

[E/19/251](#)  
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QUESTION 1

```
#include <stdio.h>

#define RECURSION

#ifdef RECURSION
int fib(int n){
    // base case
    if(n==1) return 1;
    if(n==0) return 0;
    //Recursion
    return n+fib(n-1);
}

#else
int fib(int n){
    int result = 0;
    while(n>0){
        result+= n--;
    }
    return result;
}
#endif

int main(void){

    int f;
    for(int i=0;i<15;i+=2){
        f = fib(i);
        printf("\nFibonacci of %d is %d\n",i, f);
    }

}
```

## QUESTION 2

```
#include <stdio.h>
```

```
int bin2dec(char *dec_p) {
    int dec = 0;
    /*
    */
    while(*dec_p){
        //printf(". --> %d", (*dec_p-'0'));
        dec = dec*2 + (*dec_p-'0');
        dec_p++;
    }
    return dec;
}

int main(void) {
    char binNum1[] = "00100111";
    char binNum2[] = "00110111";

    int decNum1 = bin2dec(binNum1);
    int decNum2 = bin2dec(binNum2);

    printf("%s in binary is %d in decimal\n",binNum1, decNum1);
    printf("%s in binary is %d in decimal\n",binNum2, decNum2);
    return 0;
}
```