

# **Assignment 2**

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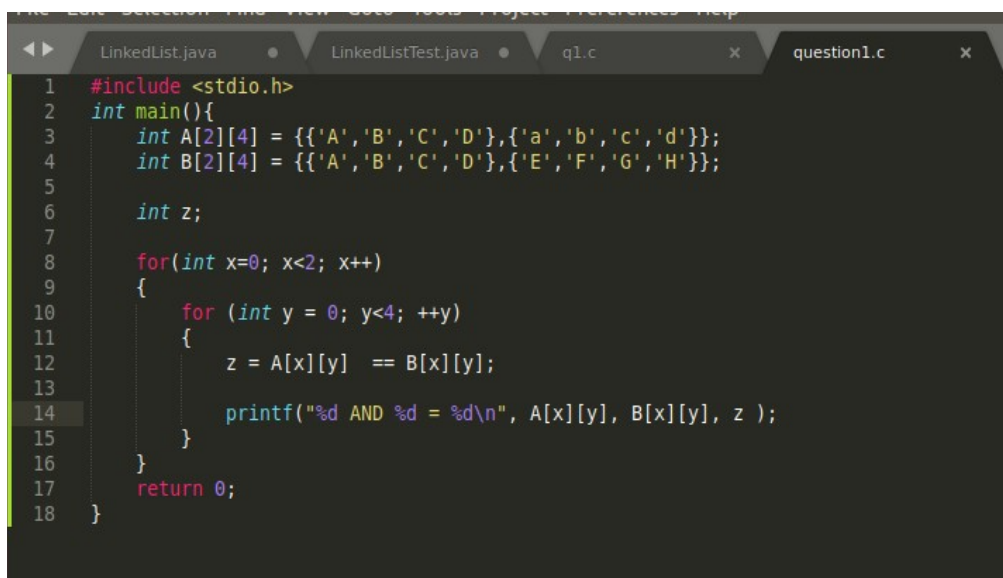
## Question (1)

WAP to check if the Characters(of the same address/position)of one Array A are exactly matching with those of the Array B.

Each 2-D Array is 2\*4 dimensional in nature shown as below:-A= {{ 'A', 'B', 'C', 'D' }, { 'a', 'b', 'c', 'd' }}; B= {{ 'A', 'B', 'C', 'D' }, { 'E', 'F', 'G', 'H' }}; Solve it by using For Loop.

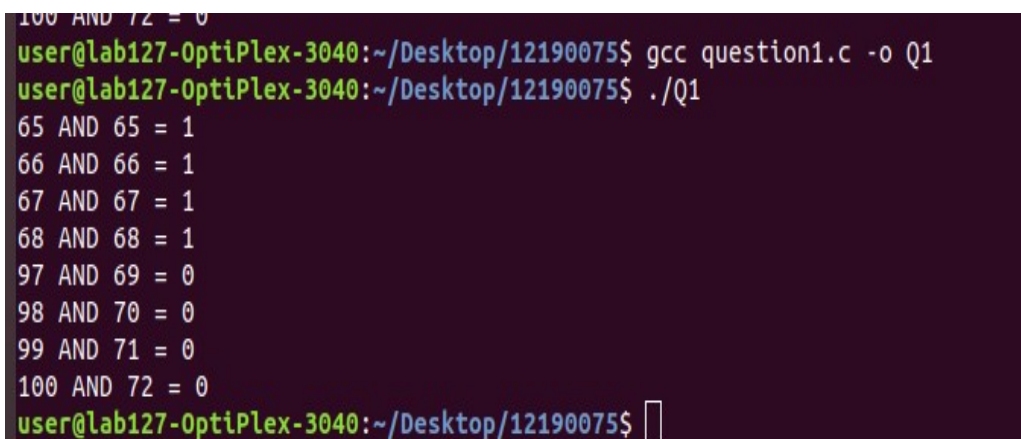
The Output should be: 1,1,1,1,0,0,0,0(vertically).

