

Snippet 1.

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

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2>java Main

Error: Main method is not static in class Main, please define the main method as:

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

Correct:

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

Output:

Hello, World!

Snippet 2

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

Error

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> 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

Correct :

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

Output:

Hello, World!

Snippet 3.

```
public class Main {  
    public static int main(String[] args) {  
        System.out.println("Hello, World!");  
        return 0;  
    }  
}
```

Error

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2>javac Main.java
Main.java Main.java:5: error: reached end of file while

parsing

```
}  
^
```

1 error

correct

```
public class Main {  
    public static int main(String[] args) {  
        System.out.println("Hello, World!");  
        return 0;  
    }  
}
```

output

Hello, World!

Snippet 4.

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

Error

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2>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

correct

```
public class Main {  
    public static void main(String[] arg) {  
        System.out.println("Hello, World!");  
    }  
}
```

Output:

Hello, World!

Snippet 5.

```
public class Main {  
  
    public static void main(String[] args) {  
  
        System.out.println("Main method with String[] args");  
  
    }  
  
    public static void main(int[] args) {  
  
        System.out.println("Overloaded main method with int[] args");  
  
    }  
}
```

Error:

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2>javac Main.java
```

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> java Main  
Main method with String[] args
```

Correct:

```
public class Main {  
  
    public static void main(String[] args) {  
  
        System.out.println("Main method with String[] args");  
  
        int[] intArgs = {1, 2, 3};  
  
        main(intArgs);  
  
    }  
  
    public static void main(int[] args) {  
  
        System.out.println("Overloaded main method with int[] args");  
  
    }  
}
```

Output:

Main method with String[] args

Overloaded main method with int[] args

The JVM always calls main(String[] args) first when running the program.

The overloaded main(int[] args) method does not execute automatically.

You must call the overloaded main(int[] args) manually inside main(String[] args).

Snippet 6.

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

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:3: error: cannot find symbol

int x = y + 10;

^

symbol: variable y

location: class Main

1 error

Correct:

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

output

11

Snippet 7.

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

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:3: error: incompatible types: String cannot be converted to int

```
int x = "Hello";
```

^

1 error

Correct:

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

Output:

Hello

Snippet 8.

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

Error:

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java  
Main.java:3: error: ')' expected
```

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

^

1 error

Correct:

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

Output:

Hello, World!

Snippet 9.

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

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:3: error: not a statement

```
int class = 10;
```

^

Main.java:3: error: ';' expected

```
int class = 10;
```

^

Main.java:3: error: <identifier> expected

```
int classn = 10;
```

^

Main.java:4: error: <identifier> expected

```
System.out.println(class);
```

^

Main.java:4: error: illegal start of type

```
System.out.println(class);
```

^

Main.java:4: error: <identifier> expected

```
System.out.println(class);
```

^

Main.java:6: error: reached end of file while parsing

```
}
```

```
^
```

7 errors

Correct:

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

Output:

10

Snippet 10.

```
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);  
    }  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:9: error: non-static method display() cannot be referenced from a static context

display();

^

Main.java:10: error: non-static method display(int) cannot be referenced from a static context

display(5);

^

2 errors

Correct:

```
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) {

    Main obj = new Main();

    obj.display();
    obj.display(5);    }
}

```

Output:

No parameters
 With parameter: 5

Snippet 11.

```

public class Main {
    public static void main(String[] args) {

```

```
int[] arr = {1, 2, 3};  
System.out.println(arr[5]);  
  
}  
  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> java Main

Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 5 out of bounds for length 3

at Main.main(Main.java:4)

correct:

```
public class Main {  
  
    public static void main(String[] args) {  
  
        int[] arr = {1, 2, 3, 4, 5, 6};  
        System.out.println(arr[5]);  
  
    }  
  
}
```

Snippet 12.

```
public class Main {  
  
    public static void main(String[] args) {  
  
        while (true) {  
  
            System.out.println("Infinite Loop");  
  
        }  
  
    }  
  
}
```

```
}
```

Output:

Infinite Loop

Infinite Loop

Infinite Loop

Infinite Loop

Infinite Loop

...

Correct:

```
public class Main {  
    public static void main(String[] args) {  
        int count = 0;  
  
        while (count < 5) {  
            System.out.println("Loop iteration: " + count);  
            count++;    }  
        }  
    }  
}
```

Snippet 13.

