

# C++ Practice Programs

## Question 1 C++ Program for Fibanocci Series

The screenshot shows the Visual Studio Code editor with a C++ program named `program1.cpp` open. The program calculates the first `n` terms of the Fibonacci series using a loop. The code is as follows:

```
1 #include <iostream>
2 using namespace std;
3 int main () {
4     int a=0,b=1,c,n;
5     cout<<"Enter the Value of n:";
6     cin>>n;
7     cout <<"Fibonacci Series is:";
8     for (int i=0;i<=n;i++)
9     {
10         cout << a << " ";
11         c=a+b;
12         a=b;
13         b=c;
14     }
15     return 0;
16 }
17
```

The terminal output shows the program being compiled and executed, with the input `5` and the output `Fibonacci Series is: 0 1 1 2 3 5`.

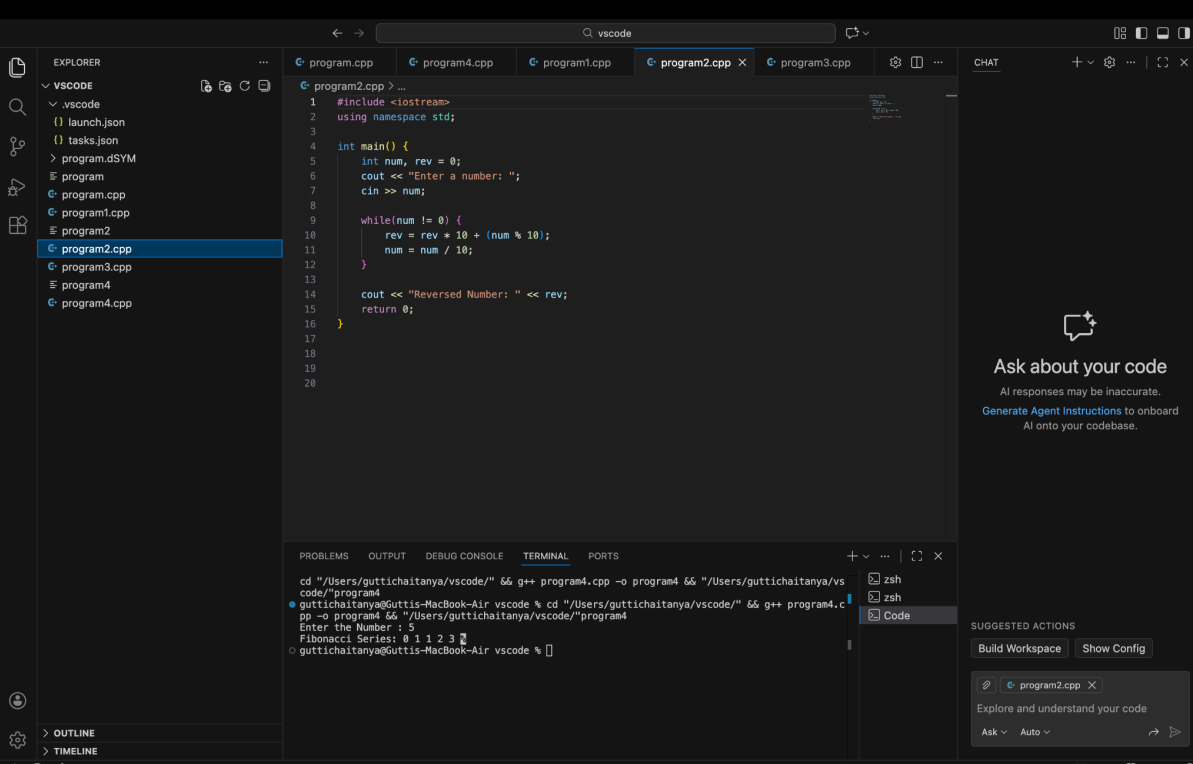
## Question 2 C++ Program for Fibanocci Series using Recursion

The screenshot shows the Visual Studio Code editor with a C++ program named `program4.cpp` open. The program calculates the first `n` terms of the Fibonacci series using a recursive function. The code is as follows:

```
1 #include <iostream>
2 using namespace std;
3
4 int fib(int n) {
5     if(n == 0)
6         return 0;
7     else if(n == 1)
8         return 1;
9     else
10        return fib(n-1) + fib(n-2);
11 }
12
13 int main() {
14     int n;
15     cout << "Enter the Number : ";
16     cin >> n;
17
18     cout << "Fibonacci Series: ";
19     for(int i = 0; i < n; i++) {
20         cout << fib(i) << " ";
21     }
22     return 0;
23 }
24
```

The terminal output shows the program being compiled and executed, with the input `5` and the output `Fibonacci Series: 0 1 1 2 3`.

### 3. C++ Program for Reverse the No.



The screenshot shows the Visual Studio Code editor with a C++ program for reversing a number. The Explorer panel on the left shows a project structure with files like `launch.json`, `tasks.json`, and several `program` files. The main editor displays `program2.cpp` with the following code:

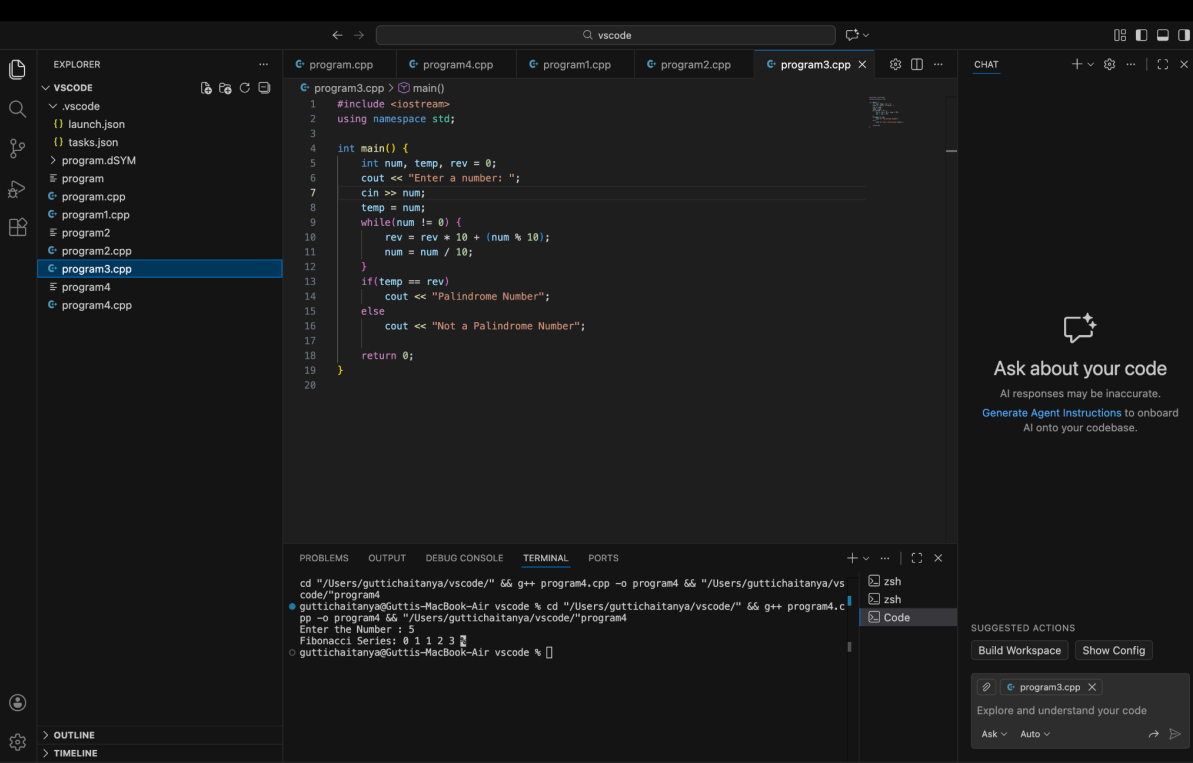
```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     int num, rev = 0;
6     cout << "Enter a number: ";
7     cin >> num;
8
9     while(num != 0) {
10        rev = rev * 10 + (num % 10);
11        num = num / 10;
12    }
13
14    cout << "Reversed Number: " << rev;
15    return 0;
16 }
```

The bottom panel shows the TERMINAL with the following output:

```
cd "/Users/guttichaitanya/vscode/" && g++ program4.cpp -o program4 && "/Users/guttichaitanya/vscode/"program4
guttichaitanya@Guttis-MacBook-Air vscode % cd "/Users/guttichaitanya/vscode/" && g++ program4.c
pp -o program4 && "/Users/guttichaitanya/vscode/"program4
Enter the Number : 5
Fibonacci Series: 0 1 1 2 3
guttichaitanya@Guttis-MacBook-Air vscode %
```

The right sidebar contains a CHAT panel with the text "Ask about your code" and a SUGGESTED ACTIONS panel with buttons for "Build Workspace" and "Show Config".

### 4.C++ Program for Palindrome for a No.



The screenshot shows the Visual Studio Code editor with a C++ program for checking if a number is a palindrome. The Explorer panel on the left shows a project structure with files like `launch.json`, `tasks.json`, and several `program` files. The main editor displays `program3.cpp` with the following code:

```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     int num, temp, rev = 0;
6     cout << "Enter a number: ";
7     cin >> num;
8     temp = num;
9     while(num != 0) {
10        rev = rev * 10 + (num % 10);
11        num = num / 10;
12    }
13    if(temp == rev)
14        cout << "Palindrome Number";
15    else
16        cout << "Not a Palindrome Number";
17
18    return 0;
19 }
```

The bottom panel shows the TERMINAL with the following output:

```
cd "/Users/guttichaitanya/vscode/" && g++ program4.cpp -o program4 && "/Users/guttichaitanya/vscode/"program4
guttichaitanya@Guttis-MacBook-Air vscode % cd "/Users/guttichaitanya/vscode/" && g++ program4.c
pp -o program4 && "/Users/guttichaitanya/vscode/"program4
Enter the Number : 5
Fibonacci Series: 0 1 1 2 3
guttichaitanya@Guttis-MacBook-Air vscode %
```

The right sidebar contains a CHAT panel with the text "Ask about your code" and a SUGGESTED ACTIONS panel with buttons for "Build Workspace" and "Show Config".

