

CS xyz3-001 Foundations of Programming and Data Structures

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Homework 1

Due date: check BB

!!!! NO LATE HOMEWORK WILL BE ACCEPTED !!!

This homework/assignment is to make sure that you can follow the directions in hw01-linux_intro_c.pdf file to create a directory (abc123-hw01) on the Linux system, create/edit files in that directory, zip the directory, and submit the abc123-hw01.zip file successfully through BB Learn.

!!!!!! “abc123” should be your own student id, abc123. !!!!!!

First, practice the instructions in hw01-linux_intro_c.pdf and make sure you feel comfortable using Linux system. Then perform the following tasks for this homework.

Here are the specific steps

1. Create a directory abc123-hw01, using your own abc123

```
> mkdir abc123-hw01
```

2. Create some files in abc123-hw01 :

```
> cd abc123-hw01
```

Create/edit **hw01.c**,

```
> vi hw01.c
```

As the first line, type your name as a C comment.

Then, type the program that converts Centigrade to Fahrenheit, as described in page 5 of hw01-sup_linux_intro_c.pdf, and given below:

```

/* Your Name Lastname */

#include <stdio.h>

#include <stdlib.h>

int main(int nargs, char **args)
{
    double temp_c,      /* temperature in Centigrade */
    temp_f;             /* temperature in Fahrenheit */

    /*
     * Prompt for centigrade temperature
     */
    printf("What is the temperature in Centigrade? ");
    scanf("%lf", &temp_c);

    /*
     * Convert it to Fahrenheit
     */
    temp_f = 9.0*temp_c/5.0 + 32.0;
    printf("%.2f degrees Centigrade is %.2f degrees in Fahrenheit",
           temp_c, temp_f);

    return 0; /* signal normal end of program */
}

```

3. Compile and run it

```

> gcc hw01.c -o hw01
> ./hw01

```

```

What is the temperature in Centigrade? 100
100.0000 degrees Centigrade is 212.0000 degrees in Fahrenheit

```

4. Copy the output on the screen and paste it into output01.txt

```

> vi output01.txt
> ls
hw01.c hw01* output01.txt

```

5. Remove executable file

```

> rm hw01
> ls
hw01.c hw01* output01.txt

```

6. Zip the whole directory

```
> cd ..  
> zip -r abc123-hw01.zip abc123-hw01
```

7. Go to BB Learn (<http://learn.utsa.edu/>) , login using your abc123

8. Submit your abc123-hw01.zip for hw01 under Assignments

Note: These are the major steps you will be following when submitting the other assignments.