**Module**: Level 8 - Programming

**CA**: Small CA - 3% of Module Mark

**Date**: November 23rd, 2021

**Duration**: 50 mins

1. Write an application that prompts the user to input a **low number** and a **high number**.

1. Generate a random number within the user-defined range (low – high).
2. Prompt the user to guess the random number that you generated in part i). Continue prompting the user to guess the random number until their guess is correct. For each guess, your program should tell the user whether their input was too low or too high, so that they can adjust their next guess.

Please Turn Page Over to see sample run.

1. Write a program that reads from file “grades.txt”, which contains a list of students, their grade for maths, and their grade for programming.
2. Write an application to display each student, their grade for maths, and their grade for programming. At the end you should also calculate and show the average grade for each student using the following formula

***average grade = (maths grade + programming grade) / 2***

1. Identify the student with the highest average grade, and the student with the lowest average grade.

Turn page over to see a sample run.

A.

Graphical user interface, text, application

Description automatically generated

B.

Table

Description automatically generated

**YOU MUST READ, SIGN and upload THIS FILE with your code submission at the end of the exam**

|  |  |
| --- | --- |
| **NAME** |  |
| **ID NO.** |  |

I declare that:

* The work submitted for this assessment is entirely my own, and no part of it has been copied from any other person’s words or ideas,
* No part of this assessment has been written or completed for me, it has not been discussed or collaborated on by me with any other person.
* I understand that I am bound by the DkIT Academic Integrity Policy   
  ( <https://www.dkit.ie/system/files/academic_integrity_policy_and_procedures.pdf> ).   
  I understand that I may be penalised if I have violated the policy in any way.