C++ - LAB-2: **Basic Input/Output and Statements and flow control**

Name: Vivaan Shiromani

Reg.No: 201900189

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Lab Guided By: Prof. Ashis Datta Sir.

Q-6: To use cin and cout

Ans: Source Code

#include <iostream>

using namespace std;

int main()

{

    int num;

    cout << "Enter a number:\n";

    cin >> num;

    cout << "You entered:" << num;

    return 0;

}

Output:

Enter a number:34

You entered:34

Q-7: To use cin, strings and stringstream

Ans: Source Code:

#include <bits/stdc++.h>

using namespace std;

int count\_words(string str)

{

    stringstream sample(str);

    string word;

    int count = 0;

    while(sample >> word)

    {

        count++;

    }

    return count;

}

int main()

{

    string sample = "my name is vivaan"

                    "I study in smit";

    cout << "Words in the string: " << count\_words(sample);

}

Output:

Words in the string: 7

Q-8-a: Read a list of five numbers and counts the number of threes and sevens in the data.

Ans: Source Code

#include <iostream>

using namespace std;

int main()

{

    int my\_arr[5], i, count=0, rem, count1=0;

    cout << "Enter 5 numbers:\n";

    for(i=0; i<5; i++)

    {

        cin >> my\_arr[i];

    }

    for(i=0; i<5; i++)

    {

        while(my\_arr[i] != 0)

        {

            rem=my\_arr[i]%10;

            if(rem == 3)

                count++;

            if(rem == 7)

                count1++;

            my\_arr[i] = my\_arr[i]/10;

        }

 cout << "Number:" << i+1 << ":: 3 = " << count << ", 7 = " << count1 << "\n";

        count = 0;

        count1 = 0;

    }

    return 0;

}

Output:

Enter 5 numbers:

123

456

789

333

777

Number:1:: 3 = 1, 7 = 0

Number:2:: 3 = 0, 7 = 0

Number:3:: 3 = 0, 7 = 1

Number:4:: 3 = 3, 7 = 0

Number:5:: 3 = 0, 7 = 3

Q-8-b: Write a program to print out the multiplication table.

Ans: Source Code:

#include <iostream>

using namespace std;

int main()

{

    int n, i;

    cout << "Enter a number: ";

    cin >> n;

    for(i=1; i<=10; i++)

    {

        cout << n << " X " << i << " = " << n\*i << "\n";

    }

    return 0;

}

Output:

Enter a number: 12

12 X 1 = 12

12 X 2 = 24

12 X 3 = 36

12 X 4 = 48

12 X 5 = 60

12 X 6 = 72

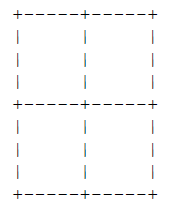
12 X 7 = 84

12 X 8 = 96

12 X 9 = 108

12 X 10 = 120

Q-8-c: Print a checkerboard (8-by-8 grid). Each square  
should be 5-by-3 characters wide. A 2-by-2  
example follows:



Ans: Source Code:

#include <bits/stdc++.h>

int main()

{

         char c[33][49];

         int i,j,k;

         for(i=0;i<33;i++)

         for(j=0;j<49;j++)

         c[i][j]=32;

         int temp;

         for(k=1;k<32;k++)

         {

                for(j=0;j<49;j=j+6)

               {

                     c[k][j]='|';

               }

         }

         for(i=0;i<33;i=i+4)

        {

                 j=0; c[i][j]='+';

                 for(k=0;k<8;k++)

                {

                        temp=j;

                        for(j=(temp+1);j<=(temp+5);j++)

                       {

                        c[i][j]='-';

                       }

                       c[i][j]='+';

               }

       }

       for(i=0;i<33;i++){

      for(j=0;j<49;j++)

      std::cout << c[i][j];

      std::cout << "\n";

     }

      return 0;

     }

Output:

