

**Project Report 3**

Project report

November 2021

Software Engineering

**ABSTRACT**

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Project report 3

Programing Language 3 report 13 pages

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The purpose of this report was to summary solutions for project 3.

Key words:

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# INTRODUCTION

* The project was written by C++ and used GNU C++ compiler.

## Building Project

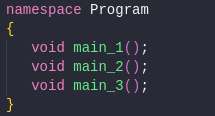
* For running this project, there are 2 options:
  + Using GNU:
    - Installed g++ on your system first.
    - Command:
      * g++ \*.cpp -o p && ./p
  + Using Meson[1]:

The source code included Meson build configuration and tutorial on this GitHub repository:

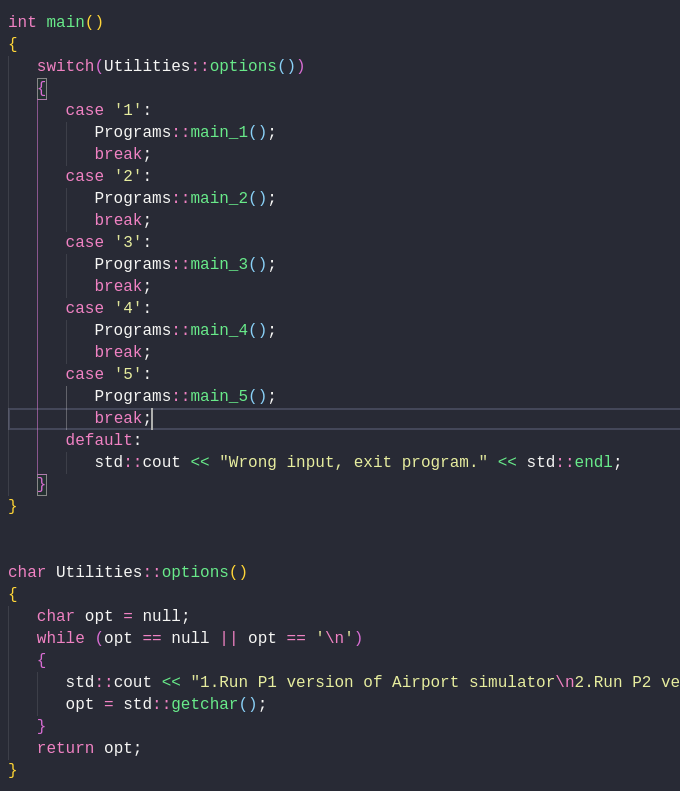
<https://github.com/minhdangphuoc/Searching-and-Sorting-Testped-Program>

## **Program structure design**

- I organizes Main() variations inside a namespace “Programs”



