# L7: Test 1 Questions

### Q1: If & Else

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## Find the output.

```
int p = 100;
if(p > 20) {
    if(p < 20) {
        printf("coding");
    }
} else {
    printf("ninjas");
}</pre>
```

# **Options**

This problem may have one or more correct answers

coding ninjas codingninjas No Output

Correct Answer: D

#### Q2: Order the code

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Write the correct order(s) of statements.

We want to print "Coding Ninjas" 10 times.

```
    while(x <= 10) {</li>
    int x = 1;
    x += 1;
    cout<<"Coding Ninjas"<<endl;</li>
    }
```

# **Options**

This problem may have one or more correct answers

Correct Answer : B , C

### Q3: Predict the output

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Figure out the output

```
int x = 10;
while(x >= 0) {
    x = x - 1;
    print(x);
    x--;
```

## **Options**

This problem may have one or more correct answers

97531 97531-1 10864 10987654321

Correct Answer: B

## Q4 : And/Or Operator

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Please select the correct statement(s) about && and || operators.

# **Options**

### This problem may have one or more correct answers

a && b is true if either a or b is true
(a || b) && c is true if c is true and either a or b is true
a && b is false if both a and b are true
a || b is true if either a or b is true

Correct Answer: B, D

# Q5 : Pyramid Number Pattern

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Print the following pattern for the given number of rows.

#### Pattern for N = 4

Input format : N (Total no. of rows) Output format : Pattern in N lines

Sample Input:

5

### Sample Output:

```
1
212
32123
4321234
543212345
   1. #include<iostream>
   2. using namespace std;
   3.
   4. int main(){
   5.
   6. // Write your code here
   7. int N;
   8.
         cin >> N;
   9.
         int i =1;
   10.
         while(i \le N){
   11.
            int space = 1;
   12.
            while(space <= N-i){
   13.
              cout << " ";
   14.
              space++;
   15.
   16.
            int num =i;
   17.
            while(num \geq 1){
   18.
              cout << num;
   19.
              num--;
   20.
   21.
           num =2;
   22.
           int k = 1;
   23.
          while(k \le i-1){
   24.
              cout << num;
   25.
              num++;
   26.
              k++;
   27.
            }
   28.
            cout<<endl;
   29.
   30.
           j++;
   31.
         }
   32.
   33. }
```

# **Q6: Number Star Pattern**

#### Send Feedback

Print the following pattern for a given number of rows.

#### Input format:

Line 1: N (Total number of rows)

### Sample Input:

# **Sample Output:**

```
1234554321
1234**4321
123****321
12*****21
1*****1
    1. #include<iostream>
    2. using namespace std;
    3. int main(){
    4.
    5. // Write your code here
    6. int N;
    7.
          cin >> N;
    8.
          int i =1;
    9.
          while(i \leq N){
    10.
            int j =1;
    11.
            while(j \leq N-i+1){
    12.
               cout << j;
    13.
               j++;
    14.
    15.
            int stars = 1;
    16.
            while(stars <= 2*(i-1)){
               cout << "*";
    17.
    18.
               stars ++;
    19.
    20.
            j = N-i+1;
    21.
            while(j \ge 1){
    22.
               cout << j;
    23.
               j--;
    24.
    25.
    26.
            cout << endl;
    27.
            j++;
    28.
        }
```

29. }

### Q7: Second Largest

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Take input a stream of n integer elements, find the second largest element present.

The given elements can contain duplicate elements as well. If only 0 or 1 element is given, the second largest should be INT\_MIN ( - 2^31).

```
Input format :
Line 1 : Total number of elements (n)
Line 2 : N elements (separated by space)
Sample Input 1:
4
3 9 0 9
Sample Output 1:
3
Sample Input 2 :
2
4 4
Sample Output 2:
-2147483648
Sample Output Explanation:
```

Since both the elements are equal here, hence second largest element is INT MIN i.e. (-2^31)

```
1. #include<iostream>
2. using namespace std;
3. #include <climits>
4. int main(){
5.
6.
      // Write your code here
7.
     int N;
8.
     long int min = -2147483648;
9.
     cin >> N;
10. int a[N+1];
11.
     for(int i =1; i \le N; i++){
12.
      cin >> a[i];
13.
    }
14. int fl = a[1];
15.
    int sl = min;
16.
    int count = 0;
17.
    if(N == 2 \&\& a[1] == a[2]){
18.
       cout << min;
19.
    }
20.
    else if(N == 0 || N == 1){
21.
    cout << min;
22.
23.
    else if(N \ge 2){
24.
          for (int i = 1; i <= N; i ++)
```

```
25.
26.
             if(a[i]> fl)
27.
28.
               sl = fl;
29.
              fl = a[i];
30.
              else if(a[i] > sl&&a[i]!=fl)//
31.
32.
33.
              sl = a[i];
34.
35.
36.
           }
cout<<sl;
37.
38.
39.
       }
40. }
```