

C++ Practice Programs

Question 1 C++ Program for Fibanocci Series

A screenshot of the Visual Studio Code (VS Code) interface. The code editor shows a file named `program1.cpp` with the following content:

```
#include <iostream>
using namespace std;
int main (){
    int a=0,b=1,c,n;
    cout<<"Enter the Value of n:";
    cin>>n;
    cout << "Fibonacci Series is:";
    for (int i=0;i<=n;i++)
    {
        cout << a << " ";
        c=a+b;
        a=b;
        b=c;
    }
    return 0;
}
```

The terminal tab shows the command `cd "/Users/guttichaitanya/vscode/" && g++ program1.cpp -o program1 && "/Users/guttichaitanya/vscode/bin/program1"` being run, and the output shows the Fibonacci series starting from 0 up to 5.

Question 2 C++ Program for Fibanocci Series using Recursion

A screenshot of the Visual Studio Code (VS Code) interface. The code editor shows a file named `program4.cpp` with the following content:

```
#include <iostream>
using namespace std;
int fib(int n) {
    if(n == 0)
        return 0;
    else if(n == 1)
        return 1;
    else
        return fib(n-1) + fib(n-2);
}
int main() {
    int n;
    cout << "Enter the Number : ";
    cin >> n;
    cout << "Fibonacci Series: ";
    for(int i = 0; i < n; i++) {
        cout << fib(i) << " ";
    }
    return 0;
}
```

The terminal tab shows the command `cd "/Users/guttichaitanya/vscode/" && g++ program4.cpp -o program4 && "/Users/guttichaitanya/vscode/bin/program4"` being run, and the output shows the Fibonacci series starting from 0 up to 5.

3. C++ Program for Reverse the No.

The screenshot shows the Visual Studio Code interface with the following details:

- Explorer View:** Shows a folder named "VS CODE" containing ".vscode", "program.dSYM", "program", "program.cpp", "program1.cpp", "program2", "program2.cpp", "program3", "program3.cpp", "program4", and "program4.cpp".
- Editor View:** The active file is "program2.cpp". The code is as follows:

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

int main() {
    int num, rev = 0;
    cout << "Enter a number: ";
    cin >> num;

    while(num != 0) {
        rev = rev * 10 + (num % 10);
        num = num / 10;
    }

    cout << "Reversed Number: " << rev;
    return 0;
}
```

- Terminal View:** The terminal shows the command "cd "/Users/guttichaitanya/vscode/" && g++ program4.cpp -o program4 && "/Users/guttichaitanya/vscode/code/program4" and the output of the program running.
- Suggested Actions:** Includes "Build Workspace" and "Show Config".

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

The screenshot shows the Visual Studio Code interface with the following details:

- Explorer View:** Shows a folder named "VS CODE" containing ".vscode", "program.dSYM", "program", "program.cpp", "program1.cpp", "program2", "program2.cpp", "program3", "program3.cpp", "program4", and "program4.cpp".
- Editor View:** The active file is "program3.cpp". The code is as follows:

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

int main() {
    int num, temp, rev = 0;
    cout << "Enter a number: ";
    cin >> num;
    temp = num;
    while(num != 0) {
        rev = rev * 10 + (num % 10);
        num = num / 10;
    }
    if(temp == rev)
        cout << "Palindrome Number";
    else
        cout << "Not a Palindrome Number";
    return 0;
}
```

- Terminal View:** The terminal shows the command "cd "/Users/guttichaitanya/vscode/" && g++ program4.cpp -o program4 && "/Users/guttichaitanya/vscode/code/program4" and the output of the program running.
- Suggested Actions:** Includes "Build Workspace" and "Show Config".

