

vaibhav ghangle assignment 2

snippet 1

error

The screenshot shows the VS Code interface with the Explorer sidebar on the left and two editors open on the right. The left editor contains the code for `firstjava.java`:1 public class Main {
2 public void main(String[] args) {
3 System.out.println("Hello, World!");
4 }
5 }
6
7
8The right editor shows the terminal output:(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavghangle/Desktop/programing/java"
cd "/Users/vaibhavghangle/Desktop/programing/java"
/ && javac firstjava.java && java firstjava
(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavghangle/Desktop/programing/java/" && ja
vac firstjava.java && java firstjava
firstjava.java:1: error: class Main is public, should be declared in a file named Main.java
public class Main {
 ^
1 error
(base) vaibhavghangle@VAIBHAVs-MacBook-Air java %

main method should be static so that it will run.

The screenshot shows the VS Code interface with the Explorer sidebar on the left and two editors open on the right. The left editor contains the code for `Main.java`:1 public class Main {
2 public static void main(String[] args) {
3 System.out.println("Hello, World!");
4 }
5 }
6The right editor shows the terminal output:(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavghangle/Desktop/programing/java"
(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavghangle/Desktop/programing/java/" && ja
vac main.java && java main
Error: Could not find or load main class main
Caused by: java.lang.NoClassDefFoundError: main (wrong name: Main)
(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % java Main
Hello, World!
(base) vaibhavghangle@VAIBHAVs-MacBook-Air java % _

snippet 2

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Code for `Main.java` is displayed:

```
1 public class Main {  
2     static void main(String[] args) {  
3         System.out.println("Hello, World!");  
4     }  
5 }
```
- TERMINAL**: Shows terminal output:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java"  
vac main.java && java main  
Error: Could not find or load main class main  
Caused by: java.lang.NoClassDefFoundError: main (wrong name: Main)  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
  
Error: Main method not found in class Main, please define the main method as:  
    public static void main(String[] args)  
or a JavaFX application class must extend javafx.application.Application  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % _
```

public is missing in inside main function

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Code for `Main.java` is displayed:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         System.out.println("Hello, World!");  
4     }  
5 }
```
- TERMINAL**: Shows terminal output:

```
vac main.java && java main  
Error: Could not find or load main class main  
Caused by: java.lang.NoClassDefFoundError: main (wrong name: Main)  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
  
Error: Main method not found in class Main, please define the main method as:  
    public static void main(String[] args)  
or a JavaFX application class must extend javafx.application.Application  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
  
Hello, World!
```

snippet 3

error

```
EXPLORER OPEN EDITORS JAVA PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS
```

```
cd "/Users/vaibhavhangale/Desktop/programing/java"  
cd "/Users/vaibhavhangale/Desktop/programing/java/" && javac main.java && java main  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java"  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java/" && ja  
vac main.java && java main  
Error: Could not find or load main class main  
Caused by: java.lang.NoClassDefFoundError: main (wrong name: Main)  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
Error: Main method must return a value of type void in class Main, please  
define the main method as:  
    public static void main(String[] args)  
○ (base) vaibhavhangale@VAIBHAVs-MacBook-Air java %
```

it should be void main instead of int main and main function should not return any value .

```
EXPLORER OPEN EDITORS JAVA PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS
```

```
public static void main(String[] args) {  
    System.out.println("Hello, World!");  
}  
//javac Main.java  
//java Main
```

```
symbol:   class void  
location: class Main  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:4: error: incompatible types: unexpected return value  
    return 0; }  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
Hello, World!
```

snippet 4

error

```
EXPLORER OPEN EDITORS JAVA PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS
```

```
J Main.java X J Main.class
J Main.java
  public class Main {
    public static void main() {
      System.out.println("Hello, World!");
    }
  }
//javac Main.java
//java Main
```

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:4: error: incompatible types: unexpected return value
      return 0; }

1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Hello, World!
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Error: Main method not found in class Main, please define the main method as:
  public static void main(String[] args)
or a JavaFX application class must extend javafx.application.Application
```

String[] arg is missing

```
EXPLORER OPEN EDITORS JAVA PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS
```

```
J Main.java X J Main.class
J Main.java
  public class Main {
    public static void main(String[] args) {
      System.out.println("Hello, World!");
    }
  }
//javac Main.java
//java Main
```

