

# SNS COLLEGE OF TECHNOLOGY



An Autonomous Institution  
Coimbatore-35

## Department of Computer Science & Engineering

**23ITB202 – Object Oriented Programming**  
I B.E CSE/ II SEMESTER

### **UNIT I :Introduction To OOPS**

**Topic 2 : Command-Line Arguments in Java**



# What Are Command-Line Arguments in Java?

- In Java, command-line arguments are passed to the main method as an array of strings called args.
- The users can pass the arguments during the execution by passing the command-line arguments inside the main() method.
- This means you can change how the program behaves without modifying the code itself.



# Topics for Discussion

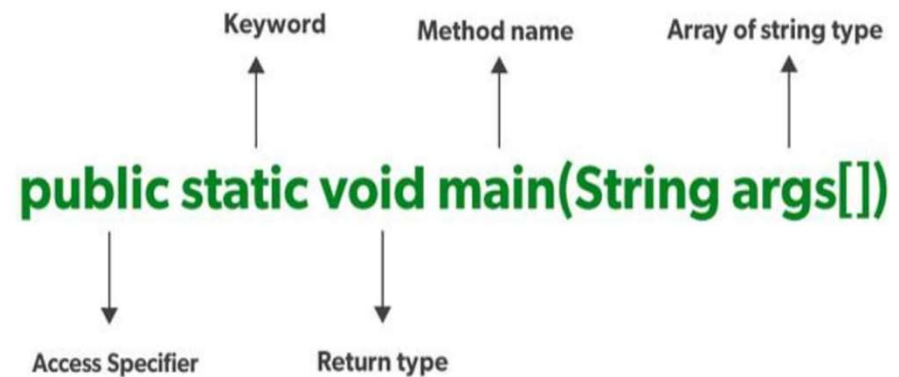
- ✓ Basic Syntax in Java.
- ✓ Accessing and Parsing Arguments.
- ✓ Example: Summing Numbers
- ✓ Handling No Arguments.
- ✓ Common Mistakes.
- ✓ Major Types of Errors in Java.

# Basic Syntax:

- The main method signature is public static void main(String[] args).
- Each argument passed from the command line is stored as a string in the args array.

## Syntax:

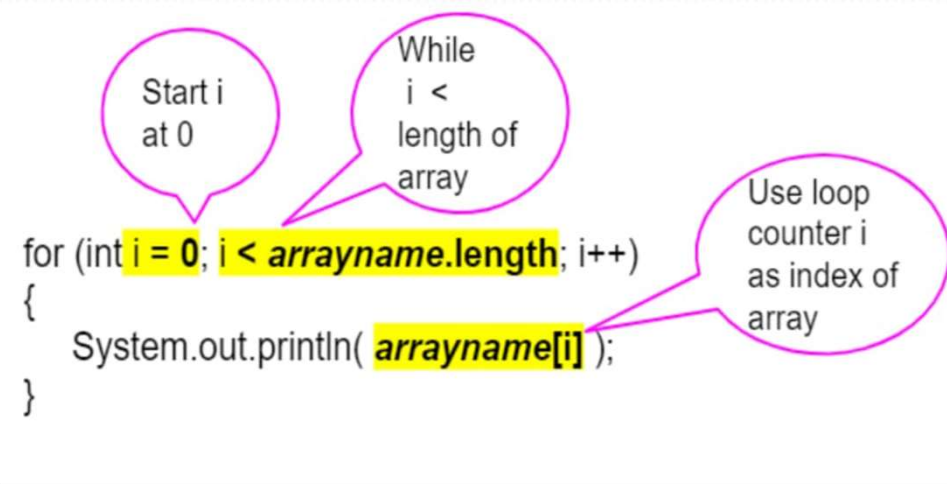
```
public static void main(String[] args)
```



# Accessing Multiple Arguments

- Use a loop to iterate through the args array and process each argument.
- This lets you handle multiple inputs dynamically.
- For example, you can sum a list of numbers passed as arguments.

```
for (int i = 0; i < arrayname.length; i++)  
{  
    System.out.println( arrayname[i] );  
}
```