- Option Picker



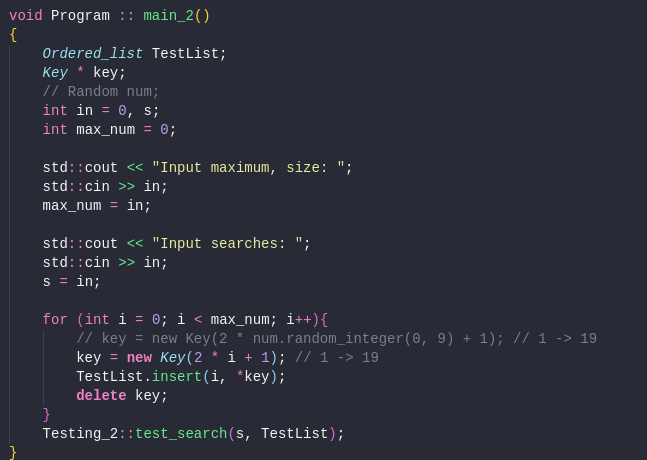
- Main() function



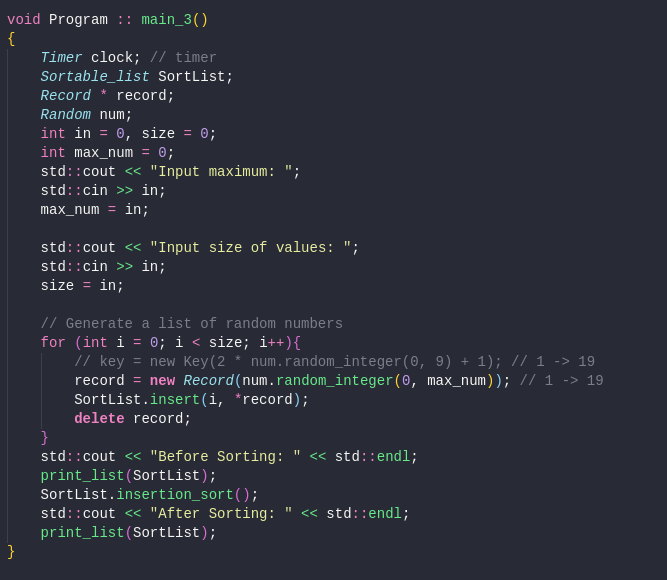
- Main\_1() function



- Main\_2() function



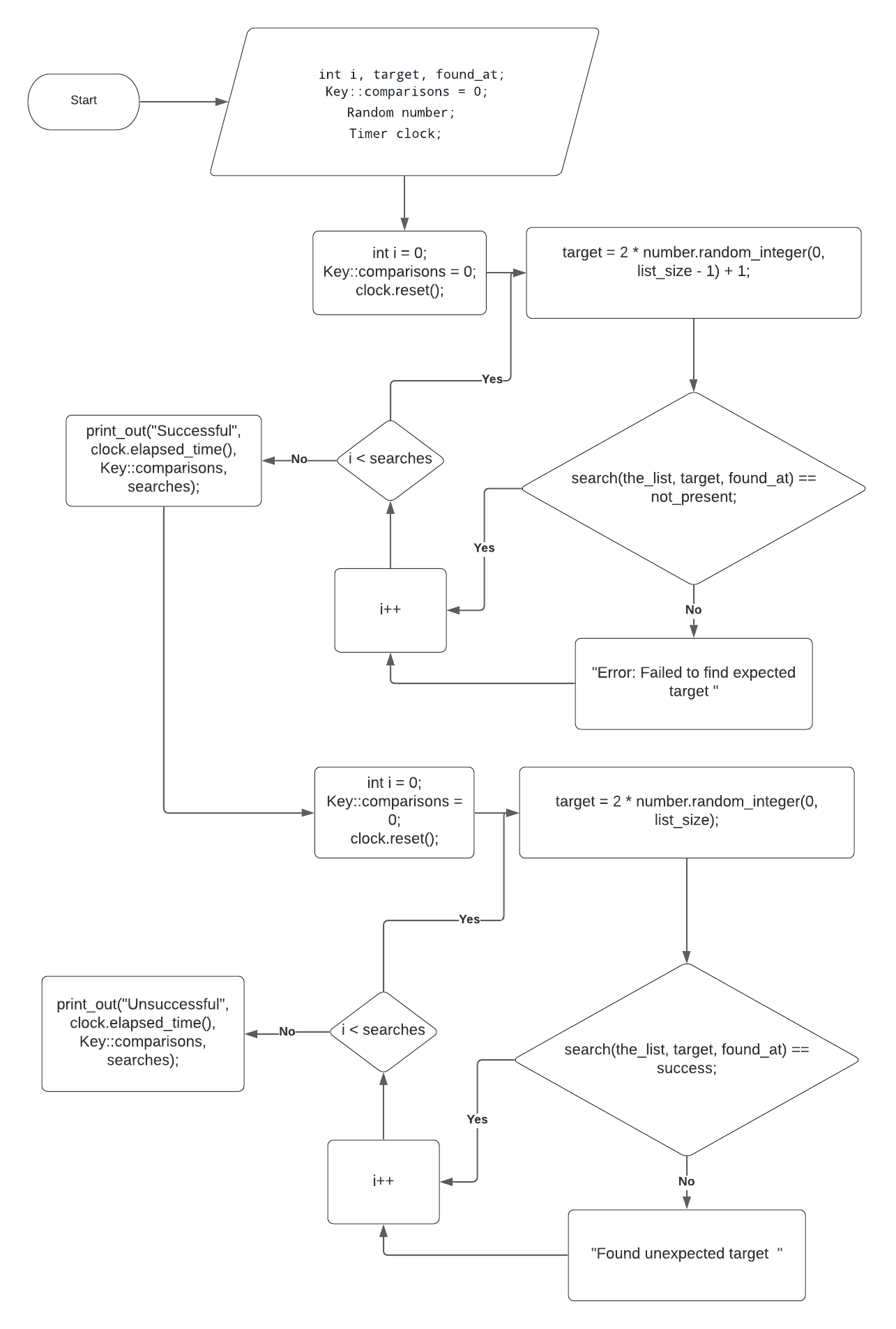
- Main\_3() function



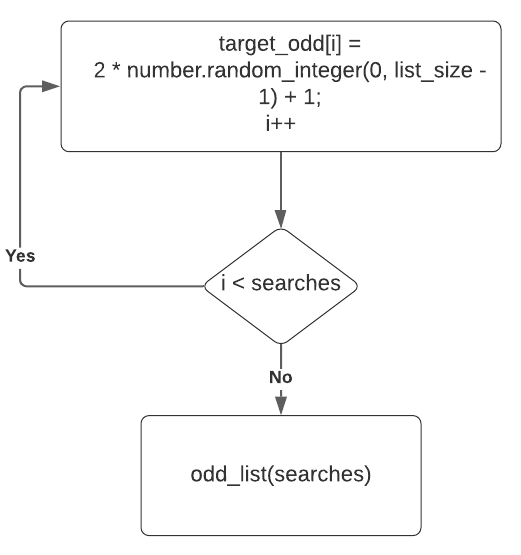
# METHOD

## **Diagram**

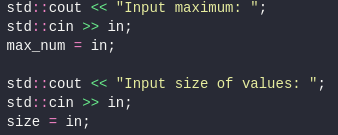
1. Group 1



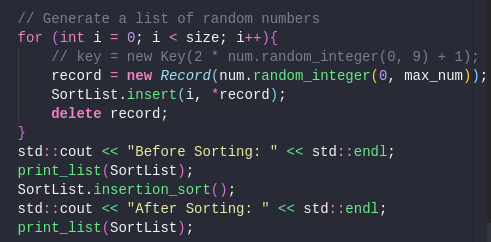
1. Group 2



1. Group 3
   1. Input maximum value and size of list



* 1. Processing part



Using test cases for solving and testing algorithms for each programs.

## Test cases for Group 1:

|  |  |  |
| --- | --- | --- |
|  | Sizes | Searches |
| Test 1 | 100 | 10 |
| Test 2 | 1000 | 10 |
