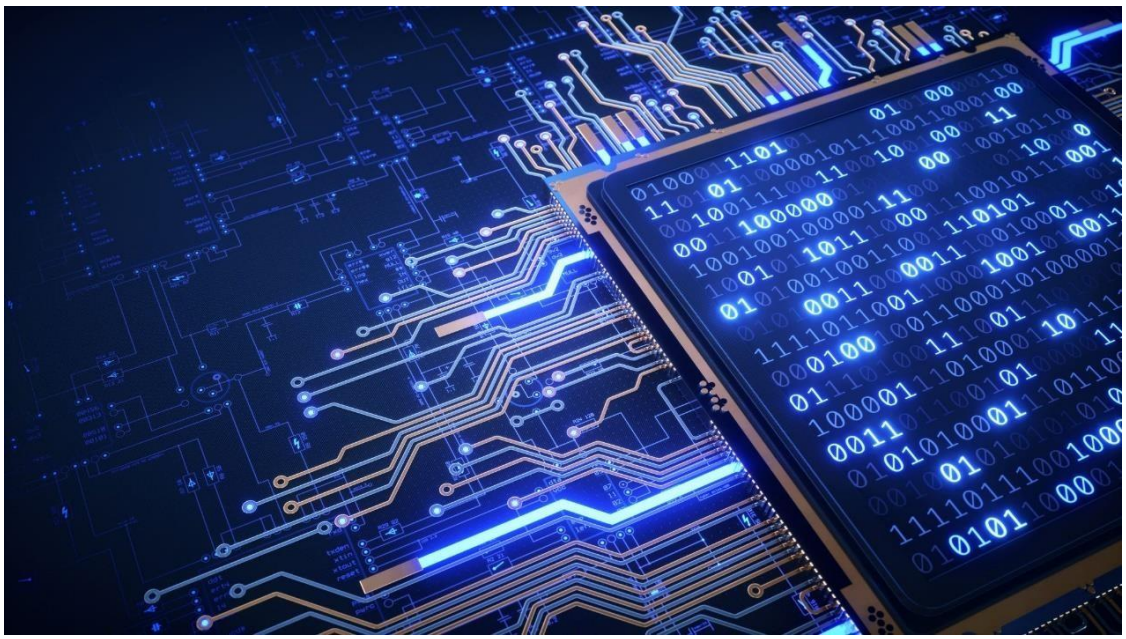
ADVANCED UNIX PROGRAMMING ASSIGNMENT REPORT

ASSIGNMENT 5



TEAM 9 — 林禾堃、馬毓昇、陳曦

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1. Code Implementation

First, in the main function, we create ‘val’ and set its value to 5. And then we try to get the address of ‘val’ from the f1 function.

```c
int main(){
    int val = 5;
    printf("Value %d is at %p\n", val, f1(&val));
    return 0;
}
```

In the modified f1 function, what actually matters is that we return int* type of ‘val’ such that we can get the address of it.

```c
int* f1(int *val){
    int num = 0;
    int *ptr = &num;
    if(num == 0){
        int val;
        val = 5;
        ptr = &val;
    }
    return val;
}
```

Lastly, we print the value and the address of ‘val’ in the main function as the sample output.

2. Results

```
root@genet0:~/Advanced-UNIX-Programming/HW5 # ./assignment5
Value 5 is at 0x811ff69c
```

3. Answer to the problem

The code is flawed because it attempts to access the integer 'val' through a pointer after the automatic variable 'val' is out of scope. Automatic variables declared within a compound statement only exist within the scope of that statement, which begins with an opening brace '{' and ends with a closing brace '}'.