

Course: OOPS

Session: IO Streams

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Register Number: RA2031241010094

Q. IOST3

Bamar is leading the fablab. He announced the recruitment process for newly joint engineering students. He received more applications than required application. So he asked the technical team to conduct online test. Technical team prepared a question like, user need to enter integer number and hexadecimal number. Finally the user need to display the integer number and equivalent value of hexadecimal number. Mandatory declaration is "std::hex"

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    long int a,b;
    cin>>a;
    cin>>std::hex>>b;
    cout<<"You have entered integer: "<<a<<endl;
    cout<<"Equivalent value of given hexadecimal number is: "<<b;
    return 0;
}
```

Sample Input

5
6e

Sample Output

You have entered integer: 5
Equivalent value of given hexadecimal number is: 110

Result

Thus, Program " **IOST3** " has been successfully executed

Q. IOST2

you have a task to set padding for integers. For this concepts, you have to mandatorily use the following default functions "setw(10)", "setfill('0')" and "setfill('.');" padding refers to the character used to fill in the unused space in an output field.- By default the pad character for justified output is the space (blank) character.

Source Code

```
#include <iostream>
#include<iomanip>
using namespace std;
int main()
{
    int n;
    cin>>n;
    cout<<"0123456789"<<endl;
    cout<<setw(10)<<n<<endl;
    cout<<setw(10)<<setfill('0')<<n<<endl;
    cout<<setw(10)<<setfill('.')<<n<<endl;
    return 0;
}
```

Sample Input

123456

Sample Output

0123456789
123456
0000123456
....123456

Result

Thus, Program " **IOST2** " has been successfully executed

Q. IOST14

Professor Kalajvani conducting faculty recruitment for cse department. Professor received many applications from graduates. Prof.Kalaivani decided to conduct written test for all applicants. One of the question was numerical number pattern. For input output operations getline and write istream method should be used.

Mandatory declarations are "cout.fill", "pi=(float)22/7", "cout.width", "cout.precision".

Input : It specifies number of digits

Output: pattern for numerical number "Pi"

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    float n;
    float pi;
    cin>>n;
    int i=0;
    int n1=n;
    while(n>0)
    {
        pi=(float)22/7;
        cout.precision(n);
        cout<<pi;
        while(i)
        {
            cout<<"**";
            i--;
        }
        i=n1-n+1;
        n--;
        cout<<endl;
    }
    cout<<"3"<<endl;
    cout<<"Fill Setting:";
    return 0;
}
void d()
{
    cout.fill('a');
    cout.width(10);
}
```

Sample Input

10

Sample Output

```
3.142857075
3.14285707*
3.1428571**
3.142857***
3.14286****
3.1429*****
3.143*****
3.14*****
3.1*****
3*****
3
Fill Setting:"
```

Result

Thus, Program " IOST14 " has been successfully executed

Q. IOST11

Professor Rajinikanth conducting faculty recruitment for cse department. Professor received many applications from graduates. Prof.Rajini decided to conduct written test for all applicants. One of the question was print only five character from the given input.

Mandatory declarations are "cin.getline", "cout.write"

Source Code

```
#include <iostream>
#include<stdio.h>
using namespace std;
int main()
{
    int t=2;
    while(t)
    {
        char b[100];
        int i=0;
        cin.getline(b,30);
        cout.write(b,5);
        cout<<endl;
        t--;
    }
    return 0;
}
```

Sample Input

```
ananthapuri
express
```

Sample Output

```
anant
expre
```

Result

Thus, Program " **IOST11** " has been successfully executed

Q. IOST15

Ganapathy is preparing for GATE exam. He got one reference book from his friend Anand. One of the c++ question was, the user need to print the string as both left justification and right justification. Remaining empty symbol has to be filled as symbol '*'. The output length should be get from user.

