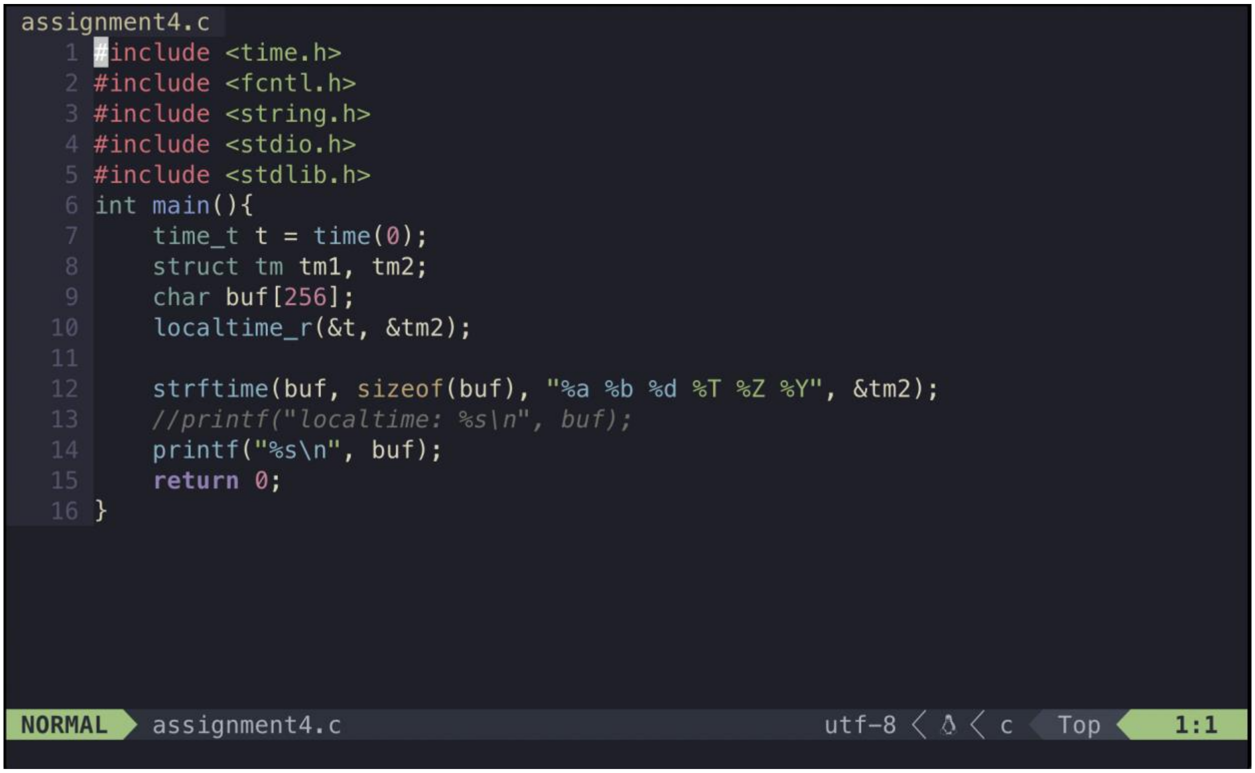
CS5243 Advanced UNIX Programming
Assignment 4 (4 pts)
Group 4

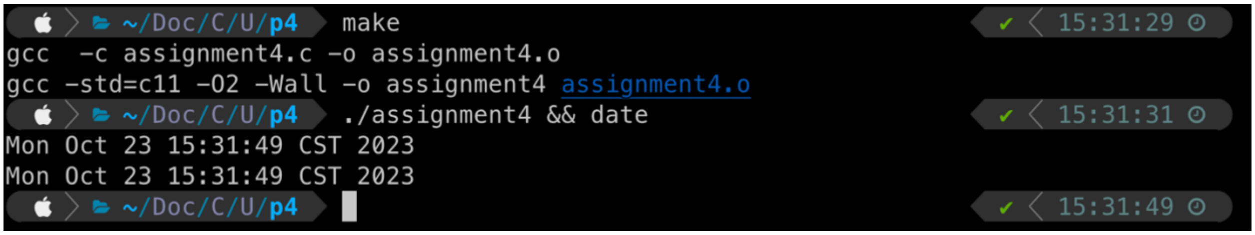
Screenshot of codes:



```c
#include <time.h>
#include <fcntl.h>
#include <string.h>
#include <stdio.h>
#include <stdlib.h>
int main(){
    time_t t = time(0);
    struct tm tm1, tm2;
    char buf[256];
    localtime_r(&t, &tm2);

    strftime(buf, sizeof(buf), "%a %b %d %T %Z %Y", &tm2);
    //printf("localtime: %s\n", buf);
    printf("%s\n", buf);
    return 0;
}
```

Screenshot of result:



```
~/Doc/C/U/p4  make                                      ✔  15:31:29
gcc  -c assignment4.c -o assignment4.o
gcc -std=c11 -O2 -Wall -o assignment4 assignment4.o
~/Doc/C/U/p4  ./assignment4 && date                     ✔  15:31:31
Mon Oct 23 15:31:49 CST 2023
Mon Oct 23 15:31:49 CST 2023
~/Doc/C/U/p4                                            ✔  15:31:49
```

1. We first declare a *time_t* variable *t*, which calculates the current time since January 1, 1970. Then, we declare *struct tm2*, representing a calendar time in several components (e.g., year, month).

2. In line 10, we call the *localtime_r* function to convert the time *t* into a local time representation, which is *tm2.*

3. Finally, we call *strftime* to format the *tm2* structure into a string. The formatted string includes abbreviated weekday name (*%a*), abbreviated month name (*%b*), day of the month (*%d*), time in HH:MM:SS format (*%T*), time zone abbreviation (*%Z*), which is CST (UTC+8), and the year (*%Y*). The formatted string is stored in the *buf* array.