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PPS13

Q1

Aim:

Write a basic C++ program to generate Fibonacci series for ‘n’ numbers.

Procedure:

Input:

Number of elements of Fibonacci Series, n

Output:

Fibonacci series of n elements

Algorithm:

Step 1: Read n
Step 2: Initialise a, b, c. a=0, b=1
Step 3: Repeat steps 4 to 5 n times
Step 4: If i = 0 or i = 1 then print i
Step 5: Else
    Step A: c = a + b
    Step B: a = b
    Step C: b = c
    Step D: Print c
Step 6: Return 0

Code:

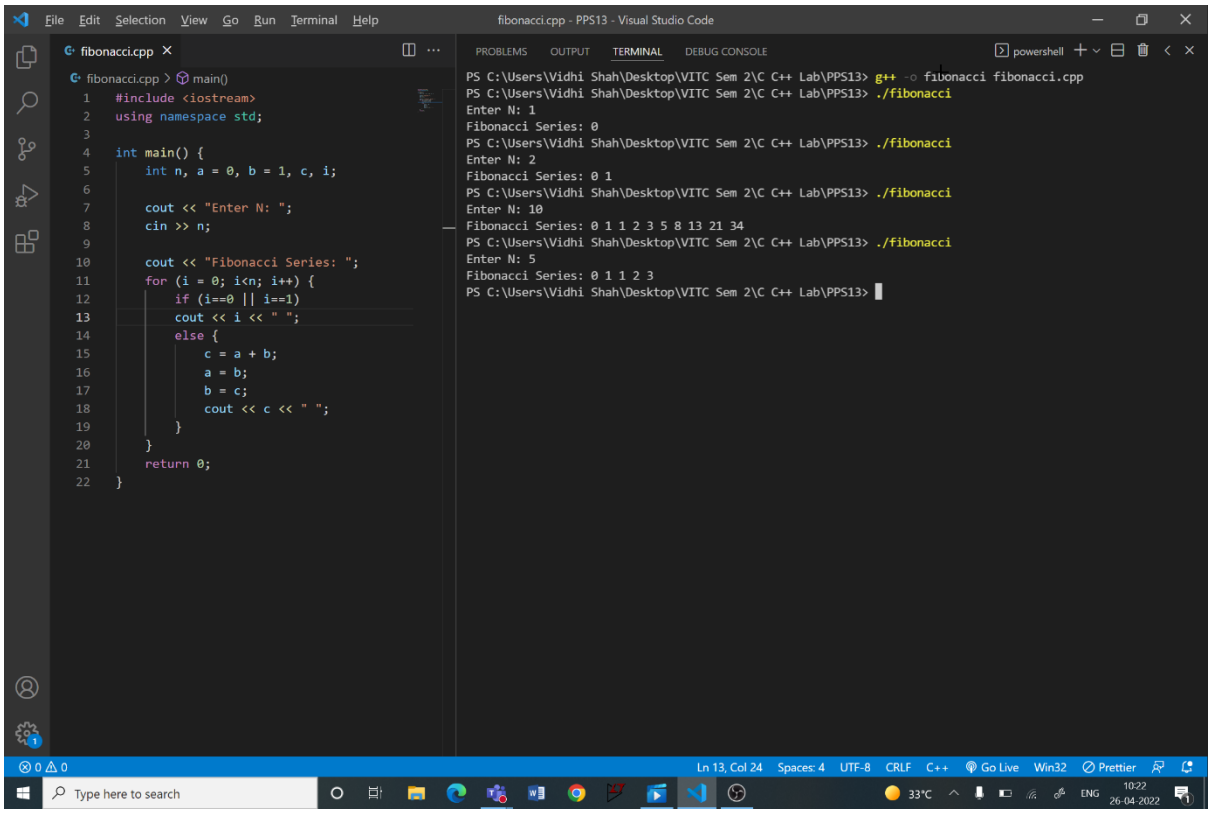
```cpp
#include <iostream>
using namespace std;

int main() {
    int n, a = 0, b = 1, c, i;

    cout << "Enter N: ";
    cin >> n;

    cout << "Fibonacci Series: ";
    for (i = 0; i<n; i++) {
        if (i==0 || i==1)
        cout << i << " ";
        else {
            c = a + b;
            a = b;
            b = c;
            cout << c << " ";
        }
    }
    return 0;
}
```

Output:



Q2

Aim:

Write a C++ program to generate the pay slip report for the employees working in an Organization. HRA is 12% and DA is 18% from basic salary for regular Employee, Print the Net Salary along with the name and id. Basic salary is a private data.

Procedure:

Input:

Employee Name
Employee ID
Basic Salary

Output:

Net Salary

Algorithm:

Class Esalary:

Step 1: Create a class Esalary
Step 2: Add private data members Employee ID, Name, Basic Salary, HRA, DA and Net Salary
Step 3: Add public member functions

1. **Input function** that reads input for ID, Name and Basic Salary
2. **Net Salary function** that calculates HRA, DA and Net Salary
    a. HRA = 0.12*basic_salary
    b. DA = 0.18*basic_salary
    c. Net Salary = basic_salary + HRA + DA
3. **Output function** that displays ID, Name and Net Salary

