

Homework Assignments

➤ Homework #05

- Overview

- **Released date:** 11/1 (Fri.)
- **Due date:** 11/8 (Fri.)
- **Where to submit:** to e-class (<http://eclass.seoultech.ac.kr>)
 - Late submission is not allowed.
- **Assigned score:** 1 points

1. Refer to the following source code.

```
#include <stdio.h>

unsigned long long fibonacci(unsigned long long n) {
    if(n == 0){
        return 0;
    } else if(n == 1) {
        return 1;
    } else {
        return (fibonacci(n-1) + fibonacci(n-2));
    }
}

int main() {
    unsigned long long i;
    unsigned long long n = 90;

    printf("Fibonacci of %lld: \n" , n);

    for(i = 0; i < n; i++) {
        printf("%lld ", fibonacci(i));
    }
    printf("\n");
    return 0;
}
```

Explain why the compiled executable from this source code takes so long time to produce the output.

2. Debug the executable file and using these command and capture the result.

```
break fibonacci
bt
x/5i $rip
x/20xg $rsp
break
info b
info r
```

3. Update the the source code to get the correct result.

- Submissions
 - Updated C file
 - Captured images to show the result