

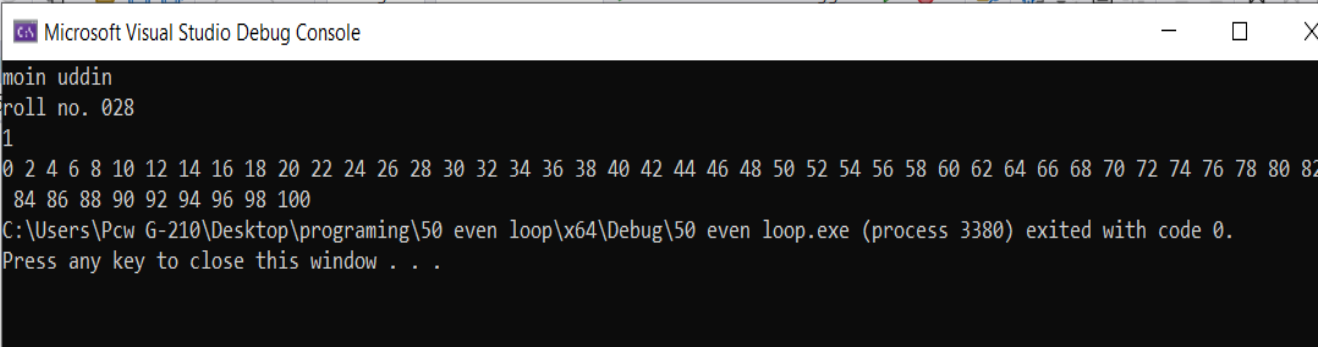
LAB TASK Lab Task 1:

1- Write a program to generate a series of first 50 even numbers.

Source code:

```
#include <iostream>
using namespace std;
int main()
{
    cout << "moin uddin" << endl;
    cout << "roll no. 028" << endl;
    int a;
    cin >> a;
    for (a = 0; a <=50; a++) {
        cout << a*2<<" ";
    }
    return 0;
}
```

Output:



```
Microsoft Visual Studio Debug Console
moin uddin
roll no. 028
1
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82
84 86 88 90 92 94 96 98 100
C:\Users\Pcw G-210\Desktop\programing\50 even loop\x64\Debug\50 even loop.exe (process 3380) exited with code 0.
Press any key to close this window . . .
```

Lab Task 2:

2- Write a program that generates a table of any number.

Source code:

```
#include <iostream>
#include <math.h>
using namespace std;
int main()
{
    cout << "moinuddin\n";
    cout << "roll no. 028\n";
    int num;
    int k;
    cout << "enter any number=";
    cin >> num;
    for (k = 1; k <= 10; ++k)
    {
        cout << num << "*" << k << "=" << (num * k) << endl;
    }

    return 0;
}
```

Output:



```
Microsoft Visual Studio Debug Console
enter any number2
2*1=2
2*2=4
2*3=6
2*4=8
2*5=10
2*6=12
2*7=14
2*8=16
2*9=18
2*10=20

C:\Users\Pcw G-210\Desktop\programing\table of no\x64\Debug\table of no.exe (process 3496) exited with code 0.
Press any key to close this window . . .
```

Lab Task 3:

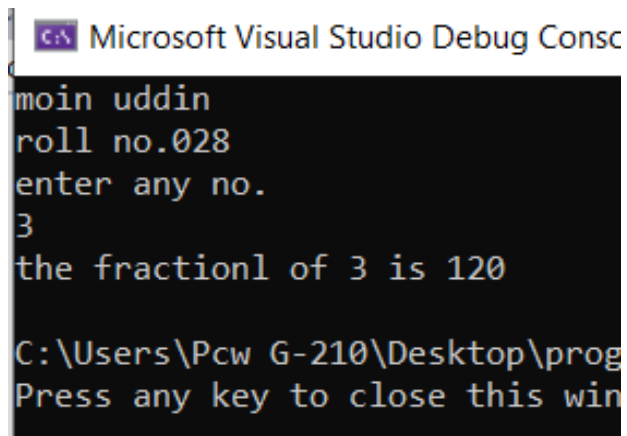
3- Write a program to calculate the factorial of any number.

Source code:

```
# include <iostream>
using namespace std;
int main() {
    cout << "moin uddin\n";
    cout << "roll no.028\n";
    int n, f = 1, i;
    cout << "enter any no.\n";
    cin >> n;
    for (i = 1; i <= 5; i++)
    {
        f=f*i;
    }
    cout << "the fractionl of " << n << " is " << f << endl;

    return 0;
}
```

Output:



Microsoft Visual Studio Debug Console

```
moin uddin
roll no.028
enter any no.
3
the fractionl of 3 is 120

C:\Users\Pcw G-210\Desktop\prog
Press any key to close this win
```

