



Practical 1 (Week 2)

The purposes of this practical are:

- Learn how to use C++ IDE.
- Understand and write simple C++ programs.

Task 1.1: Learn to use C++ IDE

Use any C++ IDE such as Eclipse C++, Dev C++, Code::Blocks, Visual C++, or xCode to create a C++ project and type the following code in the IDE editor. Run the code.

```
#include<iostream>
using namespace std;

int main() {
    cout << "Welcome to OOP class.";
    return 0;
}
```

Task 1.2:

Write a Java program that takes an input of your name and age, and output them. Translate your Java code into C++. If you do not know how to write the program in Java, try directly in C++.

Task 1.3:

Write a C++ program that uses while loops to perform the following:

- a) Prompt the user to input two integers: *firstNum* and *secondNum*.
- b) If *firstNum* is larger than or equals to *secondNum*, ask for input them again; otherwise, do the following.
- c) Output all odd numbers between *firstNum* and *secondNum*.
- d) Output the sum of all even numbers between *firstNum* and *secondNum*.

Task 1.4:

Write a nested **for** loop that prints out a multiplication table for the integers 1 through 10.

Task 1.5:

Read the following program, copy-and-paste it to a C++ IDE, run it and explain the meaning of the code to your tutor (Note that you may find some syntactical errors after copying and pasting the code to your IDE. Fix these errors and run it).

```
#include <iostream>
#include <cstdlib>

using namespace std;
```

```

int main( )
{
    int month, day;
    cout << "Welcome to your friendly weather program.\n"
        << "Enter today's date as two integers for the month and the day:\n";

    cin >> month;
    cin >> day;

    srand(month*day);

    int prediction;
    char ans;

    cout << "Weather for today:\n";

    do
    {
        prediction = rand() % 3;
        switch (prediction)
        {
            case 0:
                cout << "The day will be sunny!!\n";
                break;

            case 1:
                cout << "The day will be cloudy.\n";
                break;

            case 2:
                cout << "The day will be stormy!.\n";
                break;

            default:
                cout << "Weather program is not functioning properly.\n";

        }

        cout << "Want the weather for the next day?(y/n): ";
        cin >> ans;

    } while (ans == 'y' || ans == 'Y');

    cout << "That's it from your 24 hour weather program.\n";
    return 0;
}

```

Task 1.6 (optional):

Write a program for the following numerical game:

The computer stores a random number between 1 and 15 and the player (user) attempts to guess it. The player has a total of three attempts. After each wrong guess, the computer tells the user if the number was too high or too low. If the third attempt is also wrong, the number is output on screen.

The player wins if he or she can guess the number within three attempts. The player is allowed to repeat the game as often as he or she wants.