

Task 1: Display the last digit of given number only the last before digit is even

```
import java.util.*;

public class Main
{
    public static void main(String[] args) {
        Scanner sc = new Scanner (System.in);

        int num = sc.nextInt();

        int dup;
        dup =num;

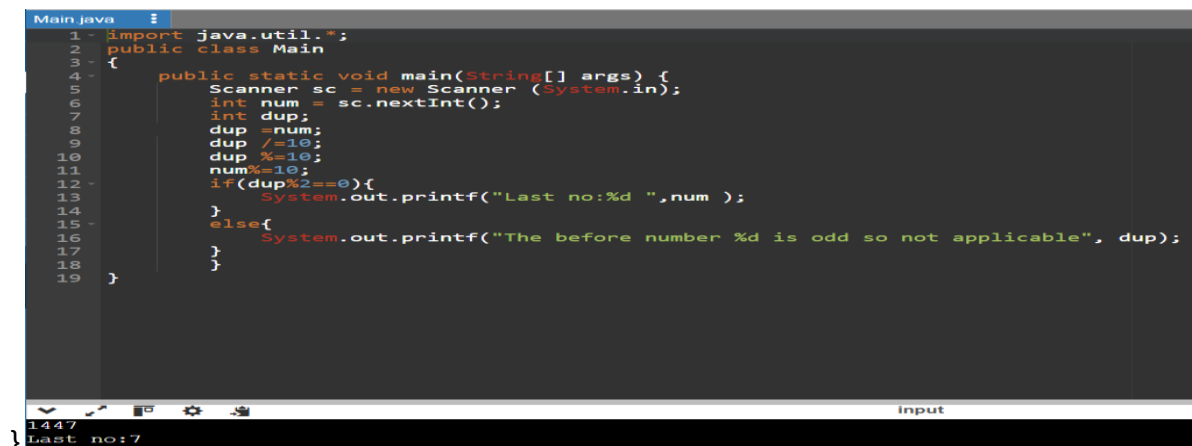
        dup /=10;

        dup %=10;

        num%=10;

        if(dup%2==0){
            System.out.printf("Last no:%d ",num );
        }

        else{
            System.out.printf("The before number %d is odd so not applicable",
dup);
        }
    }
}
```



The screenshot shows a Java IDE with a file named 'Main.java'. The code is as follows:

```
1 import java.util.*;
2 public class Main
3 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner (System.in);
6         int num = sc.nextInt();
7         int dup;
8         dup =num;
9         dup /=10;
10        dup %=10;
11        num%=10;
12        if(dup%2==0){
13            System.out.printf("Last no:%d ",num );
14        }
15        else{
16            System.out.printf("The before number %d is odd so not applicable", dup);
17        }
18    }
19 }
```

At the bottom, the 'Input' field contains '1447' and the output shows 'Last no:7'.

Task 2: How does this logic swap variables without a third variable? using ^ operator

