**Bangladesh University of Business and Technology**

**BUBT**



**Assignment**

On

Course Title : Object Oriented Programming

Course Code : CSE 122

**Submitted to : Submitted by :**

**Khan Md. Hasib** Name : Faria Akther Meghla

Lecturer ID : 21225103120

Department of CSE Intake : Intake-49

BUBT Sec : 03

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

#include <iostream>

using namespace std;

void findPerfectNumber(int start, int end);

int isPerfectNumber(int num);

int main()

{

findPerfectNumber(1,500);

return 0;

}

void findPerfectNumber(int start, int end){

for(int i = start; i<= end; i++){

if(isPerfectNumber(i))

cout<< i << ", ";

}

cout<<"\b\b ";

}

int isPerfectNumber(int num){

int sum = 0;

for(int i =1; i<=num/2;i++)

if(num%i == 0)

sum += i;

return num == sum ? 1:0;

}

1. Write a C++ program to find first n Fibonacci number where n is the input from user**.**

#include <iostream>

using namespace std;

int main() {

int n, t1 = 0, t2 = 1, nextTerm = 0;

cout << "Enter the number of terms: ";

cin >> n;

cout << "Fibonacci Series: ";

for (int i = 1; i <= n; ++i) {

if(i == 1) {

cout << t1 << ", ";

continue;

}

if(i == 2) {

cout << t2 << ", ";

continue;

}

nextTerm = t1 + t2;

t1 = t2;

t2 = nextTerm;

cout << nextTerm << ", ";

}

return 0;

}

**3.** Write a C++ program to print out all Armstrong numbers between 1 and 10000. If sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number.

#include<iostream>

using namespace std;

int main()

{

int n,digit1,digit2,digit3;

for(int i=1;i<=10000;i++)

{

digit1=i/100;

digit2=i/10 - digit1\*10;

digit3=i%10;

if(digit1\*digit1\*digit1 + digit2\*digit2\*digit2 + digit3\*digit3\*digit3 == i)

cout<<i<<endl;

}

return 0;

}

1. 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++.

#include<iostream>

#include<conio.h>

using namespace std;

float prod(float a, int b);

main()

{

float num1;

int num2;

cout<<"Enter Decimal value: ";

cin>>num1;

cout<<"Enter Integer value: ";

cin>>num2;

cout<<"Product of Two Numbers is: "<<prod(num1,num2);

getch();

}

float prod(float a, int b)

{

float pro;

pro=a\*b;

return pro;

}

**5.**BUBT grading policy is :

(i) 80 % marks or above is A+

(ii) 75% to 79% marks is A

(iii) 70% to 74% marks is A-

(iv) 65% to 69% marks is B+

(v) 60% to 64% marks is B

(vi) 55% to 59% marks is B-

(vii) 50% to 54% marks is C+

(viii) 45% to 49% marks is C

(ix) 40% to 44% marks is D

(x) Below 40% is F

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**.**