Bahria University,
Karachi Campus

COURSE: CSC -113 Computing Programming lab
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Submitted To:

1.Write a C++program to Print a table of n number (n enter by user).

PROGRAM:

```cpp
#include<iostream>
using namespace std;
int main()
{
    int n=1,operation,m=1;
    cout << "Enter the number :" << endl;
    cin>>n;
    int i=1;
    while(i<=10){
        cout<<n<<"x"<<i<<"="<<n*i<< endl;
        i++;
    }
      cout<<" enter 1 for another table \n"<<endl;
    cout<<" enter 0 for invalid input \n"<<endl;
    cin>>operation;
    cout << "Enter the number :" << endl;
    cin>>m;
    while(i<=12){
        cout<<m<<"x"<<i<<"="<<m*i<< endl;
        i++;
    }

    return 0;
}
```

```
Enter the number :
5
5x1=5
5x2=10
5x3=15
5x4=20
5x5=25
5x6=30
5x7=35
5x8=40
5x9=45
5x10=50
 enter 1 for another table

 enter 0 for invalid input

```

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2.Write a while loop that counts backwards from 20 to 10.

PROGRAM:

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

int main()
{ cout << "write a while loop count backward from 20 to 10 "<<endl;
    float i = 20;
while(i>=10)
{
    cout<< " i is : "<<i<<endl;
    i=i-1;
}
  return 0;
}
```

Output:
```
write a while loop count backward from 2
 i is : 20
 i is : 19
 i is : 18
 i is : 17
 i is : 16
 i is : 15
 i is : 14
 i is : 13
 i is : 12
 i is : 11
 i is : 10
```

3. Write a C++program to print all natural numbers from 1 to n. using while loop

PROGRAM:

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

int main()
{
    int n, num = 1;
    cout<< " enter n : ";
    cin>>n;
    while (num <= n) {
        cout << " Natural Numbers are : " << num << endl;
        num = num + 1;
    }

    return 0;
}
```

```
enter n : 9
Natural Numbers are : 1
Natural Numbers are : 2
Natural Numbers are : 3
Natural Numbers are : 4
Natural Numbers are : 5
Natural Numbers are : 6
Natural Numbers are : 7
Natural Numbers are : 8
Natural Numbers are : 9



...Program finished with exit code 0
Press ENTER to exit console.
```

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4. Write a C++ Program that displays a series of alphabets in descending order from 'Z' to 'A

PROGRAM:

```cpp
#include <iostream>
using namespace std;
int main()
{
    char alphabet;
    alphabet='Z';
    cout<<" alphabets:\n";
    while(alphabet>='A')
    {
        cout<<" "<<alphabet<<" "<<endl;
        alphabet--;
    }

    return 0;
}
```

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```
alphabets:
Z
Y
X
W
V
U
T
S
R
Q
P
O
N
M
L
K
J
I
H
G
F
E
D
C
B
A

...Program finished with exit code 0
Press ENTER to exit console.
```

5.Write a C ++ program to count number of digits in a number.

PROGRAM:

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

int main()
{
int num,i=0;
    cout<<"enter any number:";
    cin>>num;
while(num>0)
{
num=num/10;
i++;
}
cout<<" no. of digits in given number is: "<<i<<endl;
return 0;
}
```

```
enter any number:538458437557453987
no. of digits in given number is: 10



...Program finished with exit code 0
Press ENTER to exit console.
```

6.Write a program that adds all the odd numbers from 1 to n .n will be entered by the user.(n >=1)

PROGRAM:

```cpp
C++        Output
1    #include<iostream>
2    using namespace std;
3    int main()
4    {
5        int i=1,n,sum=0;
6        cout<<" Enter number : ";
7        cin>>n;
8        while(i<=n)
9        {
10           if(i%2!=0)
11           {
12           cout<<" "<<i<<endl;
13           sum=sum+i;
14       }i++;
15       }
16       cout<<" Sum of odd numbers : "<<sum<<endl;
17       return 0;
18   }
19
```

```
Enter number : 30
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
Sum of odd numbers : 225


...Program finished with exit code 0
Press ENTER to exit console.
```

7.Write an exec with a DO WHILE loop that asks passengers on a commuter airline if they want a window seat and keeps track of their responses. The flight has 8 passengers and 4 window seats. Discontinue the loop when all the window seats are taken. After the loop ends, display the number of window seats taken and the number of passengers questioned.

PROGRAM:

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

int main()
{ int windows;
  int ticket = 0;
  char Input;
  int passengers = 0;
  do{cout<<"press 'y'for windows otherwise press 'N'"<<endl;
   cin>>Input;
  if(Input == 'y'){

  cout<<"your window seat is book"<<endl;
     windows +=1;
     if(windows == 4){
        cout<<"sorry we have no window seat available"<<endl;
        cout<<"Total window seats is : "<<windows<<endl;

        cout<<"Total passengers : "<<passengers<<endl;
     }
     }
    else{
      cout<<"Your Seat will be book"<<endl;
      ticket +=1;
      cout<<"Total Seats"<<ticket<<endl;
    }
   passengers +=1;
  }
   while(passengers <= 8);
  return 0;}
```

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```
press 'y'for windows otherwise press 'N'
N
Your Seat will be book
Total Seats1
press 'y'for windows otherwise press 'N'
Y
Your Seat will be book
Total Seats2
press 'y'for windows otherwise press 'N'
N
Your Seat will be book
Total Seats3
press 'y'for windows otherwise press 'N'
Y
Your Seat will be book
Total Seats4
press 'y'for windows otherwise press 'N'
```