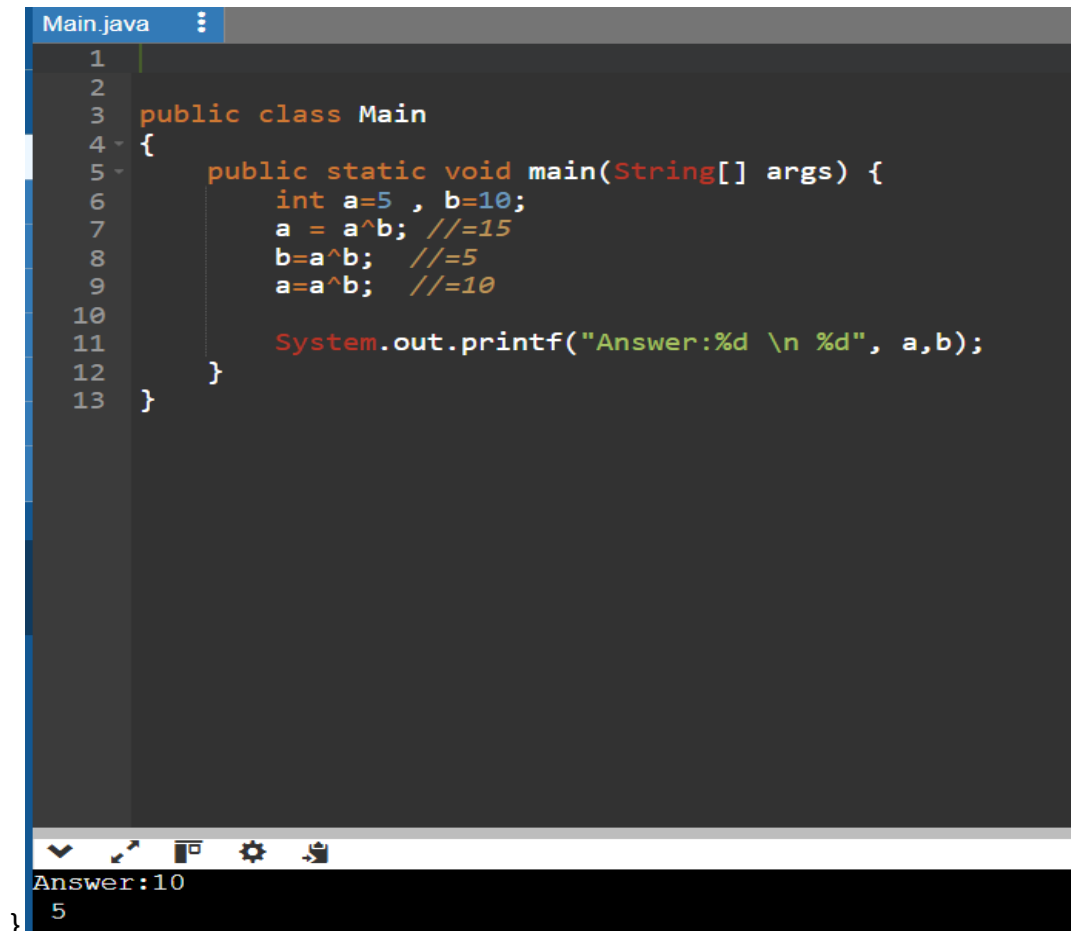
```
public class Main
{
    public static void main(String[] args) {
        int a=5 , b=10;

        a = a^b; //=15

        b=a^b; //=5

        a=a^b; //=10

        System.out.printf("Answer:%d \n %d", a,b);
    }
}
```

A screenshot of an IDE window titled 'Main.java'. The code is as follows:

```
1
2
3 public class Main
4 {
5     public static void main(String[] args) {
6         int a=5 , b=10;
7         a = a^b; //=15
8         b=a^b; //=5
9         a=a^b; //=10
10
11         System.out.printf("Answer:%d \n %d", a,b);
12     }
13 }
```

The IDE has a dark theme. At the bottom, there is a console window showing the output:

```
Answer:10
5
```

Task 3: Write a program where three integer variables a, b, and c are initialized using a single expression involving arithmetic operations. Print all three variables.

```
public class Main
```

```
{
```

