

## 1. Text File I/O

In Java we use File class to load the file and Scanner class to scan through the content of that file. To get next line of the file we use `nextLine()` method.

In C++ we use `ifstream` to load and scan the file. To get next line we use `getline()` function.

## 2. Support for Data Abstraction

Java provides abstraction through abstract classes and interfaces whereas C++ provides abstraction through classes, header files and access specifiers.

## 3. Class Libraries

Java and C++ provide a lot of inbuilt class libraries which developers can use to implement some functionality easily.

To import a library in Java, we use

```
import java.library_name.class_name;
```

Example: `import java.util.Scanner;`

To import a library in C++, we use

```
#include<library_name>
```

Example: `#include <cstdlib>`

## 4. Random Number Generation

To generate random number in Java, we use Random class from util library. Code is

```
import java.util.Random;
Random random = new Random();
int number = random.nextInt(10); // Get a random number between 0 to 9
```

To generate random number in C++, we use `rand()` function from `cstdlib` library. However, to get a new number every time we need to do one more line. That is,

```
srand(time(0));
```

If we don't do this, we will get same number for every `rand()` call. Code is,

```
#include <cstdlib>
int number = rand() % 10 // Get a random number between 0 to 9
```

## 5. Exception Handling

To handle exceptions in a code in Java/C++ we wrap the code in a `try {}` block followed by `catch(){} block` which catches exception occurred in `try{} block` and runs code according to the error occurred.

```
try{
    // Code
}
catch(Exception e){
    // Exception Handling Code
}
finally{
    // Code to run if we get error or not
```

```
}
```

## 6. String Manipulation

In both Java and C++, string is a class. We can't directly manipulate the characters present in a string. If we change characters we get a new instance of string with modified version.

## 7. Command Line Arguments

In Java, we have a main() method inside the class which gets called when we run the file. That main() method takes a parameter String[] args which stores the command line arguments we send when we run the file.

```
public static void main(String[] args){  
    for (String val : args)  
        // Printing command line arguments  
        System.out.println(val);  
}
```

In C++, main() function can take 2 parameters argc, argv where argc stores number of arguments passed and argv has the actual arguments passed.

```
int main(int argc, char** argv) {  
    cout << "Number of arguments: " << argc << "\n";  
    for (int i = 0; i < argc; ++i)  
        cout << argv[i] << "\n";  
    return 0;  
}
```

## 8. Dynamic Storage Allocation

In Java, everything gets allocated to memory dynamically.

In C++, to allocate a memory dynamically we use new operator. To delete those variables we use delete operator to deallocate the memory we allocated.