```
public class Main {  
    public static void main(String[] args) {  
        String str = null;  
        System.out.println(str.length());  
    }  
}
```

Error

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> java Main
Exception in thread "main" java.lang.NullPointerException
    at Main.main(Main.java:4)
```

Correct:

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

Snippet 14.

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

Error:

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java
```

Main.java:3: error: incompatible types: String cannot be converted to double

```
double num = "Hello";
```

^

1 error

```
public class Main {
    public static void main(String[] args) {
```



```
String num = "Hello";  
System.out.println(num);  
}  
}
```

Output:

Hello

Snippet 15

```
public class Main {  
    public static void main(String[] args) {  
        int num1 = 10;  
        double num2 = 5.5;  
        int result = num1 + num2;  
        System.out.println(result);  
    }  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:5: error: incompatible types: possible lossy conversion from double to int

```
int result = num1 + num2;
```

^

1 error

Correct:

```
public class Main {  
    public static void main(String[] args) {  
        int num1 = 10;  
        double num2 = 5.5;
```

```
double result = num1 + num2;  
  
System.out.println(result);  
  
}  
}
```

Output:

15.5

Snippet 16.

```
public class Main {  
    public static void main(String[] args) {  
        int num = 10;  
        double result = num / 4;  
        System.out.println(result);  
    }  
}
```

Error:

output 2 but
actual Answer is 2.5

Correct:

```
public class Main {  
    public static void main(String[] args) {  
        int num = 10;  
        double result =(double) num / 4;  
        System.out.println(result);  
    }  
}
```

Output:

2.5

Snippet 17

```
public class Main {  
    public static void main(String[] args) {  
        int a = 10;  
        int b = 5;  
        int result = a ** b;  
        System.out.println(result);  
    }  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:5: error: illegal start of expression

```
int result = a ** b;  
               ^
```

1 error

//correct

```
public class Main {  
    public static void main(String[] args) {  
        int a = 10;  
        int b = 5;  
        int result = Math.pow(a,b);  
        System.out.println(result);  
    }  
}
```

Output:

100000

Snippet 18.

```
public class Main {  
    public static void main(String[] args) {  
        int a = 10;  
        int b = 5;  
        int result = a + b * 2;  
        System.out.println(result);  
    }  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> java Main
20

Correct:

Multiplication (*), division (/), and modulus (%) have higher precedence than addition (+) and subtraction (-).

Snippet 19.

```
public class Main {  
    public static void main(String[] args) {  
        int a = 10;  
        int b = 0;
```

```
int result = a / b;  
  
System.out.println(result);  
  
}  
  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> java Main

Exception in thread "main" java.lang.ArithmeticException: / by zero
at Main.main(Main.java:5)

integer division by zero is not allowed, which causes an ArithmeticException at runtime.

Correct:

```
public class Main {  
  
    public static void main(String[] args) {  
  
        int a = 10;  
  
        double b = 0.0;  
  
        double result = a / b;  
  
        System.out.println(result);  
  
    }  
  
}
```

Output:

Infinity

Snippet 20.

```
public class Main {  
  
    public static void main(String[] args) {  
  
        System.out.println("Hello, World")  
  
    }  
  
}
```

```
}
```

Error:

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java
```

```
Main.java:3: error: ';' expected
```

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

```
^
```

```
1 error
```

Correct:

```
public class Main {
```

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

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

```
    }
```

```
}
```

Output:

```
Hello, World
```

Snippet 21.

```
public class Main {
```

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

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

```
        // Missing closing brace here
```

```
    }
```

Error:

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java
```

```
Main.java:5: error: reached end of file while parsing
```

```
}
```

```
^
```

1 error

Correct:

```
public class Main {  
    public static void main(String[] args) {  
        System.out.println("Hello, World!");  
        // Missing closing brace here  
    }  
}
```

Output:

Hello, World

Snippet 22.

