

Snippet 1

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

Error:

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

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

Correct code:

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

Ans: main method is not static

snippet 2 :

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

Error: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 code:

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

output:

Hello, World!

ANS:main method is not public

snippet 3:

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

Error:

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

```
}
```

^

1 error

Correct code:

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

Output:

Hello,World

ANS: missing brackets

snippet 4:

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

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 code:

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

Output:

Hello,World

ANS:There is no String args [] in code

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");
}
}

```

output:

Main method with String[] args

Snippet 6

```

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

```

Error

Main.java:3: error: cannot find symbol

```
int x = y + 10;
```

^

symbol: variable y

location: class Main

1 error

Correct output:

```

public class Main {
    public static void main(String[] args) {
        int y=5;
        int x = y + 10;
    }
}

```

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

```
}
```

```
}
```

output:15

ANS: y is not defined and initialised

Snippet 7

```
public class Main {
```

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

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

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

```
}
```

```
}
```

Error:

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

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

```
    ^
```

1 error

Correct code:

```
public class Main {
```

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

```
string x = "Hello";
```

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

```
}
```

```
}
```

output:

Hello

ANS:String is assign to int

Snippet 8

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

Error:

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

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

^

1 error

Correct code :

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

output:

Hello, World!

ANS:missing) in sop

Snippet 9

```
public class Main {
```

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

Error:

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 class = 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 code:

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

Output:10

ANS: keyword cannot be identifiers

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:

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 code:

```
public class Main {  
    public static void display() {  
        System.out.println("No parameters");  
    }  
    public static void display(int num) {  
        System.out.println("With parameter: " + num);  
    }  
    public static void main(String[] args) {  
        display();  
        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:

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

at Main.main(Main.java:4)

Correct code:

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

Output:3

ANS:array is of size 2 only

Snippet 12

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

Error: Infinite Loop(infinite time)

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

```
}  
}
```

Output: Infinite Loop(1 time)

ANS: no break in while loop

snippet 13

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

Error:

Exception in thread "main" java.lang.NullPointerException
 at Main.main(Main.java:4)

Correct code:

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

Output:4

ANS: becoz string is empty

Snippet 14

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

Error:

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

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

1 error

ANS: incompatible type that why we want either change data type of hello to string or change the value of num to double value

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:

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

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

1 error

Correct code:

```
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

ANS: we cannot change double to int i.e small datatype to big

Snippet 16

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

output:

2.0

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:

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

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

1 error

correct code:

```
public class Main {

public static void main(String[] args) {

int a = 10;

int b = 5;

int result = a * b;

System.out.println(result);

}

}
```

output:

50

ANS:expression is invalid

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);  
}  
}
```

output: 20

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:

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

Correct code:

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

```
}  
}
```

Output : 5

ANS:we cannot divide a number by zero

Snippet 20

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

Error:

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

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

1 error

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

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

1 error

Correct code:

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



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

output:

Hello, World

ANS:missing ;

Snippet 21

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

Error:

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

```
}  
^
```

1 error

correct code:

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

output:

Hello, World

ANS:missing }

Snippet 22

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

Error:

Main.java:3: error: illegal start of expression

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

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

```
}  
^
```

2 error

Snippet 23

```
public class Confusion {  
    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");
```

```
}
```

```
}
```

```
}
```

output:

Value is 2

Value is 3

Default case

Value is 3 is print after Value is 2 becoz there is no break; statement

Snippet 24

```
public class MissingBreakCase {
```

```
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");
```

```
}
```

```
}
```

```
}
```

output:

Level 1

Level 2

Level 3

Unknown level

Ans:

Break statement terminates the loop after excuting the while condition

Snippet 25

```
public class Switch {  
    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:

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

```
switch(score) {
```

```
    ^
```

1 error

Correct code:

```
public class Switch {  
    public static void main(String[] args) {  
        int 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!");  
        }  
    }  
}
```

Snippet 26

```
public class Switch {  
    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:

Switch.java:8: error: duplicate case label

case 5:

^

1 error

correct code:

```
public class Switch {
```

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

```
int number = 5;
```

```
switch(number) {
```

```
case 5:
```

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

```
break;
```

```
case 3:
```

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

```
break;
```

```
default:
```

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

```
}
```

```
}
```

```
}
```

output: Number is 5