```
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Hello, World!
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Error: Main method not found in class Main, please define the main method as:
  public static void main(String[] args)
or a JavaFX application class must extend javafx.application.Application
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Hello, World!
```

snippet 5

no error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class` under `OPEN EDITORS`, and `Main.class` under `JAVA`.
- MAIN EDITOR**: Displays the code for `Main.java`. It contains two `public static void main` methods:
 - First method: `public static void main(String[] args) { System.out.println("Main method with String[] args"); }`
 - Second method: `public static void main(int[] args) { System.out.println("Overloaded main method with int[] args"); }`
- TERMINAL**: Shows the output of running the code:

```
public static void main(String[] args)
or a JavaFX application class must extend javafx.application.Application
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Hello, World!
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:6: error: class, interface, enum, or record expected
    ^
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Main method with String[] args
```

it allows multiple main as it is being overloaded.

snippet 6

erorr

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class` under `OPEN EDITORS`, and `Main.class` under `JAVA`.
- MAIN EDITOR**: Displays the code for `Main.java`. It contains a single `public static void main` method:

```
public class Main {
    public static void main(String[] args) {
        int x = y + 10;
        System.out.println(x);
    }
}
```
- TERMINAL**: Shows the output of running the code, which results in an error:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programming/java"
cd "/Users/vaibhavhangale/Desktop/programming/java"
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programming/java/" && javac main.java && java main
main.java:3: error: cannot find symbol
    int x = y + 10;
           ^
      symbol:  variable y
      location: class Main
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java %
```

y is not declared.

```
public class Main {
    public static void main(String[] args) {
        int y=1;
        int x = y + 10;
        System.out.println(x);
    }
}

//javac Main.java
//java Main
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java"
cd "/Users/vaibhavhangale/Desktop/programing/java/" && javac main.java && java main
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java/" && ja
vac main.java && java main
Error: Could not find or load main class main
Caused by: java.lang.NoClassDefFoundError: main (wrong name: Main)
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
11
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % _
```

snippet 7

error

```
public class Main {
    public static void main(String[] args) {
        int x = "Hello";
        System.out.println(x);
    }
}

//javac Main.java
//java Main
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
cd "/Users/vaibhavhangale/Desktop/programing/java/" && javac main.java && java main
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java/" && ja
vac main.java && java main
Error: Could not find or load main class main
Caused by: java.lang.NoClassDefFoundError: main (wrong name: Main)
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
11
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:3: error: incompatible types: String cannot be converted to int
        int x = "Hello";
                           ^
1 error
```

string value cant be assign to interger type variable.

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Displays `Main.java` containing the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int x = 1;  
4         System.out.println(x);  
5     }  
6  
7  
8 //javac Main.java  
9 //java Main
```
- TERMINAL**: Shows the output of running javac and java on `Main.java`. It includes:
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % java Main
11
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % javac Main.java
Main.java:3: error: incompatible types: String cannot be converted to int
 int x = "Hello";
 ^
 - 1 error
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % java Main
11
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % java Main
1

snippet 8

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Displays `Main.java` containing the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         System.out.println("Hello, World!"  
4     }  
5  
6 //javac Main.java  
7 //java Main
```
- TERMINAL**: Shows the output of running javac and java on `Main.java`. It includes:
 - int x = "Hello";
 ^
 - 1 error
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % java Main
11
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % java Main
1
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air ~ % javac Main.java
Main.java:3: error: ')' or ',' expected
 System.out.println("Hello, World!"
 ^
 - 1 error

syntax error- incomplete line

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files: Main.java, Main.class.
- EDITOR**: Shows Main.java with the following code:

```
public class Main {
    public static void main(String[] args) {
        System.out.println("Hello, World!");
    }
}
```
- TERMINAL**: Shows terminal output:

```
System.out.println("Hello, World!")

1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
1
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:3: error: ';' expected
    System.out.println("Hello, World!")
               ^
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Hello, World!
```

snippet 9

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files: Main.java, Main.class.
- EDITOR**: Shows Main.java with the following code:

```
public class Main {
    public static void main(String[] args) {
        int class = 10;
        System.out.println(class);
    }
}
```
- TERMINAL**: Shows terminal output:

```
Main.java:3: error: ';' expected
    int class = 10;
               ^
Main.java:3: error: <identifier> expected
    int class = 10;
               ^
Main.java:4: error: illegal start of expression
    System.out.println(class);
               ^
Main.java:4: error: <identifier> expected
    System.out.println(class);
               ^
5 errors
```

class is a keyword cant be use in variable name.