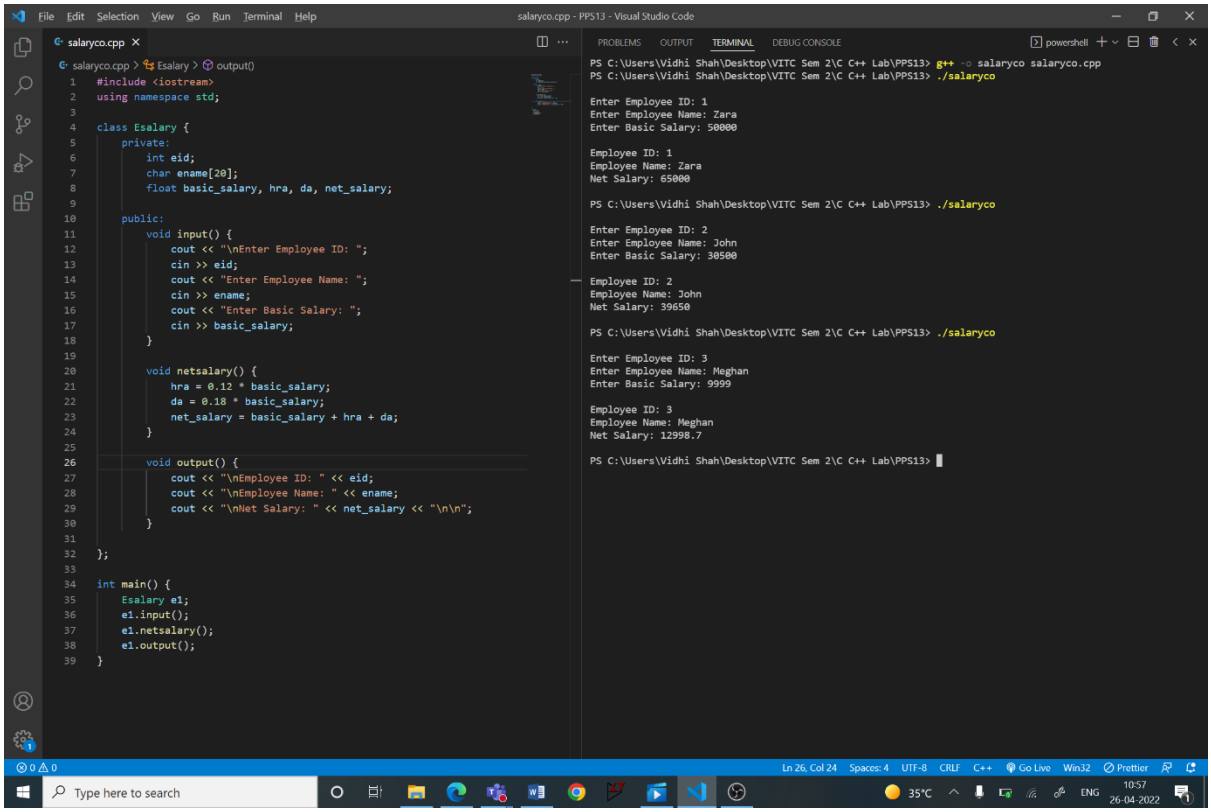
Main Function:

Step 1: Create an object e1 from class Esalary
Step 2: Call the member functions

1. e1.input()
2. e1.netsalary()
3. e1.output()

Step 3: Return 0

Output:


File Edit Selection View Go Run Terminal Help
salaryco.cpp - PPS13 - Visual Studio Code
salaryco.cpp
#include <iostream>
using namespace std;
class Esalary {
private:
int eid;
char ename[20];
float basic_salary, hra, da, net_salary;
public:
void input() {
cout << "\nEnter Employee ID: ";
cin >> eid;
cout << "Enter Employee Name: ";
cin >> ename;
cout << "Enter Basic Salary: ";
cin >> basic_salary;
}
void netsalary() {
hra = 0.12 * basic_salary;
da = 0.18 * basic_salary;
net_salary = basic_salary + hra + da;
}
void output() {
cout << "\nEmployee ID: " << eid;
cout << "\nEmployee Name: " << ename;
cout << "\nNet Salary: " << net_salary << "\n\n";
}
};
int main() {
Esalary e1;
e1.input();
e1.netsalary();
e1.output();
}
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
PS C:\Users\Vidhi Shah\Desktop\VITC Sem 2\C C++ Lab\PPS13> g++ -o salaryco salaryco.cpp
PS C:\Users\Vidhi Shah\Desktop\VITC Sem 2\C C++ Lab\PPS13> ./salaryco
Enter Employee ID: 1
Enter Employee Name: Zara
Enter Basic Salary: 50000
Employee ID: 1
Employee Name: Zara
Net Salary: 65000
PS C:\Users\Vidhi Shah\Desktop\VITC Sem 2\C C++ Lab\PPS13> ./salaryco
Enter Employee ID: 2
Enter Employee Name: John
Enter Basic Salary: 30500
Employee ID: 2
Employee Name: John
Net Salary: 39650
PS C:\Users\Vidhi Shah\Desktop\VITC Sem 2\C C++ Lab\PPS13> ./salaryco
Enter Employee ID: 3
Enter Employee Name: Meghan
Enter Basic Salary: 9999
Employee ID: 3
Employee Name: Meghan
Net Salary: 12998.7
PS C:\Users\Vidhi Shah\Desktop\VITC Sem 2\C C++ Lab\PPS13>
Ln 26, Col 24 Spaces: 4 UTF-8 CRLF C++ Go Live Win32 Prettier
Type here to search
35°C
ENG
10:57
26-04-2022