3. Develop a recursive function FIBO (num) that accepts an integer argument. Write a C program that invokes this function to generate the Fibonacci sequence up to num.

```
#include <stdio.h>
  int   FIBO(int num) {
    if (num == 0)
    return 0;
    else if (num==1)
    return 1;
    else
    return FIBO(num-1) + FIBO(num-2);
    }
int main() {
  int n;
  printf("Enter the number of terms in Fibonacci sequence: ");
  scanf("%d", &n);
printf("Fibonacci sequence up to %d terms:\n", n);
for(int i=0; i<n; i++) {
printf("%d", FIBO(i));
}
printf("\n");
return 0;
}
```

C exp6fibo.c > main()

```c

#include <stdio.h>

// Recursive function to find Fibonacci number at position num
int FIBO(int num) {
    if(num == 0)
        return 0;
    else if(num == 1)
        return 1;
    else
        return FIBO(num - 1) + FIBO(num - 2);
}

int main() {
    int n;

    printf("Enter the number of terms in Fibonacci sequence: ");
    scanf("%d", &n);

    printf("Fibonacci sequence up to %d terms:\n", n);
    for(int i = 0; i < n; i++) {
        printf("%d ", FIBO(i));
    }

    printf("\n");
    return 0;
}

```

```
PS C:\Users\abiga\OneDrive\Desktop\Absproj> cd "c:\Users\abiga\OneDrive\Desktop\Absproj\" ; if ($?) { gcc
exp6fibo.c -o exp6fibo } ; if ($?) { .\exp6fibo }
Enter the number of terms in Fibonacci sequence: 5
Fibonacci sequence up to 5 terms:
0 1 1 2 3
PS C:\Users\abiga\OneDrive\Desktop\Absproj>
```