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Displays the Java code:

```
public class Main {  
    public static void main(String[] args) {  
        int i = 10;  
        System.out.println(i);  
    }  
}
```
- TERMINAL**: Shows the output of the compilation process:

```
Main.java:3: error: <identifier> expected  
      int class = 10;  
                           ^  
Main.java:4: error: illegal start of expression  
      System.out.println(class);  
                           ^  
Main.java:4: error: <identifier> expected  
      System.out.println(class);  
                           ^  
5 errors  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
10
```

snippet 10

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Displays the Java code:

```
public class Main {  
    public void display() {  
        System.out.println("No parameters");  
    }  
    public void display(int num) { System.out.println("With parameter: " + num);  
    }  
}  
public static void main(String[] args) {  
    display();  
    display(5);  
}
```
- TERMINAL**: Shows the output of the compilation process:

```
5 errors  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
10  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:6: error: non-static method display() cannot be referenced from a static context  
    display();  
           ^  
Main.java:7: error: non-static method display(int) cannot be referenced from a static context  
    display(5);  
           ^  
2 errors
```

In Java, you cannot call instance methods directly from a static method without creating an instance of the class.

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java`, `Main.class`, and `Main` under `JAVA`.
- MAIN EDITOR**: Displays the `Main.java` file content:

```
1 public class Main {  
2     public void display() {  
3         System.out.println("No parameters");  
4     }  
5     public void display(int num) {  
6         System.out.println("With parameter: " + num);  
7     }  
8     public static void main(String[] args) {  
9         Main obj = new Main(); // Create an instance of Main  
10        obj.display(); // Call display() with no parameters  
11        obj.display(5); // Call display() with an integer parameter  
12    }  
13 }
```
- TERMINAL**: Shows the following terminal output:

```
10  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:6: error: non-static method display() cannot be referenced from a static context  
        display();  
          ^  
Main.java:7: error: non-static method display(int) cannot be referenced from a static context  
        display(5);  
          ^  
2 errors  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
No parameters  
With parameter: 5
```

snippet 11

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java`, `Main.class`, and `Main` under `JAVA`.
- MAIN EDITOR**: Displays the `Main.java` file content:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int[] arr = {1, 2, 3};  
4         System.out.println(arr[5]);  
5     }  
6     //javac Main.java  
7     //java Main
```
- TERMINAL**: Shows the following terminal output:

```
^  
Main.java:7: error: non-static method display(int) cannot be referenced from a static context  
        display(5);  
          ^  
2 errors  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
No parameters  
With parameter: 5  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 3  
at Main.main(Main.java:4)
```

syntax to declare array is `int arr[]` and we cant access elements outside the array

`size(0 ot size-1).`

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Displays `Main.java` containing the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int arr[] = {1, 2, 3};  
4         System.out.println(arr[2]);  
5     }  
6  
7 }  
8 //javac Main.java  
9 //java Main
```
- TERMINAL**: Shows the output of running the Java program, which results in an `ArrayIndexOutOfBoundsException` at index 5 of the array.

snippet 12

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: Displays `Main.java` containing the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         while (true) { System.out.println("Infinite Loop");  
4     }  
5 }  
6  
7 }  
8 //javac Main.java  
9 //java Main
```
- TERMINAL**: Shows the output of running the Java program, which enters an infinite loop and eventually causes a `StackOverflowError`.

it will run infinite time till the stack memory is full and it will run out of memory so we need breaking condition or use break

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files: Main.java, Main.class.
- EDITOR**: Displays Main.java code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         while (true) { System.out.println("Infinite Loop"); break;  
4     }  
5 }  
6  
7 //javac Main.java  
8 //java Main
```
- TERMINAL**: Shows multiple terminal sessions:
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
 - Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 3
at Main.main(Main.java:4)
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
 - Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3
at Main.main(Main.java:4)
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
 - 3
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
 - Infinite Loop

snippet 13

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files: Main.java, Main.class.
- EDITOR**: Displays Main.java code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         String str = null;  
4         System.out.println(str.length());  
5     }  
6 //javac Main.java  
7 //java Main
```
- TERMINAL**: Shows multiple terminal sessions:
 - Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3
at Main.main(Main.java:4)
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
 - 3
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
 - Infinite Loop
 - (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
 - ^[[AMain.java:4: error: reached end of file while parsing
System.out.println(str.length()); } ^

string is null so function will through error. we can put a check if it is null

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: `Main.java` content:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         String str = null;  
4         if (str != null) {  
5             System.out.println(str.length());  
6         } else {  
7             System.out.println("String is null, cannot get its length.");  
8         }  
9     }  
10 }  
11 //javac Main.java  
12 //java Main
```
- TERMINAL**: Command-line output:

```
System.out.println(str.length()); }  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
Infinite Loop  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:4: error: reached end of file while parsing  
    System.out.println(str.length()); }  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
String is null, cannot get its length.
```

snippet 14

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files `Main.java` and `Main.class`.
- MAIN EDITOR**: `Main.java` content:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         double num = "Hello";  
4         System.out.println(num);  
5     }  
6  
7 //javac Main.java  
8 //java Main
```
- TERMINAL**: Command-line output:

```
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:4: error: reached end of file while parsing  
    System.out.println(str.length()); }  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
String is null, cannot get its length.  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:3: error: incompatible types: String cannot be converted to double  
    double num = "Hello";  
1 error
```

wrong data type

The screenshot shows the VS Code interface with the following details:

- Explorer View:** Shows files Main.java and Main.class under OPEN EDITORS and JAVA.
- Main.java Editor:** Contains the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         String num = "Hello";  
4         System.out.println(num);  
5     }  
6  
7 //javac Main.java  
8 //java Main
```
- Terminal Output:** Shows the following terminal session:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
String is null, cannot get its length.  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:3: error: incompatible types: String cannot be converted to double  
    double num = "Hello";  
           ^  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
String is null, cannot get its length.  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
^[[A^[[B  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
Hello
```

snippet 15 error

The screenshot shows the VS Code interface with the following details:

- Explorer View:** Shows files Main.java and Main.class under OPEN EDITORS and JAVA.
- Main.java Editor:** Contains the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int num1 = 10;  
4         double num2 = 5.5;  
5         int result = num1 + num2; System.out.println(result);  
6     }  
7 //javac Main.java  
8 //java Main
```
- Terminal Output:** Shows the following terminal session:

```
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
String is null, cannot get its length.  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
^[[A^[[B  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
Hello  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: incompatible types: possible lossy conversion from double to int  
    int result = num1 + num2; System.out.println(result);  
                           ^  
1 error
```

result type should be double

The screenshot shows the VS Code interface with a dark theme. In the Explorer sidebar, there are two editors open: 'Main.java' and 'Main.class'. The 'Main.java' editor contains the following Java code:

```
1 public class Main {
2     public static void main(String[] args) {
3         int num1 = 10;
4         double num2 = 5.5;
5         double result = num1 + num2; System.out.println(result);
6     }
7 //javac Main.java
8 //java Main
```

The terminal tab is active, showing the following terminal output:

```
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A^[[B
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Hello
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:5: error: incompatible types: possible lossy conversion from double to int
    int result = num1 + num2; System.out.println(result);
                           ^
1 error
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A^[[B
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
15.5
```

16 error

The screenshot shows the VS Code interface with a dark theme. In the Explorer sidebar, there are two editors open: 'Main.java' and 'Main.class'. The 'Main.java' editor contains the following Java code:

```
1 public class Main {
2     public static void main(String[] args) {
3         int num = 10;
4         double result = num / 4; System.out.println(result);
5     }
6 //javac Main.java
7 //java Main
```

The terminal tab is active, showing the following terminal output:

```
Main.java:5: error: incompatible types: possible lossy conversion from double to int
    int result = num1 + num2; System.out.println(result);
                           ^
1 error
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A^[[B
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
15.5
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:5: error: reached end of file while parsing
    ^
1 error
```

integer value is stored in double so we have to type cast it to double

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files Main.java and Main.class under OPEN EDITORS, and Main.class under JAVA.
- MAIN EDITOR**: Displays Java code for Main.java:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int num = 10;  
4         double result = (double)num / 4; System.out.println(result);  
5     }  
6 //javac Main.java  
7 //java Main
```
- TERMINAL**: Shows terminal output from the command line:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: reached end of file while parsing  
}^  
1 error  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: reached end of file while parsing  
}^  
1 error  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
2.5
```

17

error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files Main.java and Main.class under OPEN EDITORS, and Main.class under JAVA.
- MAIN EDITOR**: Displays Java code for Main.java:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int a = 10;  
4         int b = 5;  
5         int result = a ** b; System.out.println(result);  
6     }  
7 //javac Main.java  
8 //java Main
```
- TERMINAL**: Shows terminal output from the command line:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: reached end of file while parsing  
}^  
1 error  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
2.5  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: illegal start of expression  
    int result = a ** b; System.out.println(result);  
1 error
```

