

Group_7 Assignment_4 report

- Code
 - https://github.com/mygodimatomato/Advanced-UNIX-Programming_Student/tree/main/assignment4

Specifications

Write a program that obtains the current time and print it using **strftime**. The printed message should look like the output from **date(1)**. In your implementation, you should write your program **without directly using date(1) or any other similar command**. The following is the grading policy:

- (1) (2 pt) Write a program that prints the current time of **Asia/Taipei** time zone using **strftime**.
- (2) (1 pt) Change a time zone and show the output of the time zone you choose in your report.
- (3) (1 pt) Describe your implementation in your report.

- Below is our implementation :

```
time_t rawtime;
struct tm * timeinfo;
char buffer [80];

//Set the time zone to Asia/Taipei
setenv("TZ", "Asia/Taipei", 1);
tzset();

// Obtain the current time
time(&rawtime);

// Convert it to local time
timeinfo = localtime(&rawtime);

// Format the time using strftime
strftime(buffer, 80, "%a %b %d %H:%M:%S %Z %Y", timeinfo);
printf("%s\n", buffer);
```

- For the first request, we first use the `setenv` function to change the time zone to `Asia/Taipei`, and call the `tzset` function to initialize the time info.
- After the initialization, we use `time(&rawtime)` to obtain current time, and use `localtime` to change it to localtime.
- After obtaining the correct time, we use `strftime` to format the time to required format and print it out
- Below is the printed output

```
mygodimato@RPi400Group7:~/Advanced-UNIX-Programming_Student/assignment4 $ ./assignment4
Wed May 10 19:45:08 CST 2023
```

```
// Change the time zone to America/New_York
setenv("TZ", "PST8PDT", 1);
tzset();      Adam West, last week * finish the assignment4.c
// Obtain the current time again
time(&rawtime);

// Convert it to local time
timeinfo = localtime(&rawtime);

// Format the time using strftime
strftime(buffer, 80, "%a %b %d %H:%M:%S %Z %Y", timeinfo);
// printf("%s\n", buffer);
```

- For the second part, we decide to change the time to Berkeley, California since BSD is developed in the place.
- The different part of the code is that we the timezone parameter in `setenv` is `PST8PDT`, which is because they have daylight saving.
- Below is the output that we printed out Taipei time and Berkeley time

```
mygodimato@RPi400Group7:~/Advanced-UNIX-Programming_Student/assignment4 $ ./assignment4
Wed May 10 19:45:08 CST 2023
Wed May 10 04:45:08 PDT 2023
```