

**Recep Tayyip Erdogan University**

**Faculty of Engineering and Architecture**

**Computer Engineering**

CE103- Algorithms and Programming - I

**Homework-5 (Week-11)**

**Fall Semester, 2021-2022**

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| Instructor | Asst. Prof. Dr. Uğur CORUH |
| Contact Information | [ugur.coruh@erdogan.edu.tr](mailto:ugur.coruh@erdogan.edu.tr) |
| Google Classroom Code | **3ipdtws** |
| Publish Date | **16.12.2021** |
| Due Date | **31.12.2021 23:59** |

**Complete the following homework requirements, prepare them in the format given in the description below until the deadline and time, and upload them to the classroom's related assignment.**

**Grades:**

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| --- | --- |
| Problem-1 | 100 points |
| **Total** | **100** points |

**Problem-1 (100 points):**

In this problem, you will write a C# console application that uses dll, which will be ported from the C application.

In the following link, you will find the snake game

<https://github.com/ucoruh/ce103-algorithms-and-programming-I/tree/main/Week-5/examples/console-snake-game>

Convert this C game to C# game with full functionality. All snake game operations will be developed in C# DLL and used by C# console application, and the C# test application will test the functionality of the game. Such as generation of foods, collisions, length of the snake after eating food, etc.

Problem restrictions

* There will be a single solution, and under this, you will develop all of your projects
* Solution file name (ce103-hw5-name-surname)
* Csharp DLL project name (ce103-hw5-snake-dll)
* Csharp Console project name (ce103-hw5-snake-app)
* Csharp Unit Test project name (ce103-hw5-snake-test) will test functionality automatically.
* There should be a well-written report. (ce103-hw5-name-surname.docx)
* Github repo name should be ce103-hw5-name-surname
* Provide Doxygen generated PDF file only as ce103-hw5-name-surname-dox.pdf

***Tips***

<https://www.dreamincode.net/forums/topic/205108-gotoxy-in-console-application/>

***Problem Grading Criteria***

1. *You need to share your code in Github with a private repository that we can see only.*
2. *You need to share your code in Classroom without binaries, delete unnecessary files (binaries will give you penalty points)*
3. *Explain what you did in your homework with comments and explanations; please do not send it if you didn’t understand.*
4. *Beautify your code with Indentation; your codes should look good.*
5. *Project and File Types should be correct*
6. *Do not send not working code or project with bugs (Not Running or Complaining)*
7. *Your project test results should be correct*
8. *If there is an algorithm solution, then explain your methods one-by-one*
9. *Correct naming for source code ce103-hw5-name-surname.rar (this will include visual studio solution that you cloned from GitHub)*
10. *Do not copy your friend’s code; copy detect software for similarity; make it own. There will be plagiarism checking. You have already created these source codes. Now you will make them your source codes.*
11. *You should only share with us Doxygen-generated pdf files. Do not send HTML or another part of auto-generated documentation files.*

Good Luck!