HOMEWORK DAY: 05

03 September 2023 19:15

HW CLASS:05 03/09/23

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Homework programs:

```cpp
// Homework 01
#include<iostream>
using namespace std;

int main(){
    bool num=1;

    // Bitwise NOT
    cout<<(~num)<<endl; // -2

    return 0;
}
```

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```cpp
// Homework 02
#include<iostream>
using namespace std;

int main(){
    bool num1=1;
    bool num2=num1;

    // Bitwise NOT
    cout<<(~num2)<<endl; // -2

    return 0;
}
```

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```cpp
// Homework 03
#include<iostream>
using namespace std;

int main(){
    bool num1;
    bool num2=num1;

    // Bitwise NOT
    cout<<~num2<<endl; // -1

    return 0;
}
```

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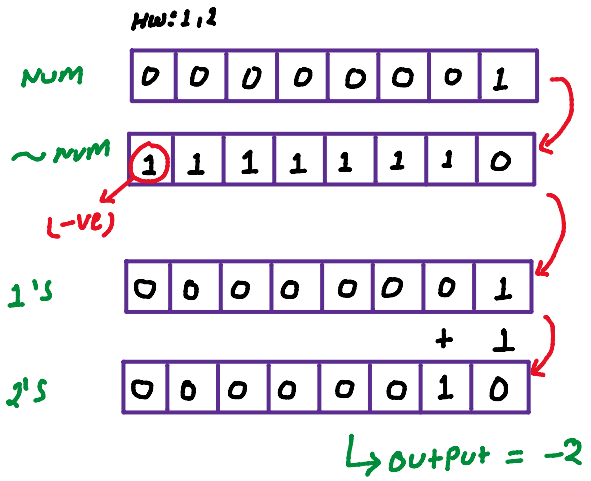
Note

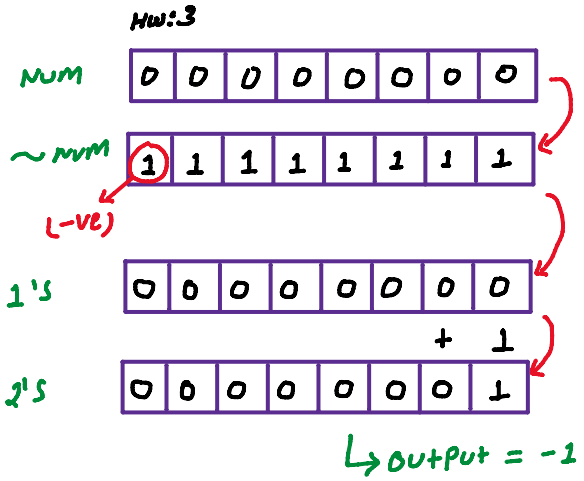
num = 1 → True (1)

num = 0 → False (0)

num = 2 → True (1)

- num contains greater than 0 or less then 0 then ~num always produces the output equal to -2 because true means 1.
- and num contains zero or nothing then ~num always produces the output equal to -1 because false means 0.





```cpp
// Homework 04
#include<iostream>
using namespace std;

int main(){
    int A=5, B=5;

    // Bitwise XOR
    cout<<(A^B)<<endl; // 0

    return 0;
}
```

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```cpp
// Homework 05
#include<iostream>
using namespace std;

int main(){
    int A=5, B=-5;

    // Bitwise XOR
    cout<<(A^B)<<endl; // -2

    return 0;
}
```

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```cpp
// Homework 06
#include<iostream>
using namespace std;

int main(){
    int A=5, B=10;

    // Bitwise XOR
    cout<<(A^B)<<endl; // 15

    return 0;
}
```

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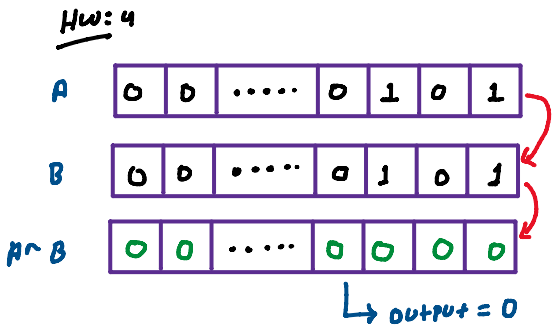

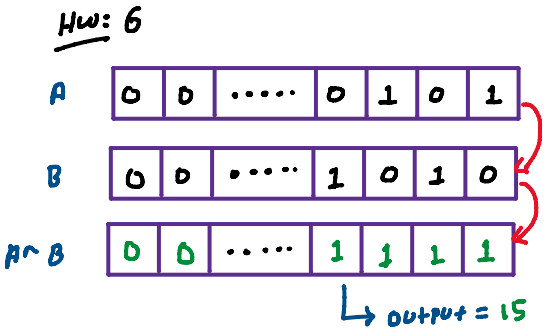

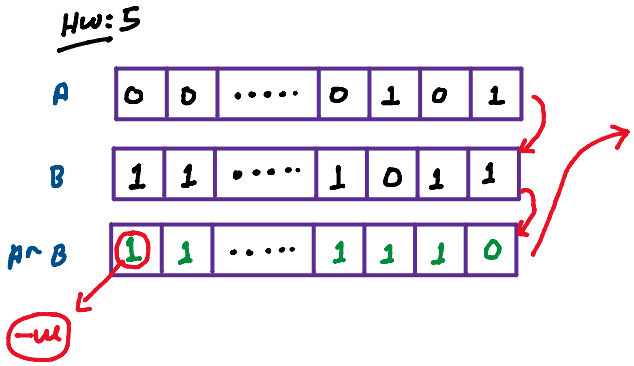

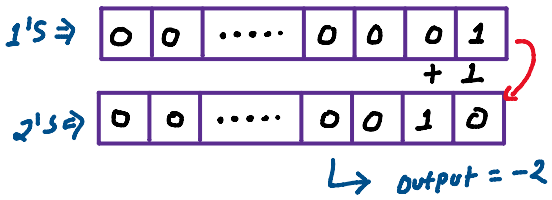

Why global variables are bad practice :

Global variables can be altered by any part of the code, making it difficult to remember or reason about every possible use.