Computer programming

Section 4

Agenda

- Good programming style.
- Program

Good programming style

- Indentation

```
int main (){
    int i = 0;
    while (i<=10){
        if(i<=5){
            for(int j = 0 ; j<=10; j++){
                //for Loop
            }
            //if block
        }
        //Inside while
    }
    //Outside while

}
```

Good programming style

- Variable naming
  - Give variables meaningful names.(**Don't** always use names like **"x"**, **"y"** or **"z"**)
  - If the variable name is more than one word use one of the following techniques.

int noOfJoints, noOfLoops; **OR** int no_of_joints, no_of_loops;

        camelCase   Underscore

Good programming style

- Add comments to your code (Meaningful comments)

```cpp
#include <iostream>
using namespace std;
/* You can Add comments as block comments.
 * It's very useful to add a description of what your program
 * do at the beginning of your code.
 *
 */
int main (){
//You can also add comment line for explaination of
//some piece of code that needs more clarification
   }
```

Use "/*" to start comment block & "*/" to end the comment block

Use double forward "//" slashes to start a comment line

Exercise (1)

- The LM35 is commonly used temperature sensor in Mechatronic applications. The sensor output is 10mV for each degree Celsius. Write a program that reads in the output of the sensor from the user and displays the temperature in both Celsius and Fahrenheit. Use floating-point numbers for all computations.

Hint: Fahrenheit = Celsius*(9/5) +32

Exercise(2)

- The temperature sensor in Exercise(1) is used to make thermal control on a room. Write a program that read the temperature and print the status of the cooler and the heater

Temperature range	Actions
More than 30 Celsius	Turn on the cooler
Less than 10 Celsius	Turn on the heater
Otherwise	Turn off the heater and the cooler

Exercise (3)

- Write a program fragment that uses nested loops to produce the following output:

1
12
123
1234
12345
123456
1234567
12345678
123456789

Assignment

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- Sign up to soloLearn website (App) and finish module 1 and module 2.
- Send screenshot or link showing your progress and score.