# Parsing Arguments

- Often you need to convert arguments from strings to other types, like integers.
- Use methods like `Integer.parseInt(args[0])` to convert string arguments to numbers.
- Always handle possible exceptions if the input is not a valid number.

```

CommandLineArguments.java
1 package com.journaldev.examples;
2
3 public class CommandLineArguments {
4
5     public static void main(String[] args) {
6         System.out.println("Number of Command Line Argument = "+args.length);
7
8         for(int i = 0; i< args.length; i++) {
9             System.out.println(String.format("Command Line Argument %d is %s", i, args[i]));
10        }
11    }
12
13
14

```

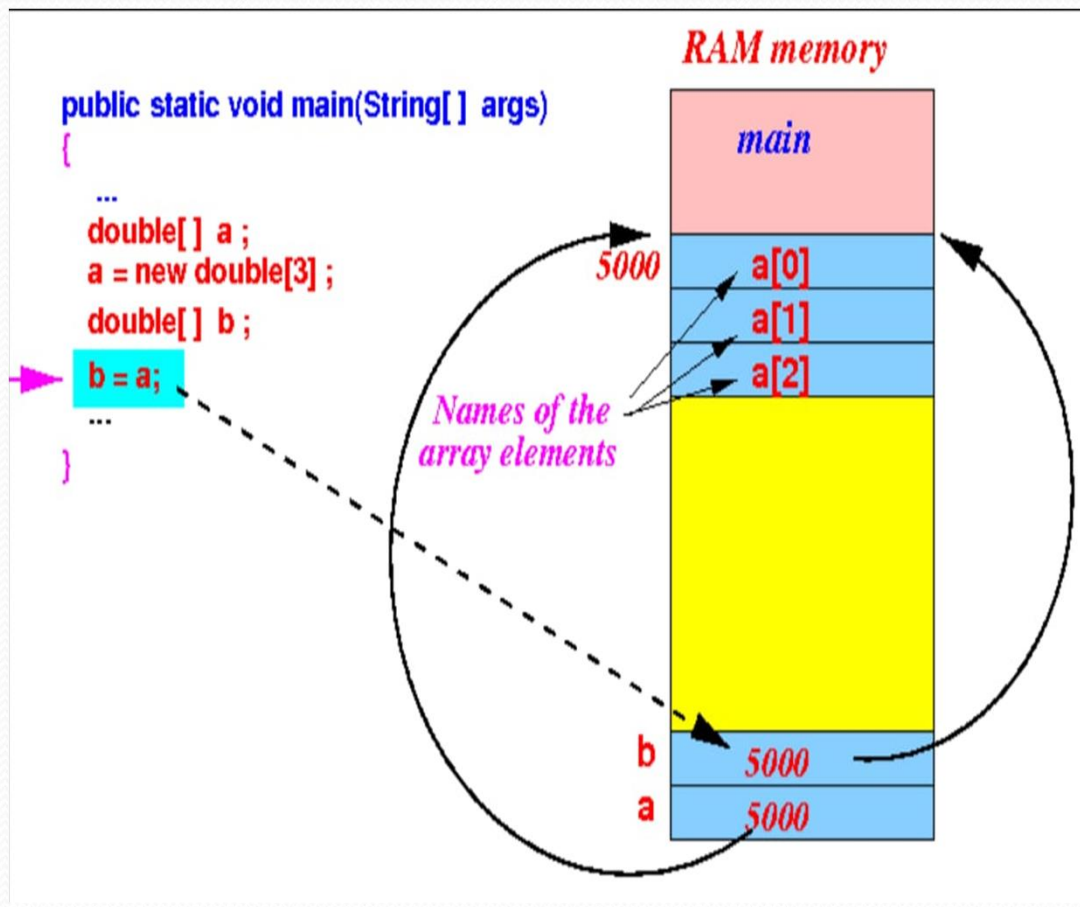
Problems @ Javadoc Declaration Console Progress

```

<terminated> CommandLineArguments [Java Application] /Library/Java/JavaVirtualMachines/jdk-11.0.1.jdk/Contents/Home/bin/java (1
Number of Command Line Argument = 3
Command Line Argument 0 is A
Command Line Argument 1 is B
Command Line Argument 2 is C

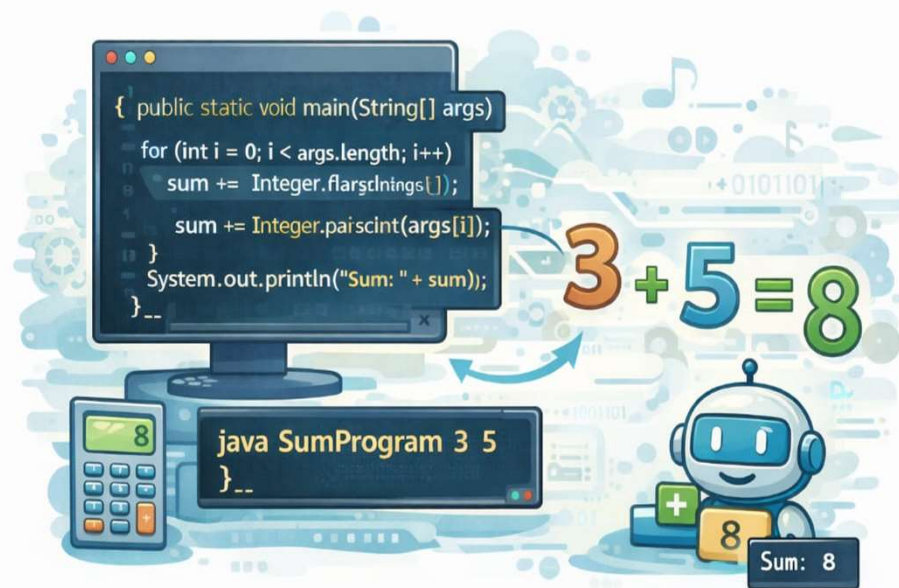
```