```
public class Main {  
    public static void main(String[] args) {  
        static void displayMessage() {  
            System.out.println("Message");  
        }  
    }  
}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java
Main.java:3: error: illegal start of expression

```
    static void displayMessage() {
```

^

Main.java:7: error: class, interface, or enum expected

```
    }
```

^

2 errors

Correct:

```
public class Main {  
  
    static void displayMessage() {  
        System.out.println("Message");  
    }  
  
    public static void main(String[] args) {  
        displayMessage();  
    }  
}
```

Output:

Message

Snippet 23.

```
public class Main {  
  
    public static void main(String[] args) {  
  
        int value = 2;  
  
        switch(value) {  
  
            case 1:  
  
                System.out.println("Value is 1");  
  
            case 2:  
  
                System.out.println("Value is 2");  
  
            case 3:  
  
                System.out.println("Value is 3");  
  
            default:  
  
                System.out.println("Default case");  
  
        }  
    }  
}
```



```
}  
}  
}
```

Error:

There should be Add break statement in all case

Correct:

```
public class Main {  
    public static void main(String[] args) {  
        int value = 2;  
        switch(value) {  
            case 1:  
                System.out.println("Value is 1");  
                break;  
            case 2:  
                System.out.println("Value is 2");  
                break;  
            case 3:  
                System.out.println("Value is 3");  
                break;  
            default:  
                System.out.println("Default case");  
        }  
    }  
}
```

Output:

Value is 2

Snippet 24.

```
public class Main {  
    public static void main(String[] args) {  
        int level = 1;  
        switch(level) {  
            case 1:  
                System.out.println("Level 1");  
            case 2:  
                System.out.println("Level 2");  
            case 3:  
                System.out.println("Level 3");  
            default:  
                System.out.println("Unknown level");  
        }  
    }  
}
```

Error:

break statment should be add

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java
```

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> java Main
```

Level 1

Level 2

Level 3

Unknown level

Correct:

```
public class Main {
```

```
public static void main(String[] args) {  
    int level = 1;  
    switch(level) {  
        case 1:  
            System.out.println("Level 1");  
            break;  
        case 2:  
            System.out.println("Level 2");  
            break;  
        case 3:  
            System.out.println("Level 3");  
            break;  
        default:  
            System.out.println("Unknown level");  
    }  
}
```

Output:

Level 1

Snippet 25.

```
public class Main {  
    public static void main(String[] args) {  
        double score = 85.0;  
        switch(score) {  
            case 100:  
                System.out.println("Perfect score!");  
            }  
        }  
    }  
}
```

```
break;

case 85:

System.out.println("Great job!");

break;

default:

System.out.println("Keep trying!");

}

}

}
```

Error:

C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java

Main.java:4: error: incompatible types: possible lossy conversion from double to int

```
switch(score) {
```

```
    ^
```

1 error

double values are not valid case labels, causing the compilation error.

Correct:

```
public class Main {

    public static void main(String[] args) {

        int score = 85;

        switch(score) {

        case 100:

            System.out.println("Perfect score!");

            break;
```

case 85:

```
System.out.println("Great job!");
```

```
break;
```

default:

```
System.out.println("Keep trying!");
```

```
}
```

```
}
```

```
}
```

Output:

Great job!

Snippet 26.

```
public class Main {
```

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

```
        int number = 5;
```

```
        switch(number) {
```

```
            case 5:
```

```
                System.out.println("Number is 5");
```

```
                break;
```

```
            case 5:
```

```
                System.out.println("This is another case 5");
```

```
                break;
```

```
            default:
```

```
                System.out.println("This is the default case");
```

```
        }
```

```
    }
```

```
}
```

Error:

```
C:\Users\Admin\OneDrive\Desktop\C_DAC\Assignment2> javac Main.java
Main.java:8: error: duplicate case label
```

```
case 5:
```

```
^
```

```
1 error
```

Correct:

```
public class Main {
    public static void main(String[] args) {
        int number = 5;
        switch(number) {
            case 4:
                System.out.println("Number is 5");
                break;
            case 5:
                System.out.println("This is another case 5");
                break;
            default:
                System.out.println("This is the default case");
        }
    }
}
```

Output:

```
This is another case 5
```