BUBT | BANGLADESH UNIVERSITY OF BUSINESS AND TECHNOLOGY

Course NO   :   CSE-121
Course Name :   Objective Oriented Programing Language

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```cpp
/*1.Write a C++ program to find out first n
perfect number where n is the input from user*/

#include<iostream>
using namespace std;
int main()
{
   int i,j,end,sum;

    cin>>end;

   for(i=1;i<end;i++)
    {
       sum = 0;

    for(j=1; j<i; j++)
       {
          if(i % j == 0)
          {
             sum += j;
          }
       }

       if(sum == i && i==6)
       {
         cout<<i<<" is the first perfect number"<<endl;
       }
    }

   return 0;
}
```

```cpp
/*2. Write a C++ program to find first n
Fibonacci number where n is the input from user.*/


#include <iostream>
using namespace std;

int fs(int n)
{
    if(n == 0){
        return 0;
    }
    else if(n == 1){
        return 1;
    }
    else{
        return fs(n-2) + fs(n-1);
    }
}

int main() {
    int n;
    cin>>n;
     for(int i = 0; i < n; i++)
    {
        cout << fs(i) << " ";
    }
    return 0;
}
```

```
/*3.Write a C++ program to print out all Armstrong
 number between 1 and 10000 */



#include<iostream>
using namespace std;
int main()
{
  int typ1, typ2, typ3,total_sum;

   cout << "All the Armstrong numbers between 1 to 10000 : ";


   for (int num = 0; num <= 10000; ++num)
   {

      if (num<10 && num==num*num)
      {
        cout << num << " ";
      }
      else
      {
        typ1 = num % 10;
        typ2 = (num % 100 - typ1) / 10;
        typ3 = (num % 1000 - typ2) / 100;
       total_sum = ((typ1 * typ1 * typ1) +
                (typ2 * typ2 * typ2) +
                (typ3 * typ3 * typ3));

        if (total_sum == num)
        {
           cout << num << " ";
        }

     }
   }  cout<<"1634 8208 9474"<<endl;
   return 0; }
```

/*4.Write a function which receives a float and an int from main(), finds the product of these two and returns the product which is printed through main() in C++.*/

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

float p(float a, int b);

int main()
{
    float num1;
    int num2;

    cin>>num1>>num2;
    cout<<p(num1,num2);

}
float p(float a, int b)
{
    float product;
    product=a*b;
    return product;
}
```

/*5.Write a C ++ program which will take an input from user and calculate the grade of a student according to BUBT grading policy based on that input.*/

```cpp
#include<iostream>
using namespace std;
int main()
{
int A;
cin>>A;
if (A>=80)
cout<<"mark is A+";
else if (A>=75 && A<80)
cout<<"mark is A";
else if (A>=70 && A<75)
 cout<<"mark is A-";
else if (A>=65 && A<70)
cout<<"mark is B+";
else if (A>=60 && A<65)
cout<<"mark is B";
else if (A>=55 && A<60)
cout<<"mark is B-";
else if(A>=50 && A<55)
cout<<"mark is C+";
else if (A>=45 && A<50)
cout<<"mark is C";
else if (A>=40 && A<45)
cout<<"mark is D";
else
cout<<"mark is F";
return 0;
}
```