

National University of Computer and Emerging Sciences



ASSIGNMENT # 2

For

PROGRAMMING FUNDAMENTALS

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22L-6277

BS EE-1D

Question # 1

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

int main()
{
    int x=10, y=10;
    char loc;
    cout<<"\nYour current loaction is: x="<<x<<" y="<<y<<endl;
    cout<<"\nPress any key <n,s,e,w>: ";
    cin>>loc;
    while(loc!='t')
    {
        if(loc=='n' || loc=='s' || loc=='e' || loc=='w' )
        {
            switch(loc)
            {
                case 'n':
                    y=y+1;
                    break;
                case 's':
                    y=y-1;
                    break;
                case 'e':
                    x=x+1;
                    break;
                case 'w':
                    x=x-1;
                    break;
            }
            cout<<"\nYour current loaction is: x="<<x<<" y="<<y<<endl;
            cout<<"\nPress any key <n,s,e,w>: ";
            cin>>loc;
        }
        else
        {
            cout<<"Please choose a valid location"<<endl;
            loc='t';
        }
    }

    cout<<endl;
    system("pause");
    return 0;
}
```

C:\Users\dell\OneDrive\Desktop\22L-6277_Q1.exe

Your current loaction is: x=10 y=10

Press any key <n,s,e,w>: e

Your current loaction is: x=11 y=10

Press any key <n,s,e,w>: w

Your current loaction is: x=10 y=10

Press any key <n,s,e,w>: s

Your current loaction is: x=10 y=9

Press any key <n,s,e,w>: n

Your current loaction is: x=10 y=10

Press any key <n,s,e,w>: t

Press any key to continue . . .

Question # 2

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

int main()
{
    for( int i=1;i<=10;i++)
    {
        for(int j=1; j<=10; j++)
            cout<<setw(6)<<i*j<<" ";
        cout<<endl;

    }
    cout<<endl;
    system("pause");
    return 0;
}
```

C:\Users\del\OneDrive\Desktop\22L-6277_Q2.exe

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

Press any key to continue . . .

Question # 3

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

int main()
{
    int x ,y, sum=0;
    cout<<"Enter a first odd number: ";
    cin>>x;
    cout<<"Enter a second odd number: ";
    cin>>y;
    int i=(x+1);
    if(x%2!=0 && y%2!=0 && x>0 && y>0 && x<y)
    {
        cout<<"Even numbers are ";
        while(i<y)
        {
            if(i%2==0)
            {
                cout<<i<<" ";
            }
            else
            {
                sum=sum+i;
            }
            i++;
        }
        cout<<"\nSum of odd numbers between "<<x<<" and "<<y<<" is "<<sum<<endl;
    }
    else
    {
        cout<<"Invalid Input"<<endl;
    }
    cout<<endl;
    system("pause");
    return 0;
}
```

C:\Users\del\OneDrive\Desktop\22L-6277_Q3.exe

Enter a first odd number: 3

Enter a second odd number: 55

Even numbers are 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

Sum of odd numbers between 3 and 55 is 725

Press any key to continue . . .

Question # 4

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

int main()
{
    int N, rem=1, d, i=1;
    int j=1;
    cout<<"Enter the number: ";
    cin>>N;
    d=N;
    while(i<=N*N)
    {
        if(i%N==rem || i%N==d || i==1 || i==N || i==(N*N))
        {
            cout<<j;
        }
        else
        {
            cout<<" ";
        }
        if(i%N==0)
        {
            cout<<endl;
            rem++;
            d--;
            if(i>(N*N+1)/2)
            {
                j--;
            }
            else
            {
                j++;
            }
        }
        i++;
    }
    return 0;
}
```

Enter the number: 11

```
1           1
 2         2
 3       3
  4     4
   5  5
    6
   5  5
  4   4
 3   3
2   2
1       1
```

Process exited after 1.682 seconds with return value 0

Press any key to continue . . .