

**Department of Computer Engineering**  
**Faculty of Engineering, University of Jaffna**  
**EC2010 – Computer Programming**  
**Lab 01**

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**Date: 18 September 2020**

**Duration: 3 Hours**

**Instructions:**

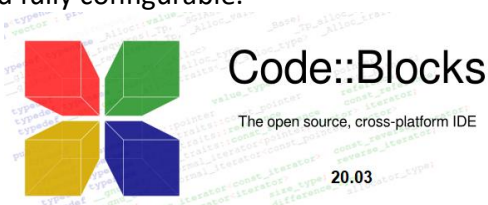
- Any plagiarized work will be given **0** marks.
  - Submit your lab work as a zip file named **LAB01\_20YYEXXX** (20YYEXXX – Your Registration Number) **on/before the given deadline** via teams.
  - The zip file should contain all “.cpp” code files and your report.
  - Prepare your lab report with the snippets of the **COMPLETE CODE** and the corresponding outputs. The code **must be** in text format not screen shots.
  - Failure to adhere to any of the above instructions may also result in zero marks.
  - The .cpp file **MUST** be named ‘Q1’, ‘Q2’, ‘Q3’, ‘Q4’ and ‘Q5’ appropriately. Do not modify these names in any manner.
  - **Do not** even annex your index number to the file name. **Do not** change case.
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## **Applications of C++ Programming**

- Embedded System
- Games Development
- Computation Programming
- Application Software Development

## **Code Blocks**

**Code::Blocks** is a free C, C++ and Fortran IDE built to meet the most demanding needs of its users. It is designed to be very extensible and fully configurable.



## How to write a C++ program in Code Blocks IDE

### Console Application in Code Blocks

To compile and run simple console applications such as those used as examples in these tutorials it is enough with opening the file with **Code::blocks** and hit F9. As an example,

**Step 1:** File -> New -> Empty File

**Step 2:** There writes the following example:

```
#include <iostream>
using namespace std;
int main()
{
    cout << "Hello UOJ";
    return 0;
}
```

**Step 3:** File -> Save file as...

(And save it with some file name with a **.cpp** extension, such as **example.cpp**)

**Step 4:** Now, hit F9 to compile and run the program.

### EXERCISES

Q1) write a program to get the following outputs.

a. Write `\t` - horizontal tab between last 3 digits of your index number

```
X      X      X
```

5 marks

b. Write `\n` -newline using last 3 digits of your index number each number in new line

```
X
X
X
```

5 marks

Q2) write a program to print the following lines.

```
Hi, this is (your index number)
My home town is (your home town name)
```

10 marks

Q3) write a program to read a student's index number and marks of 3 subjects (EC2010, EC2020, EC2030) from the console and display the output as shown below.

```
Please enter Your ID number: 20xxEyyy
Please enter subject 1: EC2010
Please enter marks: 88
Please enter subject 2: EC2020
Please enter marks: 89
Please enter subject 3: EC2030
Please enter marks: 89

Your ID number is: 20xxEyyy

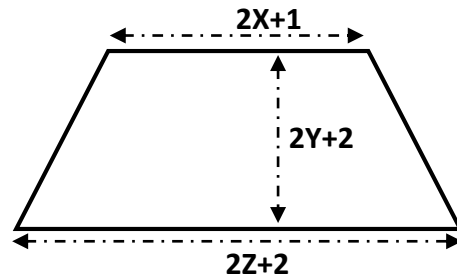
      subject      marks
      -----
      EC2010       88
      EC2020       89
      EC2030       89

total = 266
average = 88.6667

Process returned 0 (0x0)   execution time : 46.943 s
Press any key to continue.
```

20 marks

Q4) write a program which reads the following parameters (X, Y, Z) of this trapezoid as an input from the user and print the area as an output.



XYZ – last three digit of your  
index number

20 marks

Q5) write a code to get the following details of a mobile phone via console and print them.

- Brand
- Model
- Display size
- OS version
- Internal memory
- Battery capacity
- Main Camera MP

20 marks