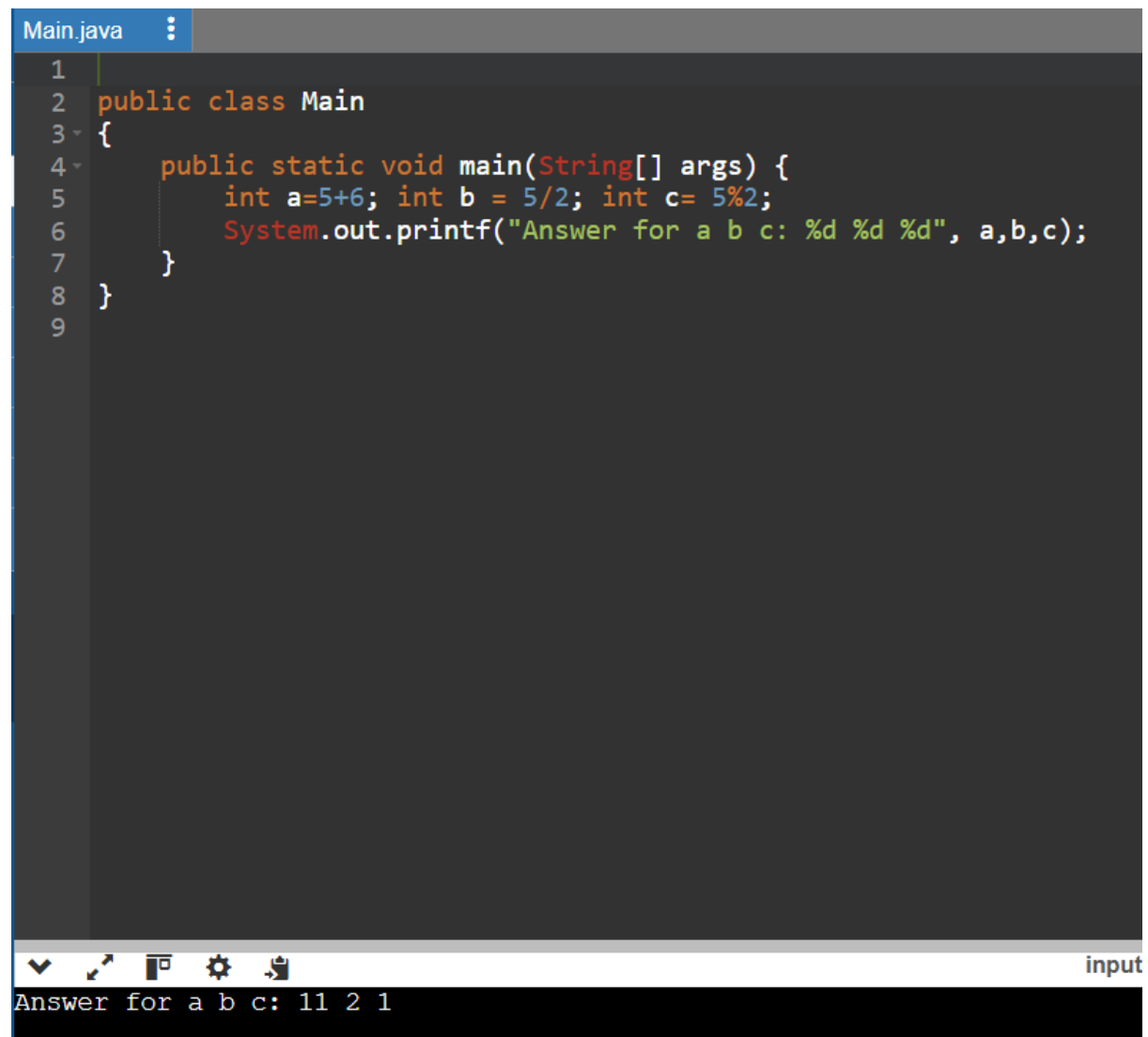
```
    public static void main(String[] args) {
```

```
        int a=5+6; int b = 5/2; int c= 5%2;
```

```
        System.out.printf("Answer for a b c: %d %d %d", a,b,c);
```

```
    }
```

```
}
```



The screenshot shows a Java IDE with a file named 'Main.java'. The code is as follows:

```
1  
2 public class Main  
3 {  
4     public static void main(String[] args) {  
5         int a=5+6; int b = 5/2; int c= 5%2;  
6         System.out.printf("Answer for a b c: %d %d %d", a,b,c);  
7     }  
8 }  
9
```

The output of the program is displayed in the console at the bottom: "Answer for a b c: 11 2 1".

Task 4: Given three variables a, b, c, use nested ternary (?:) operators to return which one is the largest without if-else

```
public class Main {  
  
    public static void main(String[] args) {  
  
        int a = 10, b = 20, c = 30;  
  
        String result = (a > b) ? "a is greater" : (c < b) ? "b is greater" : "c is greater";  
  
        System.out.println("Result: " + result);  
  
    }  
}
```

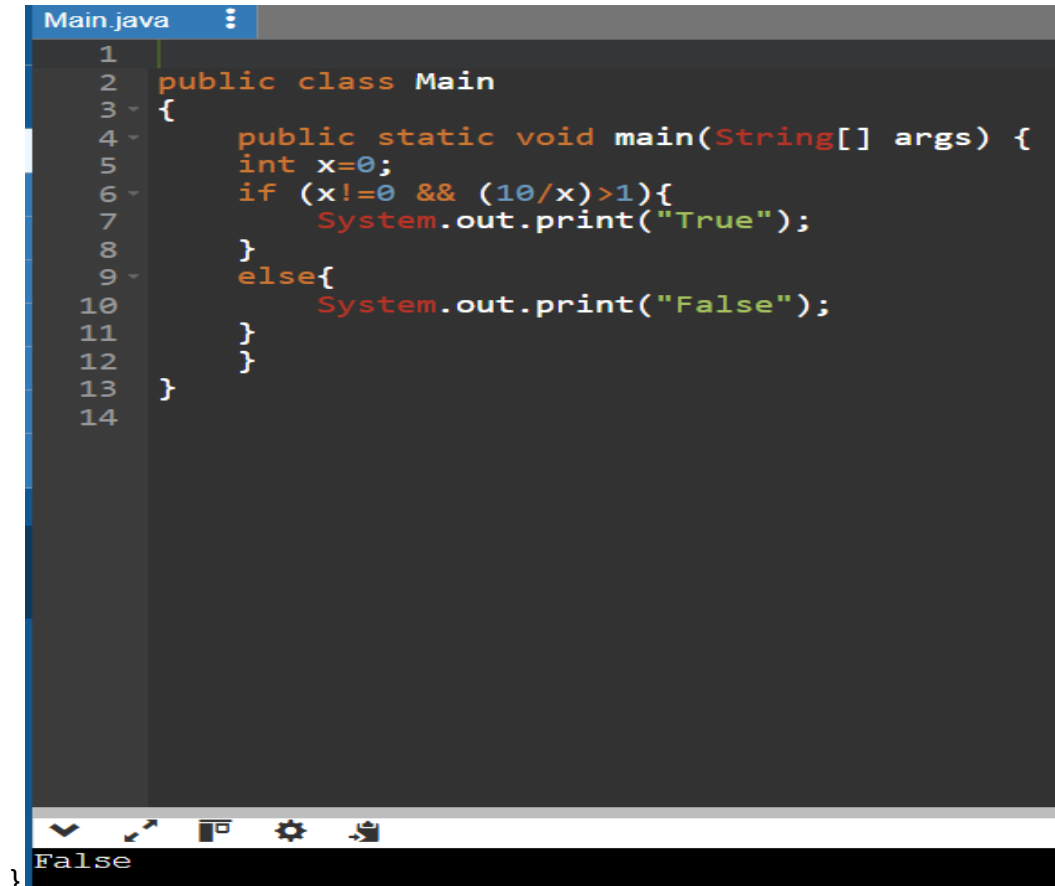
A screenshot of a Java IDE. The top part shows a code editor with the following Java code:

```
1 public class Main {  
2     public static void main(String[] args) {  
3         int a = 10, b = 20, c = 30;  
4  
5         String result = (a > b) ? "a is greater" : (c < b) ? "b is greater" : "c is greater";  
6  
7         System.out.println("Result: " + result);  
8     }  
9 }  
10
```

The bottom part of the screenshot shows the IDE's output window. It has a tab labeled 'input' and displays the text 'Result: c is greater'.

