COMP2100 Lecture 1.1 Handout

Abstraction vs Reality

1. Which of the following abstractions correspond exactly to the reality? Why or why not?

Abstraction	**Reality**
Integer	int
Written letters, numbers and symbols	char
Boolean	int
Complex number	Pair of float numbers
An arbitrary ASCII text string	An array of char

2. Why do you think that we use abstractions, even when they are not exactly correct?

COMP2100 Lecture 1.2 Handout

Unix Command Line Interface (CLI)

Command	Function
`ls`	lists the contents of a directory
`pwd`	prints the current working directory
`cd`	changes directories
`mkdir`	creates a directory
`rmdir`	removes a directory (assuming it is empty)
`touch`	creates an empty file, or if exists it modifies the timestamp
`rm`	removes a file
`mv`	moves a file, or renames a file
`cp`	copies a file, leaving the original intact

Consider your home directory in `ash/iceberg`

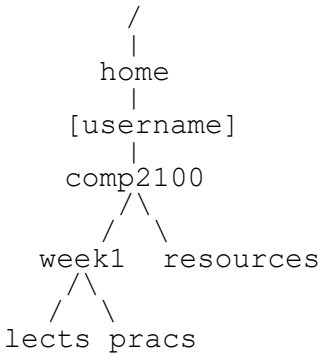
```
/home/[username]
```

1. What Unix command would you use to list files in your home directory?

2. Consider the following list of files in your home directory. Store these files in a more organised manner

```
hello.c
lecture1-1.pdf
lecture1-2.pdf
C for Java programmers.pdf
```

   a. Create `comp2100`, `week1`, `lects`, `pracs` and `resources` directories as below:



   b. Copy those four files to different directories as follows:

      i) `lecture1-1.pdf` and `lecture1-2.pdf` to **`lects`**

      ii) `hello.c` to **`pracs`**

      iii) `"C for Java programmers.pdf"` to **`resources`**

   c. Change directory name: `week1` to `week01`

COMP2100 Lecture 1.3 Handout

Basics of C

1. What is the output of the following program code?

```
int x = -5;
if (x)
    printf ("Hello\n");
else
    printf ("Goodbye\n");
```

2. Write the procedure sum that is called in the following code. The function simply adds two numbers together – this question is about defining functions and parameters.

```
long int x, y, z;
z = sum(x, y);
```

Printing

Suppose a date is stored in variables as follows:

```
int mday = 7;
char month[] = "July";
int year = 2023;
```

3. Write a `printf` statement to print the date out as “7 July 2023”.

4. Write a `printf` statement to print the date out as “2023-Jul-27”.