

**Exercise 1. Creating your CSC215 directory:**

- 1.1. Launch one of the following:
  - The terminal (U:unix-like)
  - Or the command line (W:windows).
- 1.2. It will open in your home directory.
- 1.3. To create a new directory with the name "CSC215", type the command:
  - `mkdir CSC215` then ↵ (U)
  - `md CSC215` then ↵ (W)
- 1.4. To view the current files and folders type:
  - `ls` ↵ (U)
  - `dir` ↵ (W)
- 1.5. You will be able to see your newly created directory.
- 1.6. To enter the directory "CSC215" type:
  - `cd CSC215` ↵
- 1.7. Using what you just learned, create a new directory with the name "Lab01" inside "CSC215" and let it be the current working directory. (1 point)

**Exercise 2. Writing your first C program:**

**2.1. PART 1 : Creating the program file using emacs:**

While in the terminal, inside the directory "Lab01", type:

- `emacs hello.c` ↵ (U)
- `notepad hello.c` ↵ (W)
- or launch your preference of text editors, to create a new document titled "hello.c" (Optional)

- 2.2. Save the file on the disk.
- 2.3. Close the text editor application.
- 2.4. Reopen the file "hello.c" in the text editor. (1 point)
- 2.5. **PART 2 : Writing the program using emacs:**  
Make sure you Opened the file "hello.c" in a text editor
- 2.6. Then type the following c code:

```
#include <stdio.h>
int main(){
    puts("Hello World !");
    return 0;
}
```

- 2.7. Save your work.
- 2.8. Close the editor.
- 2.9. In the terminal, view your files (using `ls` command) and make sure that "hello.c" is created and updated.

**Exercise 3. Compiling your first c program using GCC:**

3.1. While in the terminal, in directory "Lab01", type:

```
■ gcc -Wall -ansi -o hello hello.c
```

If your program contains no errors this will produce a file: "hello" in the current directory.

3.2. Run the program hello by typing:

```
■ ./hello
```

3.3. Modify the 4th line in "hello.c" to: `puts("Hello World !\n");`

Then, recompile and run.

(1 point)

3.4. Modify the 4th line in "hello.c" to: `printf("Hello World !");`

Then, recompile and run.

(1 point)

**Exercise 4. Using printf with char and int arguments:**

4.1. Create a new c file named "ex4.c"

4.2. Type the following program and save it:

```
#include <stdio.h>

int main(){
    char letter = 'b';
    printf("%c\n", letter);
    printf("%d\n", letter);
    printf("%c\t%d\n", letter, letter);
    return 0;
}
```

4.3. Compile and run.

4.4. Record your output.

4.5. Modify the program by adding the following statement right before return line:

```
printf("%c\t%c\n", letter, letter+15);
```

4.6. Compile and run.

4.7. Record your output.

4.8. Explain the last result.

(1 point)

**Lab assignment:**

(5 points)

Write a C program that declares a char variable, say, `ch`, and initializes it to any lowercase letter, ex: `ch = 'b'`

The program should:

1. print the character `ch`.
2. print in a new line the **three** characters that follow the `ch` character in the alphabetical order.

**Note:** In your answer don't change the value of `ch` and don't use any other variable.

**Expected output:**

```
CH = b
```

The following three characters are: c d e