| Test 3 | 10000 | 20 |

## Test cases for Group 2:

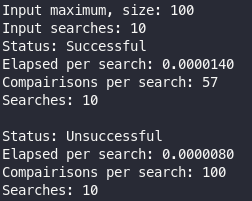
|  |  |  |
| --- | --- | --- |
|  | Sizes | Searches |
| Test 1 | 100 | 10 |
| Test 2 | 1000 | 20 |
| Test 3 | 10000 | 30 |

## Test cases for Group 3:

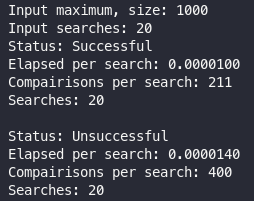
|  |  |  |
| --- | --- | --- |
|  | Sizes | Maximum |
| Test 1 | 500 | 10000 |
| Test 2 | 1000 | 10000 |
| Test 3 | 2000 | 10000 |

# RESULTS

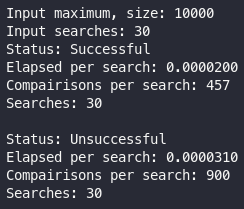
1. Group 1
   1. Test 1



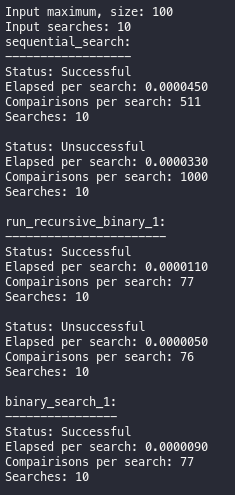
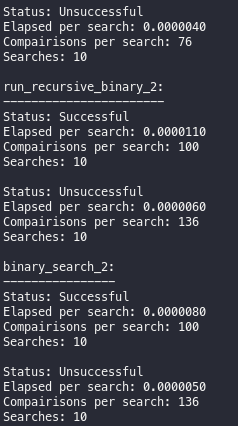
* 1. Test 2



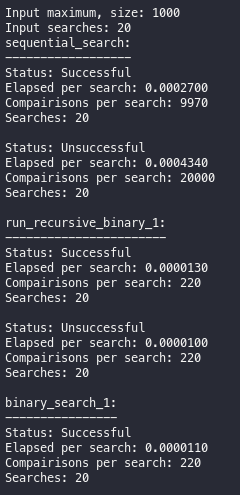
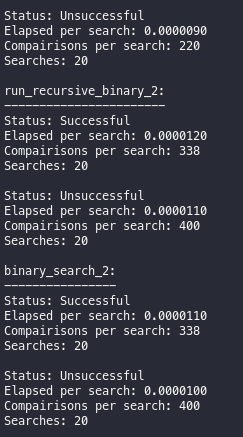
* 1. Test 3



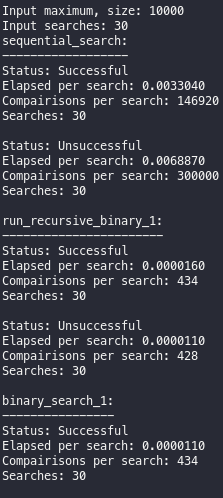
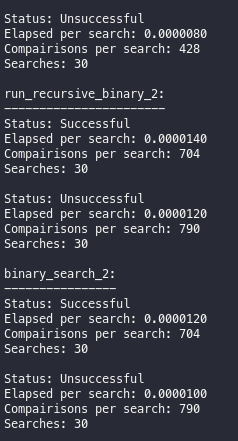
1. Group 2
   1. Test 1

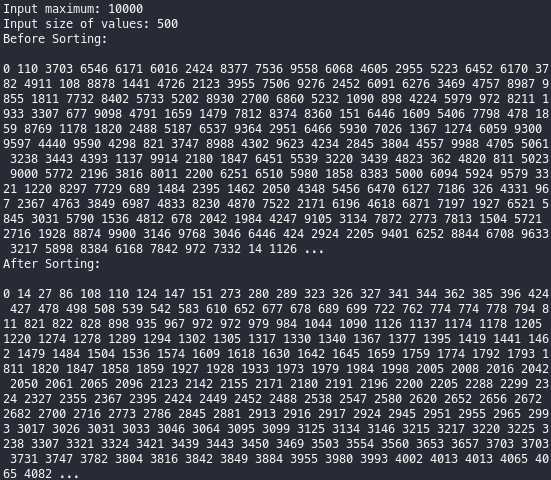
* 1. Test 2

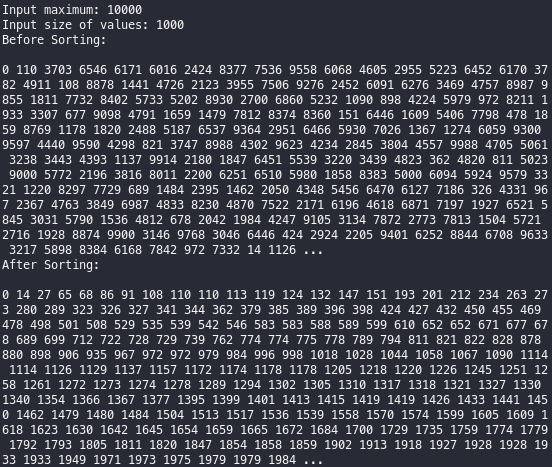
* 1. Test 3

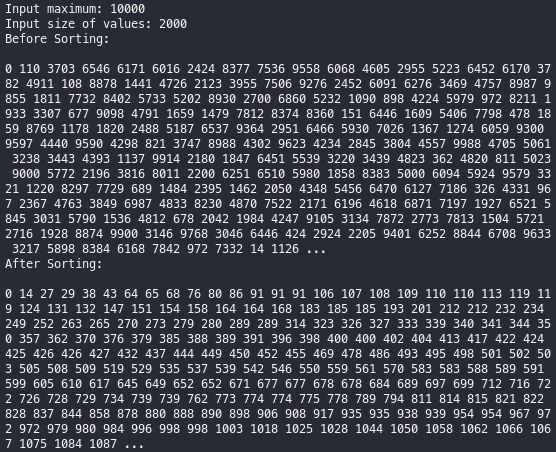
1. Group 3
   1. Test 1



* 1. Test 2



* 1. Test 3



# WORKING HOURS

|  |  |  |
| --- | --- | --- |
| Date | Task | Duration |
| 29/11/2021 | Download Source Code on Moodle | 10m |
| 29/11/2021 | Edited base code and library for the first requirement. | 1h |
| 29/11/2021 | Finished first requirement | 20m |
| 4/12/2021 | Edited base code and library for the 2nd requirement. | 30m |
| 4/12/2021 | Coding and add modifications | 30m |
| 4/12/2021 | First search running | 5m |
| 5/12/2021 | Finished second requirement | 30m |
| 12/12/2021 | Edited base code and library for the 2nd requirement. | 15m |
| 12/12/2021 | Finished third requirement | 60m |

# REFERENCE

[1] [Meson C++ Build](https://mesonbuild.com/)