|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | eLab Book  Fundamentals of Programming  WE2.0  Maurice Finan   |  |  | | --- | --- | | *Date :* | Monday, 05 November 2012 | | *Last Lab* |  | |  |  | | *Version:* | *1* | | *Status:* | *Release* | |  |  | |  |  | |  |  | |

Document Control

|  |  |  |
| --- | --- | --- |
| Contributors | | |
| **Name/Position** | **Organization** | **Contact Details** |
| Maurice Finan |  | maurice.finan@webelevate.ie |
|  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Version History | | | |
| **Date** | **Version** | **Status** | **Comments** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |
| --- |
| Changes since last version |
|  |

|  |
| --- |
| Known Omissions |
|  |

Development Approach

**STAGE 1: Before writing code your code design should be documented in the eLabbook as follows:**

1. Problem Definition
   * What is the objective
   * What is the program to do
2. Design
   * Draw a picture of the execution steps
   * Write down in words the execution steps
   * Draw the design Object or Class diagrams
3. Test Cases (how will you test it)
   * Write what you will use for testing that it runs and creates the right answer
     + Test Case 10 : 1 + 1 = 2 Simple Case
     + Test Case 20: 5 + 9 = 14 Normal Case
     + Test Case 30: 0 + 9 = 9 Edge condition
     + Test Case 40 : 5 + 0 = 5 Edge condition

*If this was division we could have division by zero issues and very small answers*

* + - Test Case 50 : 166666666666 + 788777777777777 = 788944444444443 test the very big

**STAGE 2: Once you have documented your approach you should proceed to do the following:**

1. Write Code
   * Step by step, on piece of functionality at a time, get it working, save a copy of that working version ***addTwoNumbers\_v1.code*** in your \_Attic directory, add the next bit of functionality
2. Test Code with test cases
   * Debug the code, change ONLY ONE thing at a time, KEEP SAVING VERSIONS

**STAGE 3: The code once written should be documented in the eLabBook under the following headings:**

1. Code
   * Insert the code into the eLabBook
2. Screens
   * Take snapshots of the program screens and copy them into the eLabBook
3. Test Records
   * Records of the tests you performed and the results
4. documentation
   * How to use the program documentation
   * Object and class diagrams showing the implementation
5. References
   * Any websites or code you looked up or used in the creation of your program

Table of Contents

[1 Lab 01: My CV 6](#_Toc338891578)

[1.1 Who am I 6](#_Toc338891579)

[1.2 Have you have done any programming before and if so, in what language and what did you build 6](#_Toc338891580)

[1.3 What is your favourite Website, App and software – Why? 6](#_Toc338891581)

[1.4 What piece of software, app or website do you wish you had created or would like to create? 6](#_Toc338891582)

[1.5 Your hobbies and interests 6](#_Toc338891583)

[1.6 An interesting fact about you 6](#_Toc338891584)

[2 Lab02 : Description 7](#_Toc338891585)

[2.1 Problem definition 7](#_Toc338891586)

[2.2 Design 7](#_Toc338891587)

[2.3 Test cases 7](#_Toc338891588)

[2.4 Code 7](#_Toc338891589)

[2.5 Screens 7](#_Toc338891590)

[2.6 Test Records 7](#_Toc338891591)

[2.7 Documentation 7](#_Toc338891592)

[2.8 References 7](#_Toc338891593)

[3 Appendix 8](#_Toc338891594)

[3.1 Problem definition 8](#_Toc338891595)

[3.2 Design 8](#_Toc338891596)

[3.3 Test cases 8](#_Toc338891597)

[3.4 Code 8](#_Toc338891598)

[3.5 Screens 8](#_Toc338891599)

[3.6 Test Records 8](#_Toc338891600)

[3.7 Documentation 8](#_Toc338891601)

[3.8 References 8](#_Toc338891602)

# Lab 02: My CV

## Who am I

Name Maurice Finan

Photo

DIT Student No

E-Mail maurice.finan@webelevate.ie

## Have you have done any programming before and if so, in what language and what did you build

1991 – One year course in COBOL and C

## What is your favourite Website, App and software – Why?

## What piece of software, app or website do you wish you had created or would like to create?

## Your hobbies and interests

## An interesting fact about you

# Lab02 : Description

## Problem definition

1.Create a SCRATCH program to ask the user for three numbers.

2.Sum the three numbers

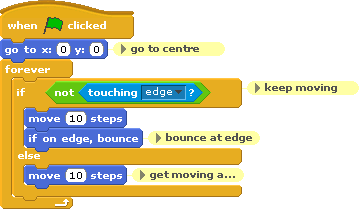
3.And say the answer

## Design

## Test cases

Tested with large and small numbers, positive and negative

## Code



## Screens

## Test Records

## Documentation

## References

# Appendix

**Program Design and Implementation Template**

## Problem definition

## Design

## Test cases

## Code

## Screens

## Test Records

## Documentation

## References