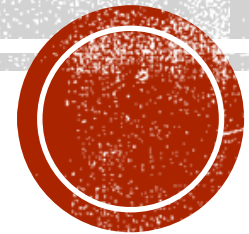


# Exercises

If, if...else



## EXERCISE 1:

Write a program that reads an integer number and prints its absolute value



# Solution 1-Exercise 1:

Write a program that reads an integer number and prints its absolute value

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int x, y;
6      cin>>x;
7      if(x>=0)
8          y=x;
9      else
10         y=-x;
11         cout<<"|x|="<<y;
12         return 0;
13 }
```

```
20
|x|=20
-----
Process exited after 11.22 seconds with return value 0
Press any key to continue . . .
```

```
-15
|x|=15
-----
Process exited after 2.92 seconds with return value 0
Press any key to continue . . .
```



## Solution 2-Exercise 1:

Write a program that reads an integer number and prints its absolute value

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int x;
6      cin>>x;
7      if(x>=0)
8          cout<<"|x|="<<x;
9      else
10         cout<<"|x|="<<-x;
11     return 0;
12 }
```

```
20
|x|=20
-----
Process exited after 11.22 seconds with return value 0
Press any key to continue . . .
```

```
-15
|x|=15
-----
Process exited after 2.92 seconds with return value 0
Press any key to continue . . .
```



## Exercise 2:

Write a program that reads two integer numbers and prints the maximum value



## SOLUTION 1-EXERCISE 2:

Write a program that reads two integer numbers and prints the maximum value

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int a,b;
6      cout<<"enter two integer numbers : ";
7      cin>>a>>b;
8      if ( a > b )
9          cout<< "the maximum value of "<< a << "and "<< b << " is = "<<a;
10     else
11         cout<< "the maximum value of "<< a << "and "<< b << " is = "<<b;
12     return 0;
13 }
```

```
enter two integer numbers : 3
10
the maximum value of 3and 10 is = 10
```

```
-----
Process exited after 7.36 seconds with return value 0
Press any key to continue . . .
```

```
enter two integer numbers : 20 5
the maximum value of 20and 5 is = 20
```

```
-----
Process exited after 8.959 seconds with return value 0
Press any key to continue . . .
```



## SOLUTION 2-EXERCISE 2:

Write a program that reads two integer numbers and prints the maximum value

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int a,b,max;
6      cout<<"enter two integer numbers : ";
7      cin>>a>>b;
8      if ( a > b )
9          max = a ;
10     else
11         max = b ;
12     cout<< "the maximum value of "<< a << "and "<< b << " is = "<<max;
13     return 0;
14 }
```

```
enter two integer numbers : 9 5      enter two integer numbers : 6 14
the maximum value of 9and 5 is = 9    the maximum value of 6and 14 is = 14
```



### Exercise 3:

write a program that reads two integer numbers A and B and prints “A is greater than B” or “A is smaller than B” or, “A is equal to B”





### SOLUTION 1-EXERCISE 3:

WRITE A PROGRAM THAT READS TWO INTEGER NUMBERS A AND B AND PRINTS "A IS GREATER THAN B" OR "A IS SMALLER THAN B" OR, "A IS EQUAL TO B"

```
1  #include <iostream>
2  using namespace std;
3  int main()
4  {
5      int A, B;
6      cin >> A >> B;
7      if (A>B)
8          cout << " A is greater than B";
9      if (A==B)
10         cout << " A is equal to B";
11      if (A< B)
12         cout << "A is smaller than B";
13     return 0;
14 }
```

```
10 3
A is greater than B
```

```
-5 9
A is smaller than B
```

```
4 4
A is equal to B
```



### SOLUTION 2-EXERCISE 3:

WRITE A PROGRAM THAT READS TWO INTEGER NUMBERS A AND B AND PRINTS “A IS GREATER THAN B” OR “A IS SMALLER THAN B” OR, “A IS EQUAL TO B”



### SOLUTION 2 -EXERCISE 3:

WRITE A PROGRAM THAT READS TWO INTEGER NUMBERS A AND B AND PRINTS “A IS GREATER THAN B” OR “A IS SMALLER THAN B” OR, “A IS EQUAL TO B”

```
1  #include <iostream>
2  using namespace std;
3  int main()
4  {
5      int A, B;
6      cin >> A >> B;
7      if (A>B)
8          cout << " A is greater than B";
9      else
10         if (A==B)
11             cout << " A is equal to B";
12         else
13             cout << "A is smaller than B";
14     return 0;
15 }
```



## EXERCISE 4

- Write a program that reads three integer values for the three variables A, B and C, and then make the following changes in the values of the variables A, B, C:
  - If  $A > B$  then swap the values of A and C
  - Otherwise, swap the values of B and C

At the end, the program should print the final values of A, B and C.



## EXERCISE 4

- Write a program that reads three integer values for the three variables A, B and C, and then make the following changes in the values of the variables A, B, C:
  - If  $A > B$  then swap the values of A and C
  - Otherwise, swap the values of B and C

At the end, the program should print the final values of A, B and C.



# SOLUTION-EXERCISE 4:

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int A,B,C,temp;
6      cout<<" enter the integer values of A and B and C respectively";
7      cin>>A>>B>>C;
8      if (A > B)
9      {
10         temp = A;
11         A=C;
12         C=temp;
13     }
14     else
15     {
16         temp = B ;
17         B = C;
18         C = temp ;
19     }
20     cout<<"A="<< A<< " , B="<<B<< " , C="<<C;
21     return 0;
22 }
```

Reads values for A,B,C

- If  $A > B$  then swap the values of A and C
- Otherwise, swap the values of B and C

```
enter the integer values of A and B and C respectively
10 3 5
A=5 , B=3, C=10
```



# SOLUTION-EXERCISE 4:

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int A,B,C,temp;
6      cout<<" enter the integer values of A and B and C respectively";
7      cin>>A>>B>>C;
8      if (A > B)
9      {
10         temp = A;
11         A=C;
12         C=temp;
13     }
14     else
15     {
16         temp = B ;
17         B = C;
18         C = temp ;
19     }
20     cout<<"A="<< A<< " , B="<<B<< " , C="<<C;
21     return 0;
22 }
```

Reads values for A,B,C

- If  $A > B$  then swap the values of A and C
- Otherwise, swap the values of B and C

```
enter the integer values of A and B and C respectively
```

```
3 8 16
```

```
A=3 , B=16, C=8
```