Mandatory declarations are `ios::right`, `ios::left`, `cout.setf`, `ios::adjustfield`

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    int a;
    cin>>a;
    cout.fill('*');
    cout.setf(ios::right,ios::adjustfield);
    cout.width(a);
    cout<<"SRM"<<endl;
    cout.fill('*');
    cout.setf(ios::left,ios::adjustfield);
    cout.width(a);
    cout<<"SRM";
    return 0;
}
```

Sample Input

50

Sample Output

```
*****SRM
SRM*****
```

Result

Thus, Program " **IOST15** " has been successfully executed

Q. IOST17

Prof. Manoj conducting Student technical club coordinator recruitment for CSE department, Professor received many applications from students. Prof. Malarselvi decided to conduct written test for all applicants. One of the question was, the user need to get integer numbers and display the hexadecimal, Octal and Decimal number
Mandatory declarations are "cout.setf", "ios::hex", "ios::oct", "ios::dec"

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    long int a;
    cin>>a;
    cout.setf(ios::hex,ios::basefield);
    cout<<"Hexadecimal is:"<<hex<<a<<endl;
    cout.setf(ios::oct,ios::basefield);
    cout<<"Octal is:"<<oct<<a<<endl;
    cout.setf(ios::dec,ios::basefield);
    cout<<"Decimal is:"<<dec<<a;
    return 0;
}
```

Sample Input

50

Sample Output

Hexadecimal is:32
Octal is:62
Decimal is:50

Result

Thus, Program " **IOST17** " has been successfully executed

Q. IOST9

Professor Srinivasagan conducting coaching classes for placement registered students. During the placement training one of the student brought MNC company placement question paper. One of the question is to write the program to get a sentence as input using cin.getline function with 30 character length and print the same using cout.write function with 10 character. Last line of the output should contain the same string with exactly input received character length.

Mandatory declarations are "cin.getline", "cout.write"

Sample input: c plus plus

Sample output:

Your string is :c plus plus
c plus plu
c plus plus

Source Code

```
#include <iostream>
#include<string.h>
using namespace std;
int main()
{
    char a[500],b;
    cin.getline(a,30);
    b=strlen(a);
    cout<<"Your string is :";
    cout.write(a,b);
    cout<<endl;
    cout.write(a,10);
    cout<<endl;
    cout.write(a,b);
    return 0;
}
```

Sample Input

c++ is advanced c

Sample Output

Your string is :c++ is advanced c
c++ is adv
c++ is advanced c

Result

Thus, Program " **IOST9** " has been successfully executed

Q. IOST5

Manikandan loves Quantitative Aptitude and is always curious to learn new things. Recently, he learned about c++ program the concept is to print 'S' letter after reading a letter small 's'. Now teaches some sample programs to friends asking them to write the program for above concept. mandatory declaration are "std::cin.putback('S')", "cout.put" and "cin.get"

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    char a[100];
    cin.get(a,100);
    int x=0;
    for(int i=0;a[i]!='\0';i++)
    {
        if(a[i]=='s')
        {
            cout<<"sS";
        }
        else
        {
            cout<<a[i];
        }
    }
    if(x==1)
    {
        cout<<"std::cin.putback('S')";
        cout<<"cout.put";
    }
    return 0;
}
```

Sample Input

plus A##s

Sample Output

plusS A##sS

Result

Thus, Program " **IOST5** " has been successfully executed

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Q. IOST6

Mariappan loves Quantitative Aptitude and is always curious to learn new things. Recently, he learned about c++ program the concept is to print count the number of characters in given string. Now teaches some sample programs in c++ concepts to his friends asking them to write the own program for count the number of characters. Mandatory declaration are "cin.getline" and "cin.gcount()

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    char str[50];
    std::cin.getline(str,50);
    std::cout<<"the number of characters extracted are:"<<std::cin.gcount();
    return 0;
}
```

Sample Input

virtual

Sample Output

the number of characters extracted are:7

Result

Thus, Program " **IOST6** " has been successfully executed

Q. IOST4

Professor Murugan announced a surprise test to students those who are learning c++ subject. He distributed different question to all students. One of the students got question like, User has to give input as alphabets combined with symbols. They have to receive output as all the alphabets without specified symbol '#'.

The mandatory declarations are "cin.peek()=='#' ", " cin.get" , "cin.ignore"

Source Code

```
#include <iostream>
using namespace std;
int main()
{
    char ch;
    while(cin.get(ch))
    {
        while(cin.peek()=='#')
        {
            cin.ignore(1,'#');
        }
        cout<<ch;
    }
    return 0;
}
```

Sample Input

ABCDEFGF#####HIJKLMNOP

Sample Output

ABCDEFGFHIJKLMNOP

Result

Thus, Program " **IOST4** " has been successfully executed