Task 5: Declare an integer x = 0. Write a condition using && inside an if where the second condition divides 10 by x. Explain the output.

```
public class Main
{
    public static void main(String[] args) {
        int x=0;
        if (x!=0 && (10/x)>1){
            System.out.print("True");
        }
        else{
            System.out.print("False");
        }
    }
}
```

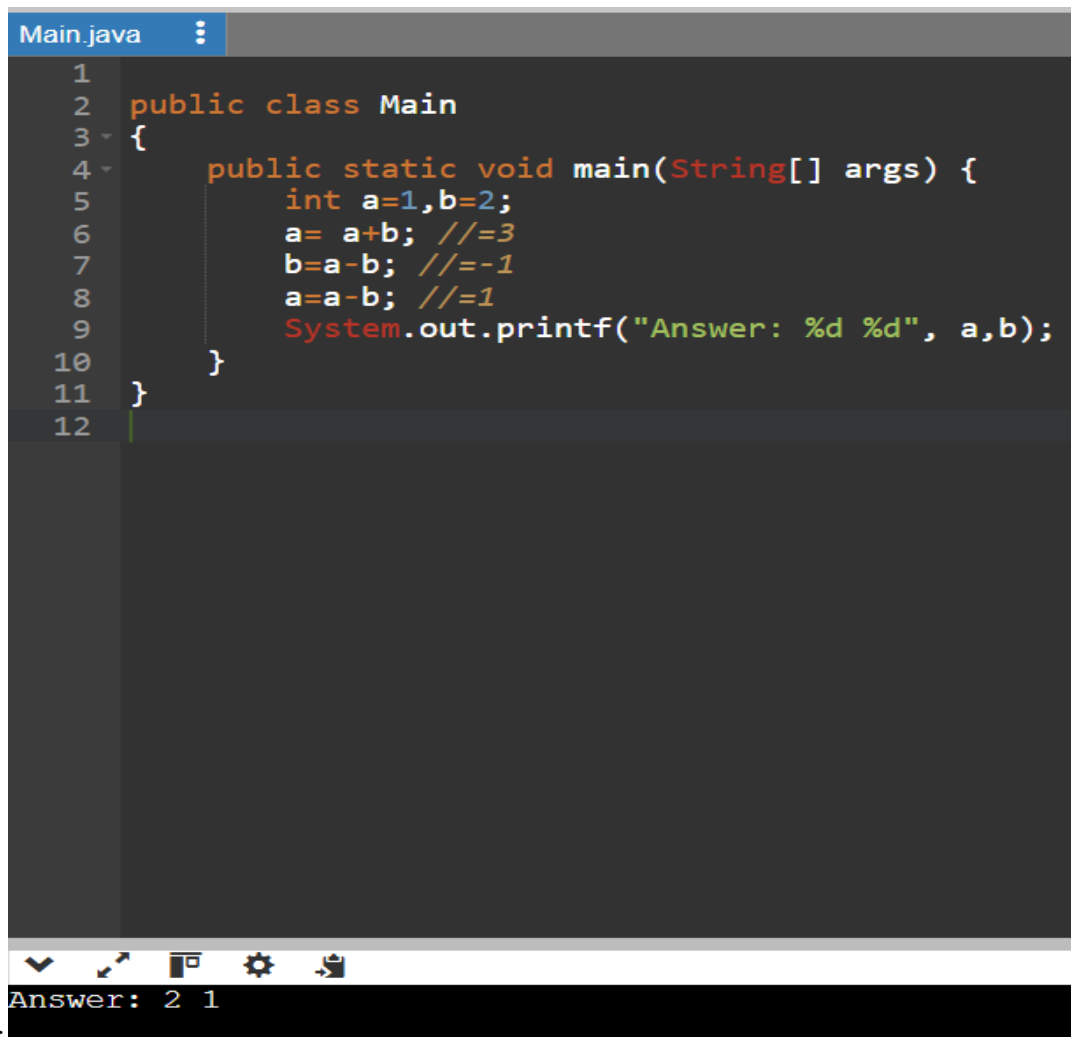
A screenshot of an IDE window titled 'Main.java'. The code is the same as the one above. The output at the bottom of the IDE shows 'False'.

```
1
2 public class Main
3 {
4     public static void main(String[] args) {
5         int x=0;
6         if (x!=0 && (10/x)>1){
7             System.out.print("True");
8         }
9         else{
10            System.out.print("False");
11        }
12    }
13 }
14
```