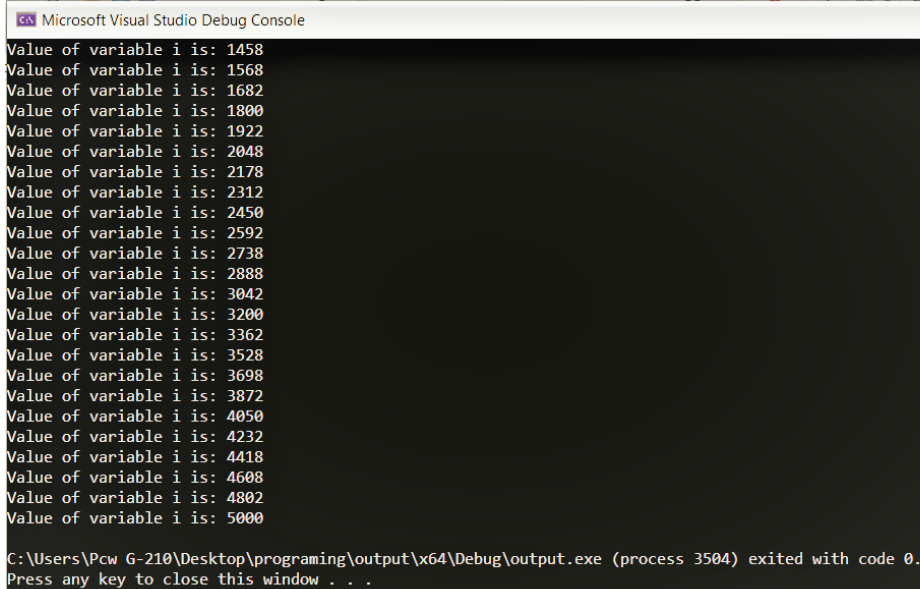
Lab Task 4:

4- what will the output of the following code.

Source code:

```
#include <iostream>
using namespace std;
int main()
{
    for (int i = 1; i <= 50; i++)
    {
        /* This statement would be executed
        * repeatedly until the condition
        * i<=50 returns false.
        */
        cout << "Value of variable i is: " << i - i + 2 * i * i << endl;
    }
    return 0;
}
```

Output:



```
Microsoft Visual Studio Debug Console
Value of variable i is: 1458
Value of variable i is: 1568
Value of variable i is: 1682
Value of variable i is: 1800
Value of variable i is: 1922
Value of variable i is: 2048
Value of variable i is: 2178
Value of variable i is: 2312
Value of variable i is: 2450
Value of variable i is: 2592
Value of variable i is: 2738
Value of variable i is: 2888
Value of variable i is: 3042
Value of variable i is: 3200
Value of variable i is: 3362
Value of variable i is: 3528
Value of variable i is: 3698
Value of variable i is: 3872
Value of variable i is: 4050
Value of variable i is: 4232
Value of variable i is: 4418
Value of variable i is: 4608
Value of variable i is: 4802
Value of variable i is: 5000
C:\Users\Pcw G-210\Desktop\programing\output\x64\Debug\output.exe (process 3504) exited with code 0.
Press any key to close this window . . .
```

Lab Task 5:

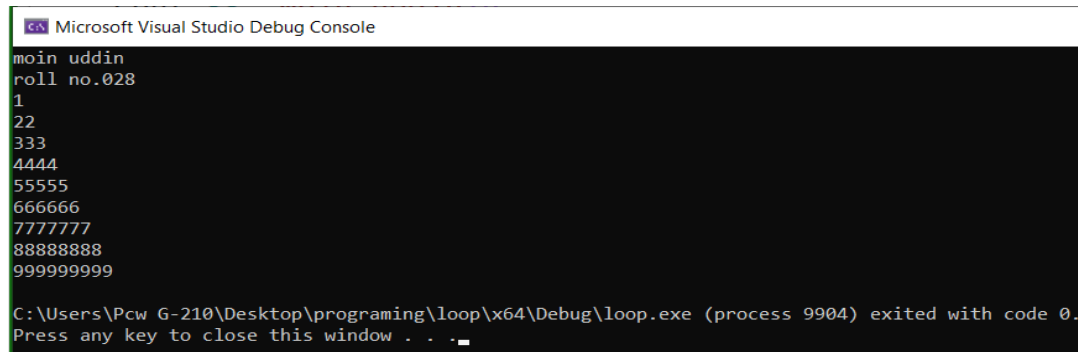
5- Write a program that prints given structure as output.

Source code:

```
#include<iostream>
using namespace std;
int main() {
    cout << "moin uddin\n";
    cout << "roll no.028\n";
    int i, j;
    for (i = 1; i <= 9; i++)
    {
        for (j = 1; j <= i; j++)
        {
            cout << i;
        }
        cout << "\n";
    }

    return 0;
}
```

Output:



Microsoft Visual Studio Debug Console

```
moin uddin
roll no.028
1
22
333
4444
55555
666666
7777777
88888888
999999999

C:\Users\Pcw G-210\Desktop\programing\loop\x64\Debug\loop.exe (process 9904) exited with code 0.
Press any key to close this window . . .
```

Lab Task 6:

6- Use nested for loop to generate the given structure as output.

Source code:

```
using namespace std;
int main()
{
    int k, j;
    cout << "\t\t nested loop generation\n";
    for (k = 1; k <= 5; k++)
    {
        for (j = 1; j <= 5; j++)
        {
            cout << (k * j) << "\t";
        }

        cout << endl;
    }
    return 0;
}
```

Output:

Microsoft Visual Studio Debug Console

```

        nested loop generation
1      2      3      4      5
2      4      6      8      10
3      6      9     12     15
4      8     12     16     20
5     10     15     20     25

C:\Users\Pcw G-210\Desktop\programing\nes\x64\Debug\nes.exe (process 14096) exited with code 0.
Press any key to close this window . . .
```

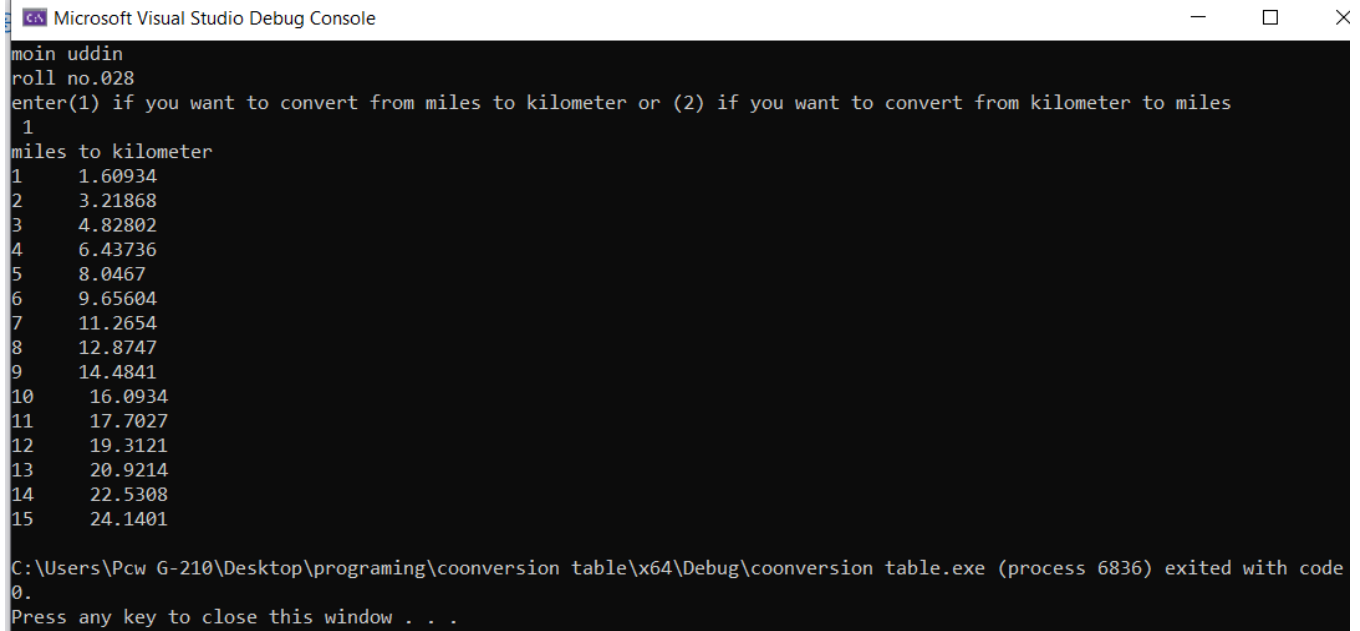
Lab Task 7:

7- Write a program that prints a conversion table from miles to kilometers or from kilometers to miles. The program must first ask what kind of conversion table the user wants. After having asked this, you need an if construct in the program. the program must use for loop to print the conversion table. the program must print at least 15 conversion lines.

Source code:

```
# include <iostream>
using namespace std;
int main()
{
    cout << "moin uddin\n";
    cout << "roll no.028\n";
    float km, mile;
    cout << "enter(1) if you want to convert from miles to kilometer or (2) if you want to convert from kilometer to miles\n ";
    int n;
    cin >> n;
    if (n == 1)
    {
        cout << "miles to kilometer\n";
        for (mile = 1; mile <= 15; mile++)
        {
            km = mile * 1.60934;
            cout << mile << " " << km << endl;
        }
    }
    else if (n == 2) {
        cout << "kilometer to miles" << endl;
        for (km = 1; km <= 15; km++)
        {
            mile = km / 1.60934;
            cout << km << " " << mile << endl;
        }
    }
    else
    {
        cout << "you did not enter valid input";
    }
    return 0;
}
```

Output:



The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar reads "Microsoft Visual Studio Debug Console". The console output is as follows:

```
moin uddin
roll no.028
enter(1) if you want to convert from miles to kilometer or (2) if you want to convert from kilometer to miles
1
miles to kilometer
1    1.60934
2    3.21868
3    4.82802
4    6.43736
5    8.0467
6    9.65604
7    11.2654
8    12.8747
9    14.4841
10   16.0934
11   17.7027
12   19.3121
13   20.9214
14   22.5308
15   24.1401

C:\Users\Pcw G-210\Desktop\programing\conversion table\x64\Debug\conversion table.exe (process 6836) exited with code
0.
Press any key to close this window . . .
```


LAB# 06:

FOR AND

NESTED- FOR

LOOPS