Answer:



```
1 #include <stdio.h>
2 int main(){
3     int A[2][4] = {{ 'A', 'B', 'C', 'D' }, { 'a', 'b', 'c', 'd' }};
4     int B[2][4] = {{ 'A', 'B', 'C', 'D' }, { 'E', 'F', 'G', 'H' }};
5
6     int z;
7
8     for(int x=0; x<2; x++)
9     {
10         for (int y = 0; y<4; ++y)
11         {
12             z = A[x][y] == B[x][y];
13
14             printf("%d AND %d = %d\n", A[x][y], B[x][y], z );
15         }
16     }
17     return 0;
18 }
```

Output:



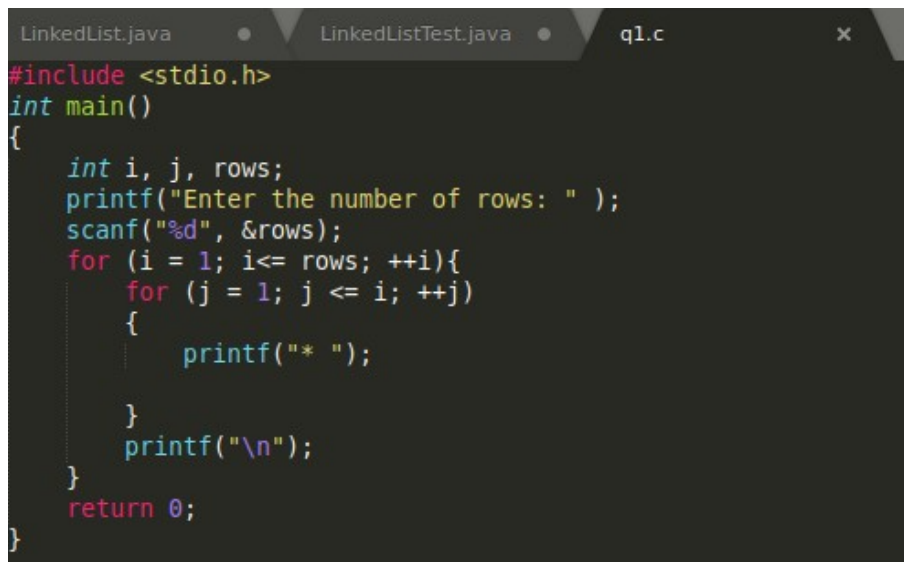
```
100 AND 72 = 0
user@lab127-OptiPlex-3040:~/Desktop/12190075$ gcc question1.c -o Q1
user@lab127-OptiPlex-3040:~/Desktop/12190075$ ./Q1
65 AND 65 = 1
66 AND 66 = 1
67 AND 67 = 1
68 AND 68 = 1
97 AND 69 = 0
98 AND 70 = 0
99 AND 71 = 0
100 AND 72 = 0
user@lab127-OptiPlex-3040:~/Desktop/12190075$
```

## Question (2)

WAP to print the following pattern by using For-Loop.