False

Task 6: Swap Two Numbers Without Third Variable

```
public class Main
{
    public static void main(String[] args) {
        int a=1,b=2;
        a= a+b; //=3
        b=a-b; //=-1
        a=a-b; //=1
        System.out.printf("Answer: %d %d", a,b);
    }
}
```



```
Main.java
1
2 public class Main
3 {
4     public static void main(String[] args) {
5         int a=1,b=2;
6         a= a+b; //=3
7         b=a-b; //=-1
8         a=a-b; //=1
9         System.out.printf("Answer: %d %d", a,b);
10    }
11 }
12
```

Answer: 2 1

Task 7: Convert Fahrenheit to Celsius (take fahrenheit as input)

```
import java.util.*;

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

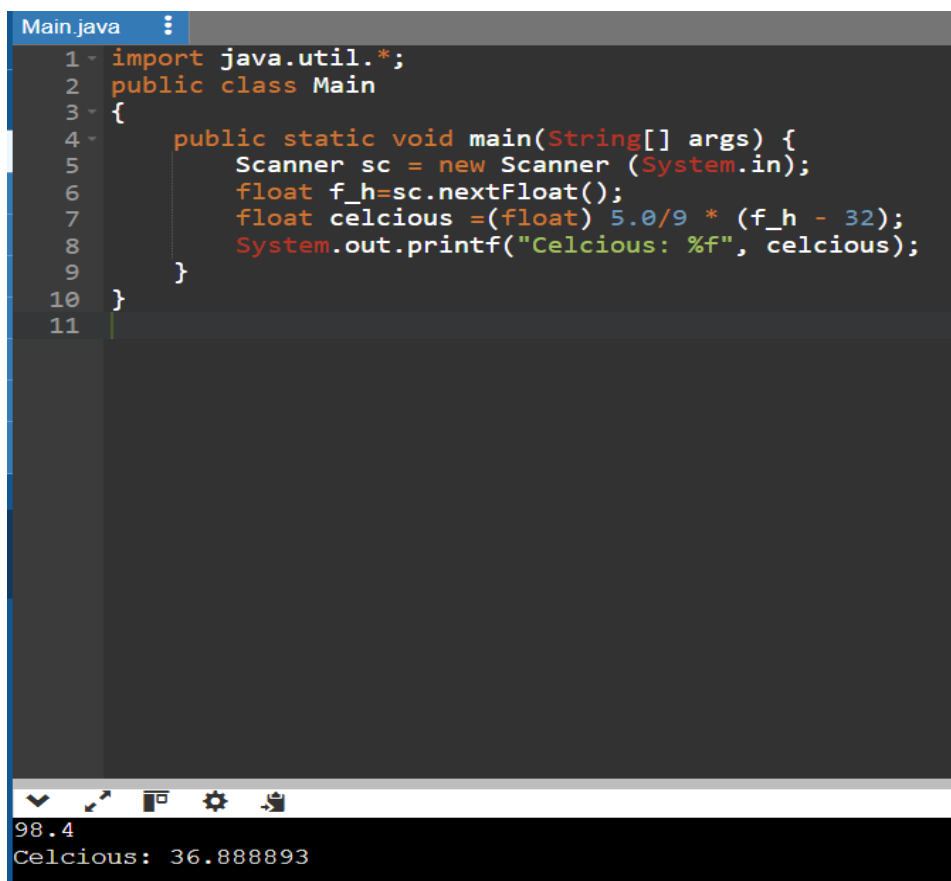
        Scanner sc = new Scanner (System.in);

        float f_h=sc.nextFloat();

        float celcious =(float) 5.0/9 * (f_h - 32);

        System.out.printf("Celcious: %f", celcious);

    }
```



The screenshot shows a Java IDE with a file named 'Main.java'. The code is as follows:

```
1 import java.util.*;
2 public class Main
3 {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner (System.in);
6         float f_h=sc.nextFloat();
7         float celcious =(float) 5.0/9 * (f_h - 32);
8         System.out.printf("Celcious: %f", celcious);
9     }
10 }
11
```

The output of the program is displayed at the bottom:

```
98.4
Celcious: 36.888893
```