

Program to binary number increment by one

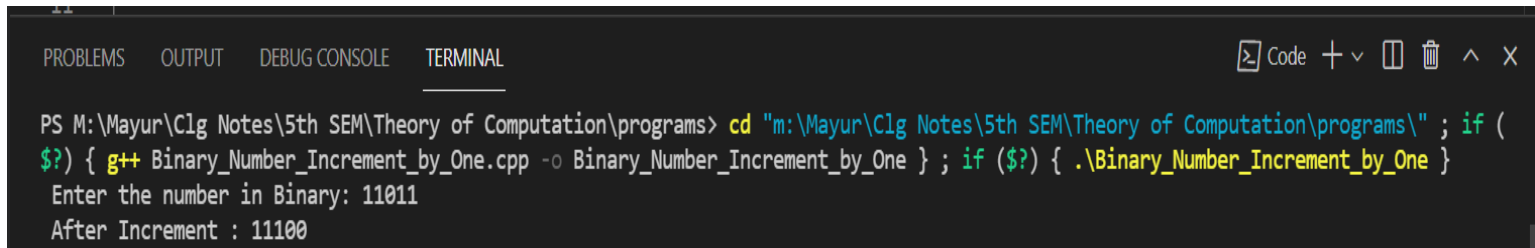
CODE:

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

int main()
{
    long b1,b2=1;
    int i=0, r=0;
    int S[20];
    cout << " Enter the number in Binary: ";
    cin >> b1;

    while (b1 != 0 || b2 != 0)
    {
        S[i++] = (int)((b1 % 10 + b2 % 10 + r) % 2);
        r = (int)((b1 % 10 + b2 % 10 + r) / 2);
        b1 = b1 / 10;
        b2 = b2 / 10;
    }
    if (r != 0) {
        S[i++] = r;
    }
    --i;
    cout << " After Increment : ";
    while (i >= 0) {
        cout << (S[i--]);
    }
    cout << ("\n");
}
```

OUTPUT:



The screenshot shows a terminal window with a dark background. At the top, there are tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL', with 'TERMINAL' being the active tab. To the right of the tabs are icons for 'Code', a plus sign, a minus sign, a square, a trash can, an up arrow, and a close 'X' button. The terminal content shows a PowerShell prompt 'PS M:\Mayur\Clg Notes\5th SEM\Theory of Computation\programs>' followed by a command to change directory and run a C++ program. The program prompts for a binary number, which is entered as '11011'. The program then outputs 'After Increment : 11100'.

```
PS M:\Mayur\Clg Notes\5th SEM\Theory of Computation\programs> cd "m:\Mayur\Clg Notes\5th SEM\Theory of Computation\programs\" ; if ($?) { g++ Binary_Number_Increment_by_One.cpp -o Binary_Number_Increment_by_One } ; if ($?) { .\Binary_Number_Increment_by_One }  
Enter the number in Binary: 11011  
After Increment : 11100
```