass both strings and primitive data types(int, double, float, char, etc) as command-line arguments. These arguments convert into a string array and are provided to the main() function as a string array argument.

When command-line arguments are supplied to JVM, JVM wraps these and supplies them to args[]. It can be confirmed that they are wrapped up in an args array by checking the length of args using args.length.

Internally, JVM wraps up these command-line arguments into the args[ ] array that we pass into the main() function. We can check these arguments using args.length method. JVM stores the first command-line argument at args[0], the second at args[1], the third at args[2], and so on.

1.3 Examples of command line argument

Example 1:

// Java Program to Illustrate First Argument

// Class
class GFG {

    // Main driver method
    public static void main(String[] args)
    {
        // Printing the first argument
        System.out.println(args[0]);
    }
}

Output:

```
[mayanksolanki@MacBook-Air Desktop % javac GFG.java
[mayanksolanki@MacBook-Air Desktop % java GFG
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 0
out of bounds for length 0
        at GFG.main(GFG.java:10)
[mayanksolanki@MacBook-Air Desktop % java GFG GeeksforGeeks
GeeksforGeeks
mayanksolanki@MacBook-Air Desktop % 
```

Explanation of the above code:

If we run a Java Program by just providing its classname, then it will not run as the program tries to print the first argument (i.e., args[0]). Therefore, when we provide the string "GeeksForGeeks", it will print this string as the first argument (args[0]).

Example 2:

```java
// Java Program to Check for Command Line Arguments

// Class
class GFG {

    // Main driver method
    public static void main(String[] args)
    {
        // Checking if length of args array is
        // greater than 0
        if (args.length > 0) {

            // Print statements
            System.out.println("The command line arguments are:");

            // Iterating the args array
            // using for each loop

            for (String val : args)
                // Printing command line arguments
                System.out.println(val);
        }
        else
            // Print statements
            System.out.println("No command line "
                                + "arguments found.");
    }
}
```

Output:

Explanation of the above code:

If we run a Java Program by writing the command "**java Hello Geeks At GeeksForGeeks**" where the name of the class is "Hello", then it will run up to Hello. It is a command up to "Hello" and after that i.e "Geeks At GeeksForGeeks", these are command-line arguments.

2.   Programming practice

Program 1:

Write a program using command line argument to read the contents of files in a directory.

Ans:

```
import java.io.File;
import java.util.Scanner;

public class FileReaderCommandLine{
    public static void main(String args[]) throws Exception{
        File folder = new File(args[0]);
        File[] listOfFiles = folder.listFiles();
        String content="";
        for (File file : listOfFiles) {
                    if (file.isFile()) {
```

```java
                    //System.out.println(file.getName());
                File myFile=new File(file.getAbsolutePath());
                    Scanner sc=new Scanner(myFile);
                while(sc.hasNextLine()){
                            //System.out.println(sc.nextLine());
                        content=content+sc.nextLine()+" ";
                        }
                System.out.println("File name: "+file.getName()+"\nContent: "+content.trim());
                    }
            content="";
        }

    }
}
```

Output:

java FileReaderCommandLine /home/vboxuser/AJP/data
File name: text1.txt
Content: We are from Sitare University. We live in Lucknow.
File name: text2.txt
Content: Pacific Ocean is the largest ocean. We have seven continents.