

**Recep Tayyip Erdogan University**

**Faculty of Engineering and Architecture**

**Computer Engineering**

CE103- Algorithms and Programming - I

**Homework-1 (Week-3)**

**Fall Semester, 2021-2022**

| 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 | **22.10.2021** |
| Due Date | **29.10.2021 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:**

| Problem-1 | 40 points |
| --- | --- |
| Problem-2 | 60 points |
| **Total** | **100** points |

***Development Environment***

In this problem, you will use GIT, Github with WSL and Windows

***Grading Criteria***

1. *Github Code Sharing*
2. *Classroom Code and Report Sharing*
3. *Comments and Explainations*
4. *Project and File Types*
5. *Code or Project Bugs (Not Running or Complaining)*
6. *Tests and Results*
7. *Algorithm Solution Methods and Explanations*

**Problem-1 (40 points):**

*Prepare a .bat (windows) and .sh (linux-wsl) script that collect user environment information to for e-mailing with attachment*

*For Windows OS prepare \*.bat file and for WSL Linux create \*.sh files separately*

*Each file should provide the following information from operating system*

* Get Computer Name and User Name
* Get Current Working Directory
* Get Current Running Applications and Services
* Get Current Opened Ports
* Get Current Hostname
* Get Current IP and Network Adapters
* Get Available Memory Space
* Get Available Hardisk Space

Create this output and save to a file **pc-information.txt**

***Expected Problem-1 Output***

Batch script file with inline description. Do not forget to explain your script operations in bat file and sh script

**Problem-2: (60 points)**

Follow the required steps and share the logs with asciicinema

<https://asciinema.org/docs/installation#installing-on-linux>

* Open git in WSL and start asciicinema
* Create repo named with sample-git on your local folder
* Create .gitignore with gig for C C++ Java and VisualStudio and save to repo
* Commit Changes
* Create remote repository on your Github with same name
* Create a README.md in your local folder and commit this change
* Link Github repo with local repo with git remote
* Push your local changes to remote repo
* Pull remote changes
* Create 4 branch
  + feature/branch-1
  + feature/branch-2
  + feature/branch-3
  + feature/branch-4
* Push all branches to remote repo with - - all tag
* Move to “feature/branch-1”
* Add a textfile named “Hello-1.txt”
* Commit changes
* Insert “CE103 Algorithms and Programmin – I ” in Hello-1.txt
* Commit changes
* Switch “feature/branch-2”
* Update content “Algorithms and Programmin – I ” in Hello-1.txt
* Commit changes
* Merge “feature/branch-1” with “feature/branch-2”
* Commit changes
* Stop asciicinema and share the public video link your homework and git repository

***Expected Problem-2 Output***

Github Repo

Asciicinema Content and Public URL

Good Luck!