# Getting Started

Workshop 1 (out of 10 marks - 1% of your final grade)

In this workshop, you will code and execute a C-language program using a Visual Studio Integrated Development Environment (IDE).

## LEARNING OUTCOMES

Upon successful completion of this workshop, you will have demonstrated the abilities:

- to use Visual Studio to code, edit and execute a C-language program
- to login to a remote host using an SSH client
- to transfer source code between a local computer and a remote host using an SFTP client
- to describe to your instructor what you have learned in completing this workshop

## SUBMISSION POLICY

Your workshops are divided in two sections; in_lab and at_home.

in_lab  section is to be completed **during your assigned lab section**.  It is to be completed and submitted by the end of the workshop.  If you do not attend the in_lab                                      at_home
30% late deduction will be assessed).        at_home                        **due the day before your next scheduled workshop**

**All your work (all the files you create or modify) must contain your name, Seneca email and student number.**

You are responsible for regularly backing up your work.

## IN-LAB:  (30%)

For the in-lab part you are to write a C program that displays

```
>*** Welcome to C Programming ***<
```

on a separate line (only the part between > and < and highlighted in yellow).

## Prepare a Visual Studio Solution on your local Computer

Create a Visual Studio 2017 project using the following instructions:

- Start Visual Studio 2017
- Select File → New → **Project…**
- Select Visual C++ → Windows Desktop → **Windows Desktop Wizard**
- Enter Workshop1 as the Project Name | Select OK
- Set Application Type:  **Console Application (.exe)**
- Uncheck **Precompiled Header**
- Uncheck **Security Development Lifecycle (SDL) checks**
- Check **Empty Project** | Click OK
- Select Project -> Add New Item
- Select Code | C++ file | Enter w1_lab.c as the File Name | Press OK
    - *Make sure the file extension is ALWAYS ".c". This forces Visual Studio to use the C compiler.*
- Enter your source code
- Select Build | Build Solution
- If unsuccessful, fix your errors and then Select Build | Build Solution (Or <Ctrl>+<Shift>+B)
- If successful, Start without Debugging (Or <Ctrl> + F5)

## Test your Solution on the Remote Host (Matrix)

Once your Visual Studio solution runs successfully, test your source file on matrix using the following instructions

- Open an SSH client like putty

- Login to matrix.senecac.on.ca

- Enter your userid and password

- create a directory named w01 and change into that directory
    - `mkdir w01 <ENTER>`
    - `cd w01 <ENTER>`

- Open an SFTP client like WinSCP

- Login to matrix.senecac.on.ca

- Enter your userid and password

- Transfer your source file from your local computer to the directory named w01

    - *Make sure the files are transferred in text and not binary, change the transmission setting from automatic to text.*

- Compile and run your solution on matrix
    - `gcc w1_lab.c –o w1 <ENTER>`
    - `w1 <ENTER>`

Make sure the output is exactly as required: **`*** Welcome to C Programming ***`**

## IN_LAB SUBMISSION:

If not on matrix already, upload your `w1_lab.c` file to your matrix account (see SFTP instructions above). Compile and run your code and make sure that everything works properly.

Then, run the following script from your account: (replace profname.proflastname with your professor s Seneca userid)

```
~profname.proflastname/submit 144_w1_lab <ENTER>
```

and follow the instructions.

## AT_HOME: TITLE (30%)

For the at_home part of your submission, you are to upgrade your program to display:

```
>*******************************<
>*** Welcome to C Programming ***<
>*******************************<
```

Save your solution in a source file named w1_home.c

## AT-HOME REFLECTION (40%)

In 3 or 4 sentences describe in your own words what you have learned in completing this workshop in a text file named `reflect.txt.`

Note: when completing the workshop reflection it is a violation of academic policy to cut and paste content from the course notes or any other published source, or to copy the work of another student.

## AT_HOME SUBMISSION:

If not on matrix already, upload your `w1_home.c, reflect.txt` to your matrix account (see SFTP instructions above). Compile and run your code and make sure everything works properly.

Then run the following script from your account: (replace profname.proflastname with your professors Seneca userid)

```
~profname.proflastname/submit 144_w1_home <ENTER>
```

and follow the instructions.