# Array Reference Assignment in Java (Memory Representation)



# Example: Summing Command-Line Arguments

- Example: A Java program that takes two arguments, converts them to integers, and prints their sum.
- This demonstrates how to handle and operate on numerical arguments.
- It's a practical use case for command-line inputs.

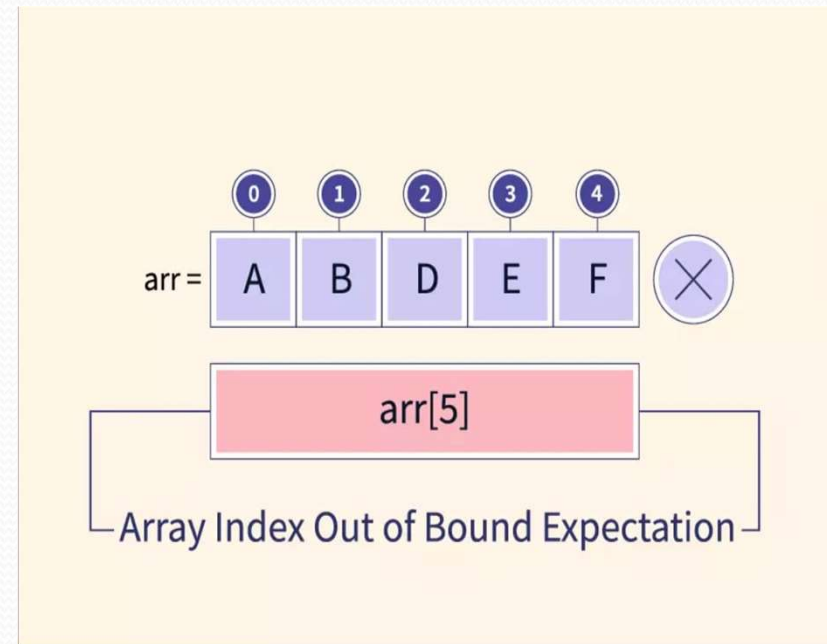


# Handling No Arguments

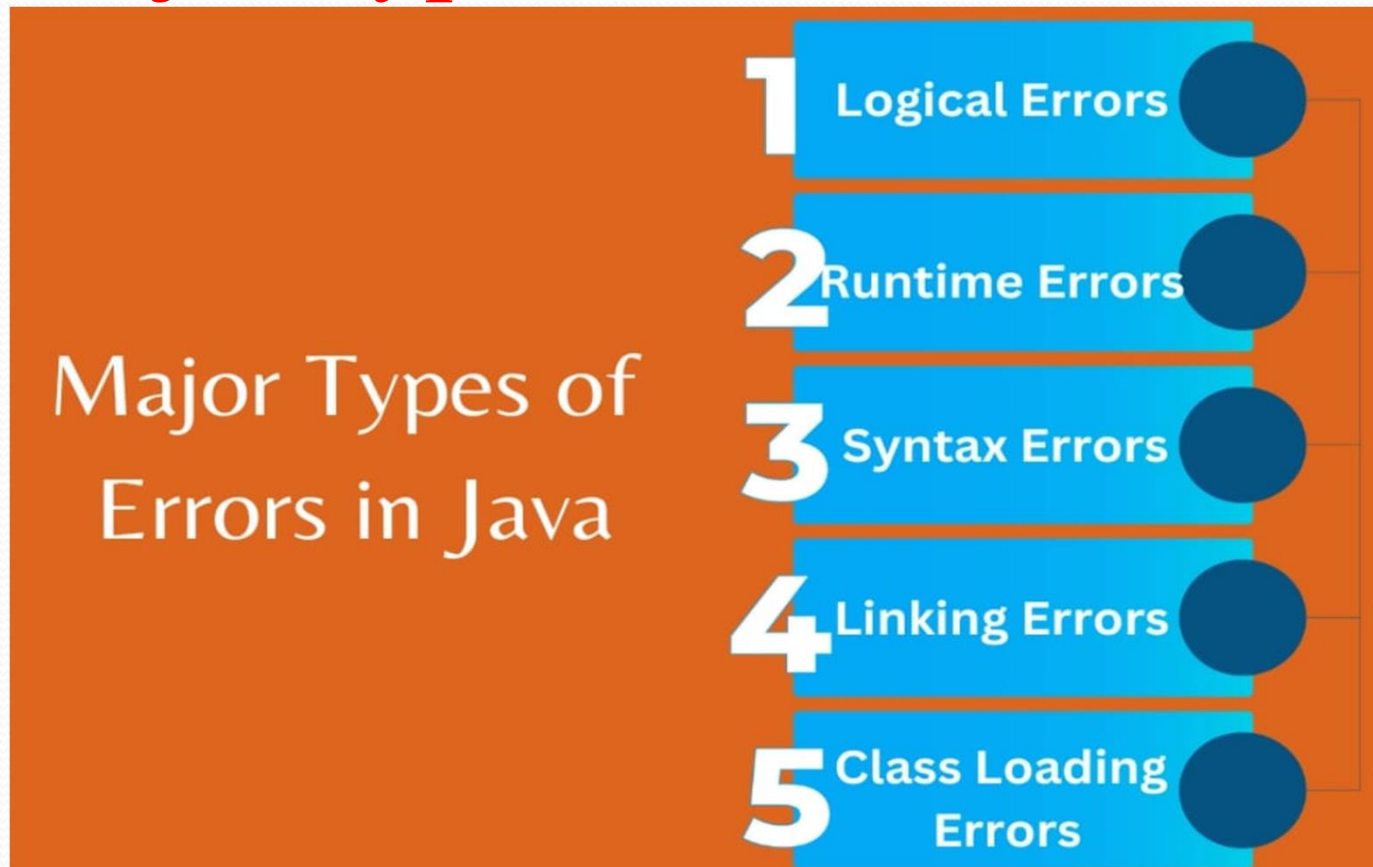
- Check if `(args.length == 0)` to see if no arguments are provided.
- Print a user-friendly message explaining how to run the program with arguments.
- This ensures the program doesn't fail silently and helps users understand what to do.