** operator is not there in java insted use pow function

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files Main.java and Main.class under OPEN EDITORS and JAVA.
- EDITOR**: Displays the Main.java file content:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int a = 10;  
4         int b = 5;  
5         int result = (int) Math.pow(a, b);  
6         System.out.println(result);  
7     }  
8 }  
9  
10 //javac Main.java  
11 //java Main
```
- TERMINAL**: Shows terminal output:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
2.5  
④ (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: illegal start of expression  
    int result = a ** b; System.out.println(result);  
           ^  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
^[[A  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
100000
```

18 no error

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files Main.java and Main.class under OPEN EDITORS and JAVA.
- EDITOR**: Displays the Main.java file content:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int a = 10;  
4         int b = 5;  
5         int result = a + b * 2; System.out.println(result);  
6     } }  
7  
8 //javac Main.java  
9 //java Main
```
- TERMINAL**: Shows terminal output:

```
④ (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:5: error: illegal start of expression  
    int result = a ** b; System.out.println(result);  
           ^  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
^[[A  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
100000  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
20
```

19 error

The screenshot shows a Java application running in a terminal window. The code in Main.java divides 10 by 0, which results in an ArithmeticException.

```
public class Main {
    public static void main(String[] args) {
        int a = 10;
        int b = 0;
        int result = a / b; System.out.println(result);
    }
}

//javac Main.java
//java Main
```

Terminal Output:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
100000
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
20
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Exception in thread "main" java.lang.ArithmeticException: / by zero
at Main.main(Main.java:5)
```

denominator can't be zero

The screenshot shows a Java application running in a terminal window. The code in Main.java divides 10 by 2, resulting in 5.

```
public class Main {
    public static void main(String[] args) {
        int a = 10;
        int b = 2;
        int result = a / b; System.out.println(result);
    }
}

//javac Main.java
//java Main
```

Terminal Output:

```
100000
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
20
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Exception in thread "main" java.lang.ArithmeticException: / by zero
at Main.main(Main.java:5)
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A^[[A
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
5
```

20 full stop was not mentioned.

EXPLORER OPEN EDITORS JAVA

Main.java Main.class

```
1 public class Main {  
2     public static void main(String[] args) {  
3         System.out.println("Hello, World");  
4     }  
5 }  
6 //javac Main.java  
7 //java Main
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

^[[A
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Exception in thread "main" java.lang.ArithmeticException: / by zero
at Main.main(Main.java:5)
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
^[[A^[[A
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
5
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:3: error: ';' expected
 System.out.println("Hello, World") ^
1 error

21 closing bracket was missing

EXPLORER OPEN EDITORS JAVA

Main.java Main.class

```
1 public class Main {  
2     public static void main(String[] args) {  
3         System.out.println("Hello, World!"); // Missing closing brace here  
4     }  
5 }  
6 //javac Main.java  
7 //java Main
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

^[[A^[[A
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
5
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:3: error: ';' expected
 System.out.println("Hello, World") ^
1 error
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:4: error: reached end of file while parsing
} ^
1 error

22 error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files Main.java and Main.class under OPEN EDITORS and JAVA.
- MAIN EDITOR**: File Main.java contains the following code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         static void displayMessage() { System.out.println("Message");  
4     }  
5 }  
6  
7 //javac Main.java  
8 //java Main
```
- TERMINAL**: Displays the output of the javac command, showing two errors:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:4: error: reached end of file while parsing  
}^  
1 error  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:3: error: illegal start of expression  
    static void displayMessage() { System.out.println("Message");  
    ^  
Main.java:5: error: class, interface, enum, or record expected  
}  
^  
2 errors
```

23 error

The screenshot shows the VS Code interface with the following details:

- EXPLORER** sidebar: Shows files Main.java and Main.class under OPEN EDITORS and JAVA.
- MAIN EDITOR**: File Main.java contains the following code:

```
0 case 2:  
1     System.out.println("Value is 2");  
2 case 3:  
3     System.out.println("Value is 3");  
4 default:  
5     System.out.println("Default case");  
6 }  
7 }  
8  
9  
10 //javac Main.java  
11 //java Main
```
- TERMINAL**: Displays the output of the javac command, showing one error:

```
cd "/Users/vaibhavhangale/Desktop/programing/java/" && javac main.java && java main  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java/"  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % cd "/Users/vaibhavhangale/Desktop/programing/java/" && ja  
vac main.java && java main  
main.java:1: error: class Confusion is public, should be declared in a file named Confusion.java  
public class Confusion {  
    ^  
1 error  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:1: error: class Confusion is public, should be declared in a file named Confusion.java  
public class Confusion {  
    ^  
1 error
```

add break statement or else all case will be run.