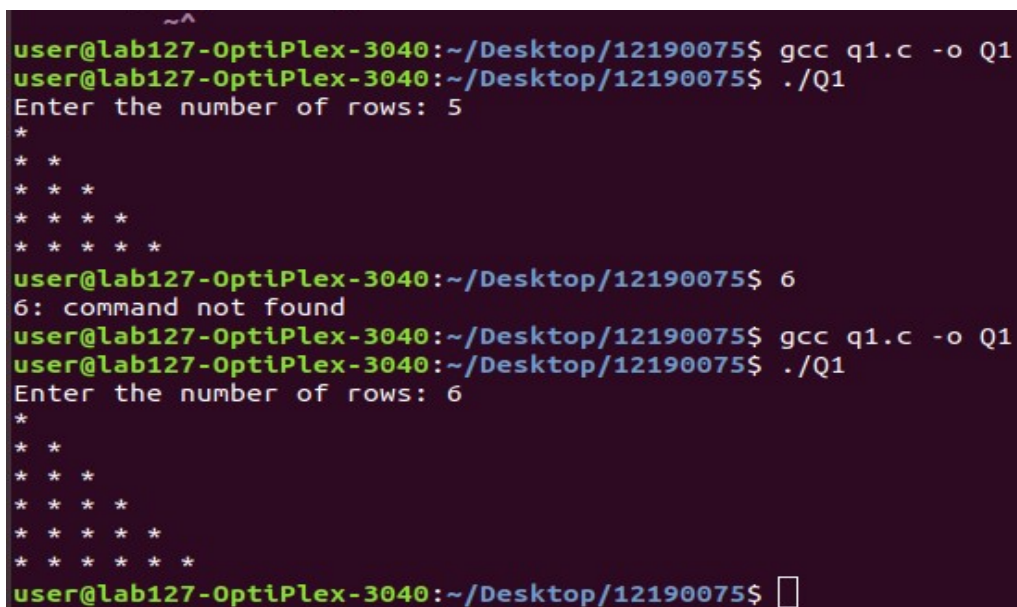
```
*
* *
* * *
* * * *
* * * * *
```

Answer:



```
LinkedList.java  •  LinkedListTest.java  •  q1.c  x
#include <stdio.h>
int main()
{
    int i, j, rows;
    printf("Enter the number of rows: " );
    scanf("%d", &rows);
    for (i = 1; i <= rows; ++i){
        for (j = 1; j <= i; ++j)
        {
            printf("* ");
        }
        printf("\n");
    }
    return 0;
}
```

Output:



```
user@lab127-OptiPlex-3040:~/Desktop/12190075$ gcc q1.c -o Q1
user@lab127-OptiPlex-3040:~/Desktop/12190075$ ./Q1
Enter the number of rows: 5
*
* *
* * *
* * * *
* * * * *
user@lab127-OptiPlex-3040:~/Desktop/12190075$ 6
6: command not found
user@lab127-OptiPlex-3040:~/Desktop/12190075$ gcc q1.c -o Q1
user@lab127-OptiPlex-3040:~/Desktop/12190075$ ./Q1
Enter the number of rows: 6
*
* *
* * *
* * * *
* * * * *
* * * * *
user@lab127-OptiPlex-3040:~/Desktop/12190075$ □
```

### Question (3)

WAP to print the following pattern by using For-Loop

```
0
0 1
0 1 2
0 1 2 3
0 1 2 3 4
```

Answer:

```
1  #include <stdio.h>
2  int main()
3  {
4      int i, j, rows;
5      printf("Enter the number of rows: ");
6      scanf("%d", &rows);
7      for (i = 0; i <= rows; ++i){
8          for (j = 0; j <= i; ++j)
9          {
10             printf("%d ", j);
11
12             }
13         printf("\n");
14     }
15     return 0;
16 }
```

Output:

```
user@lab127-OptiPlex-3040:~/Desktop/12190075$ gcc q1.c -o Q1
user@lab127-OptiPlex-3040:~/Desktop/12190075$ ./Q1
Enter the number of rows: 5
0
0 1
0 1 2
0 1 2 3
0 1 2 3 4
0 1 2 3 4 5
user@lab127-OptiPlex-3040:~/Desktop/12190075$ gcc q1.c -o Q1
user@lab127-OptiPlex-3040:~/Desktop/12190075$ ./Q1
Enter the number of rows: 4
0
0 1
0 1 2
0 1 2 3
0 1 2 3 4
user@lab127-OptiPlex-3040:~/Desktop/12190075$
```

#### Question (4)

WAP to print the following pattern by using For-Loop.

```
* * * * *
* * * *
* * *
* *
*
```

Answer:

```
1  #include <stdio.h>
2  int main()
3  {
4      int i, j;
5      int rows = 5;
6
7
8      for (i = rows; i >= 1; --i){
9          for (j = 1; j <= i; ++j)
10             {
11                 printf("* ");
12             }
13             printf("\n");
14         }
15         return 0;
16     }
17 }
```

```
* * * * *
* * * *
* * *
* *
*
[Finished in 0.1s]
```

