

Lab Task # 5

Q1. Write a program that prints a 5x5 grid of alphabets (A to E in each row) using nested for loops.

Solution:

```
#include<iostream>
using namespace std;

int main() {
    int a;
    char n;
    for (a = 1; a <= 5; a++)
    {
        for (n = 'A'; n <= 'E'; n++)
        {
            cout << n;
        }
        cout << endl;
    }
    return 0;
}
```



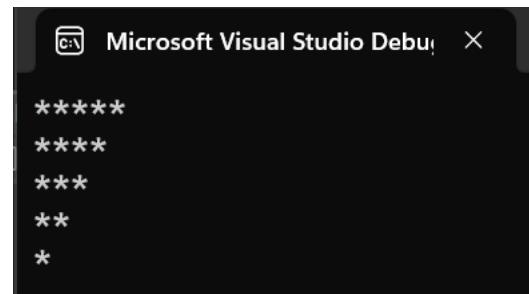
The screenshot shows the Microsoft Visual Studio Debug window. The title bar says "Microsoft Visual Studio Debug". The window displays the output of the program, which is a 5x5 grid of alphabets (A to E) in each row. The output is as follows:

```
ABCDE
ABCDE
ABCDE
ABCDE
ABCDE
```

Q2. Write a program that prints an inverted right triangle pattern of stars using nested for loops.

Solution:

```
#include<iostream>
using namespace std;
int main() {
    int s, t;
    for (s = 5; s >= 1; s--)
    {
        for (t = 1; t <= s; t++)
        {
            cout << "*";
        }
        cout << endl;
    }
    return 0;
}
```



The screenshot shows the Microsoft Visual Studio Debug window. The title bar says "Microsoft Visual Studio Debug". The content area displays an inverted right triangle pattern of stars, starting with five stars on the top line and decreasing by one star per line until there is only one star on the bottom line.

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

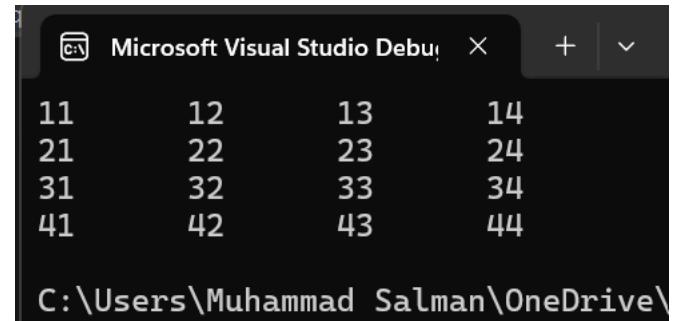
Q3. Write a program using nested for loops to display all possible two-digit combinations of numbers within the range 1 to 4.

Solution:

```
#include <iostream>

using namespace std;

int main() {
    for (int a = 1; a <= 4; a++)
    {
        for (int b = 1; b <= 4; b++)
        {
            cout << a << b << "\t";
        }
        cout << endl;
    }
    return 0;
}
```



The screenshot shows the Microsoft Visual Studio Debug window. The title bar says "Microsoft Visual Studio Debug". The output window displays the following text:

11	12	13	14
21	22	23	24
31	32	33	34
41	42	43	44

Below the table, the path "C:\Users\Muhammad Salman\OneDrive\" is visible.