# Common Mistakes with Command-Line Arguments

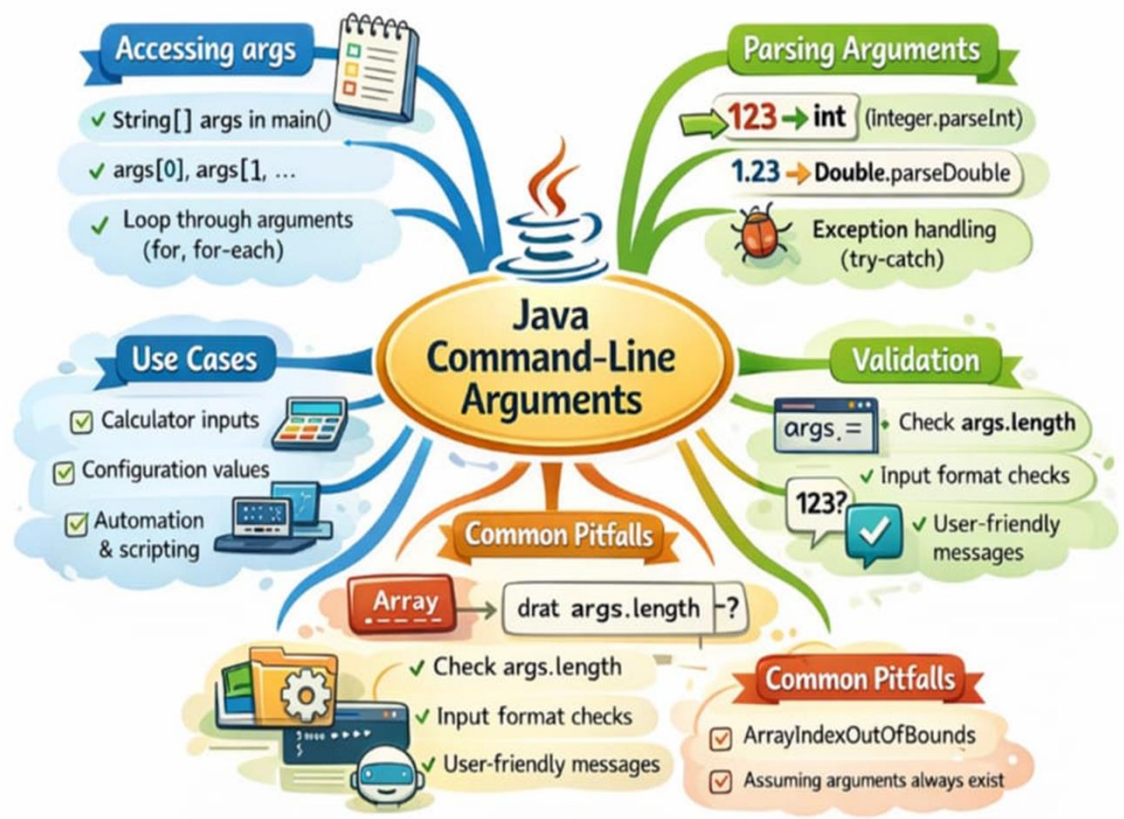
- Forgetting to check the length of the args array before accessing elements.
- Not handling exceptions when parsing numbers or expecting certain formats.
- Assuming that arguments will always be present or in the correct order.



# Major Types of Errors in Java...



# Mind Map



# Assessment

**1. In Java, the first command-line argument is accessed via \_\_\_\_\_ .**

Ans: args[0].

**2. Which method is used to parse a string into an integer in Java?**

- (a) Integer.parseInt().
- (b) String.toInt()
- (c) Integer.toInteger().

**3. Write a small Java snippet that prints all command-line arguments.**

```
Answer : public class PrintArgs {  
    public static void main(String[] args) {  
        for (String arg : args) {  
            System.out.println(arg);  
        }  
    }  
}
```

# References

- <https://www.geeksforgeeks.org/command-line-arguments-in-java/>
- <https://docs.oracle.com/en/java/>
- <https://www.w3schools.com/java/>

# Thank You