Line 9, Column 33

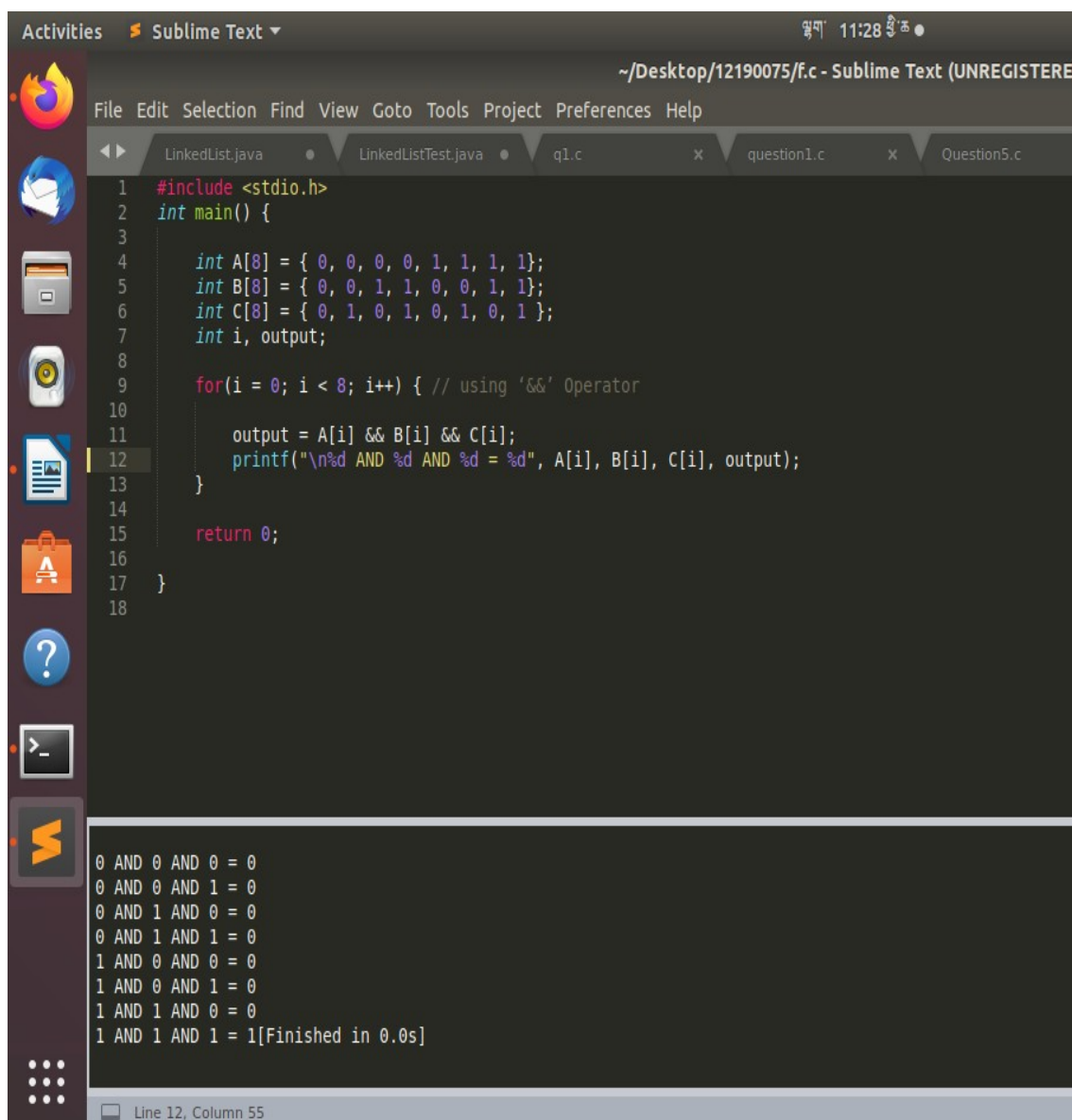
## Question (5)

WAP to find the output of the 1-D, 3-Input AND Gate. Each 1-D Array is a 1\*8dimensional in nature shown as below:-A = { 0, 0, 0, 0, 1, 1, 1, 1 }; B[] = { 0, 0, 1, 1, 0, 0, 1, 1 }; C[] = { 0, 1, 0, 1, 0, 1, 0, 1 };

Solve it by using For Loop.

The Output should be: 0, 0, 0, 0, 0, 0, 0, 1

Answer:



```
1 #include <stdio.h>
2 int main() {
3
4     int A[8] = { 0, 0, 0, 0, 1, 1, 1, 1};
5     int B[8] = { 0, 0, 1, 1, 0, 0, 1, 1};
6     int C[8] = { 0, 1, 0, 1, 0, 1, 0, 1 };
7     int i, output;
8
9     for(i = 0; i < 8; i++) { // using '&&' Operator
10
11         output = A[i] && B[i] && C[i];
12         printf("\n%d AND %d AND %d = %d", A[i], B[i], C[i], output);
13     }
14
15     return 0;
16 }
17
18
```

```
0 AND 0 AND 0 = 0
0 AND 0 AND 1 = 0
0 AND 1 AND 0 = 0
0 AND 1 AND 1 = 0
1 AND 0 AND 0 = 0
1 AND 0 AND 1 = 0
1 AND 1 AND 0 = 0
1 AND 1 AND 1 = 1[Finished in 0.0s]
```