

Due: 29.10.2023, 23:00, to [Submit](#) and [GitHub](#)

ASSIGNMENT1

BBM103

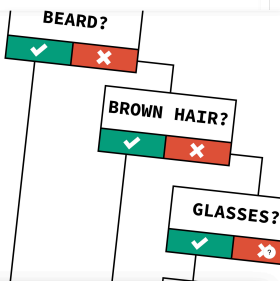
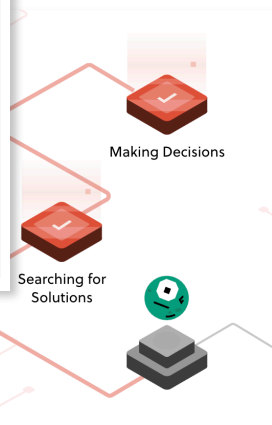
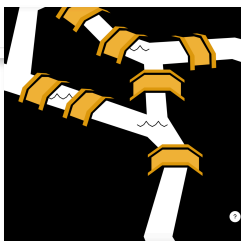


CS & PROGRAMMING - LEVEL 1 >

1.2 Computer Science Fundamentals

Wrap your mind around computational thinking, from everyday tasks to algorithms.

14 Lessons

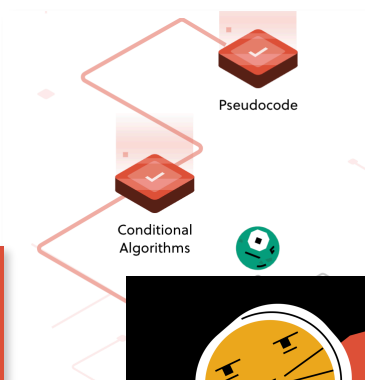
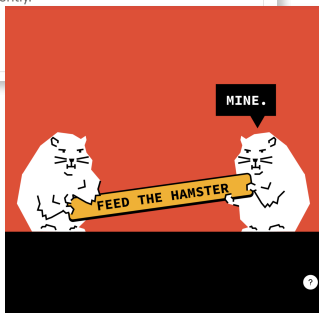


CS & PROGRAMMING - LEVEL 2 >

2.2 Introduction to Algorithms

Learn how to make a computer do what you want, elegantly and efficiently.

15 Lessons



*Instructors: Dr. Fuat Akal, Dr. Aydın Kaya, Dr. Tunca Doğan
TA: Hayriye Çelikbilek*

Course: BBM103 Fall 2023

Subject: Introduction to Programming Concepts and Submit

Given: 13.10.2023

Due: 29.10.2023, 23:00, to [Submit](#) and [GitHub](#)

Introduction

[GitHub](#) is a platform for version control systems and collaboration. It allows you and others to work together on a project from anywhere.

You will benefit significantly from GitHub, especially its feature enabling you to track your assignment development stages. To use GitHub, you only need an account and Internet access. Once you create an account, you can access a personal repository containing folders, files, images, data sets and anything else needed for your projects.

Additionally, the [Submit](#) system is our department's assignment management web application for students and instructors.

Since we handle student and instructor needed requirements privately using our services, rather than having the requirements only for developing some software, we will collect the following assignments (excluding this assignment) using the [Submit](#) webpage.

You will submit your work to both [GitHub](#) and [Submit](#) webpages within the scope of Assignment 1.

Policy

- ❖ Do not miss the submission deadline. The deadline is 23:00, and you see 23:59 on the live because of the in advance compensation of potential problems. **Last-minute excuses will not be tolerated.**
- ❖ Save all your work until the assignment is graded.
- ❖ You can ask your questions via [Piazza](#), and you are supposed to be aware of everything discussed on Piazza.
- ❖ You must submit your work with the file hierarchy as stated below.
- ❖ No other submission methods will be accepted (mail)

Academic Integrity

All work on assignments must be done **individually** unless stated otherwise. You are encouraged to discuss with your classmates about the given assignments, but these discussions should be carried out **abstractly**. Discussions about a particular solution to a problem (either in actual code or pseudocode) **will not be tolerated**. In short, turning in someone else's work (from the internet), in whole or part, as your own will be considered a **violation of academic integrity**. The former condition also holds for the material on the web, as everything on the web has been written by someone else.

References for the Academic Integrity (AI):

<https://academicintegrity.ucsd.edu/AI-Handbook-for-UCSD-2019.pdf>,
academicintegrity.org/resources/facts-and-statistics

Getting Your CS Account

Every undergraduate student in the HUBBM department has a CS account in order to connect to our servers, services and e-mail interface. You should have received an e-mail by now into your e-mail addresses provided by your application form to the university while you were enrolling on the faculty. Please contact the department secretary and system administrators if you still need to receive your account and password information.