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files: Main.java, Main.class.
- EDITOR**: Shows Main.java code:

```
1 public class Main {
2     public static void main(String[] args) {
3         int value = 2; switch(value) {
4             case 1:
5                 System.out.println("Value is 1"); break;
6             case 2:
7                 System.out.println("Value is 2"); break;
8             case 3:
9                 System.out.println("Value is 3"); break;
10            default:
11                System.out.println("Default case");
12        }
13    }
14}
```
- TERMINAL**: Shows terminal output:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:1: error: class Confusion is public, should be declared in a file named Confusion.java
public class Confusion {
^
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:1: error: class Confusion is public, should be declared in a file named Confusion.java
public class Confusion {
^
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Value is 2
```

24 no error

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows files: Main.java, Main.class.
- EDITOR**: Shows Main.java code:

```
1 public class Main {
2     public static void main(String[] args) {
3         int level = 1; switch(level) {
4             case 1: System.out.println("Level 1");
5             case 2: System.out.println("Level 2");
6             case 3: System.out.println("Level 3");
7             default:
8                 System.out.println("Unknown level");
9         }
10    }
11
12 //javac Main.java
13 //java Main
```
- TERMINAL**: Shows terminal output:

```
Value is 2
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:1: error: class MissingBreakCase is public, should be declared in a file named MissingBreakCase.java
a
public class MissingBreakCase {
^
1 error
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Level 1
Level 2
Level 3
Unknown level
```

25

switch case is in int

The screenshot shows a Java file named Main.java in the editor. The code contains a switch statement with cases for 100 and 85. The terminal below shows compilation errors due to incompatible type conversions from double to int.

```
1 public class Main {
2     public static void main(String[] args) {
3         int score = 85; switch(score) {
4             case 100:
5                 System.out.println("Perfect score!"); break;
6             case 85:
7                 System.out.println("Great job!"); break;
8             default:
9                 System.out.println("Keep trying!");
10            } }
11        }
12    }
13 //javac Main.java
14 //java Main
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
✖ (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:3: error: incompatible types: possible lossy conversion from double to int
    int score = 85.0; switch(score) {
                           ^
1 error
✖ (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:3: error: incompatible types: possible lossy conversion from double to int
    int score = 85.0; switch(score) {
                           ^
1 error
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main
Great job!
```

26 two case cant be same

The screenshot shows a Java file named Main.java in the editor. The code contains a switch statement with cases for 5 and 5. The terminal below shows compilation errors due to duplicate case labels.

```
1 public class Switch {
2     public static void main(String[] args) {
3         int number = 5; switch(number) {
4             case 5:
5                 System.out.println("Number is 5");
6                 break;
7             case 5:
8                 System.out.println("This is another case 5");
9                 break;
10            | default:
11                System.out.println("This is the default case");
12            } }
13        }
14 //javac Main.java
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
^
Main.java:6: error: duplicate case label
    break; case 5:
^
2 errors
✖ (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java
Main.java:1: error: class Switch is public, should be declared in a file named Switch.java
public class Switch {
^
Main.java:7: error: duplicate case label
    case 5:
^
2 errors
```

The screenshot shows a Java development environment with the following details:

- EXPLORER** sidebar: Shows **OPEN EDITORS** with **Main.java** and **Main.class**, and **JAVA** with **J Main.class** and **J Main.java**.
- MAIN EDITOR**: **Main.java** file open, displaying the following code:

```
1 public class Main{  
2     public static void main(String[] args) {  
3         int number = 5;  
4         switch(number) {  
5             case 1:  
6                 System.out.println("Number is 5");  
7                 break;  
8             case 5:  
9                 System.out.println("This is another case 5");  
10                break;  
11            default:  
12                System.out.println("This is the default case");  
13            }  
14        }
```
- TERMINAL**: Shows the command-line output:

```
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:1: error: class Switch is public, should be declared in a file named Switch.java  
public class Switch {  
^  
1 error  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
Main.java:1: error: class Switch is public, should be declared in a file named Switch.java  
public class Switch {  
^  
1 error  
(base) vaibhavhangale@VAIBHAVs-MacBook-Air java % javac Main.java  
● (base) vaibhavhangale@VAIBHAVs-MacBook-Air java % java Main  
This is another case 5
```