Once you have your CS account, (i) you will sign up to the GitHub platform.

Create Your GitHub Account

Per the instructions in the lab handout, create your GitHub account (see **Figure 3**). (Make sure you use your **CS e-mail** account and student ID **b2XXXXXX** as your **username** for your GitHub account. **Otherwise, your work will not be graded.**)

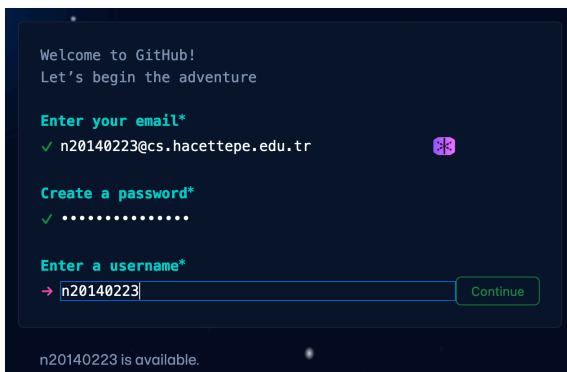
A screenshot of the GitHub sign-up interface. The background is dark blue. At the top, it says "Welcome to GitHub!" and "Let's begin the adventure". Below this, there are three sections: "Enter your email*", "Create a password*", and "Enter a username*". Each section has a green checkmark icon. The email field contains "n20140223@cs.hacettepe.edu.tr" and has a purple icon to its right. The password field contains a series of dots. The username field contains "n20140223" and has a green "Continue" button to its right. At the bottom, it says "n20140223 is available." with a small white dot to its right.

Figure 3. How to sign-up GitHub.

Then, accept Assignment 1 using the GitHub link above.

Simply create a text file, named with your student ID (b2XXXXXXX.txt), in which is an **academic integrity consent** that you introduce yourself and state that you understand and accept the course policy (see **Figure 1**). This file and your **Student ID Card** (with a photo of yourself) named with your ID b2XXXXXXX.jpg (or .png) should be placed under a directory also named with your ID (see **Figure 2**).

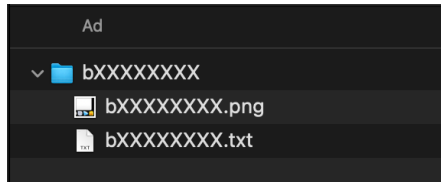


Figure 2. Showing your overall project hierarchy.

<NAME>

<SURNAME>

<ID>

<MAIL>

<SHORT SELF-INTRODUCTORY TEXT>

I acknowledge that I have fully read and understood the contents of the course website; I will not share my work (not even a part of it) on Piazza; I will be responsible for what has been discussed/asked on Piazza; I will not expect any response for my questions that have already been asked or written in a language other than English. I understand that if I have any questions or concerns about the course mechanics, it is my responsibility to discuss them with the instructors within their office hours.

Figure 1. Text file content to manually type.

How to Use GitHub/Git

Firstly, download and install the Git versioning system from [here](#). Follow the installation instructions for your

operating system. Set your username and email using the following Git commands from your (or dev) command line:

```
git config --global user.name "b2XXXXXX"  
git config --global user.email "b2XXXXXX@cs.hacettepe.edu.tr"
```

These are your actual GitHub username and email.

Initialize a new Git repository inside the project folder b2XXXXXX using the following command: `git init`

Stage the changes when you make changes within the folder using `git add <filename>` or `git add .` to stage all changes.

Commit the changes using the command: `git commit -m "Your message"`

Go to [GitHub](#), login, and click the "+" icon in the top right corner. Select "New repository". Give your repository a name, choose visibility (public or private), and add a README if needed. On the GitHub repository creation page, you have the option to add a .gitignore file to exclude certain files and a license for your project if needed. Click "Create repository". **But, in the scope of this assignment you will be given your repository by clicking the [GitHub](#).**

On the GitHub repository page (after creating the repository), look for the green "Code" button. Click the "Code" button to reveal a dropdown. Make sure "HTTPS" is selected (unless you have set up SSH), and then copy the repository URL. Your URL should look something like: [git@github.com:username/repository.git](#) or [https://github.com/username/repository.git](#).

Add the GitHub repository as the remote repository for your local Git repository:

```
git remote add origin <repository_url>
```

Replace <repository_url> with the URL of your copied GitHub repository.

Finally, PUSH your project (identification and academic integrity consent) to GitHub once completed using:

```
git push -u origin main
```

Visit your GitHub repository in a browser and ensure your project is there.

You may explore more Git commands, branching strategies, and collaboration workflows as you become comfortable with the basics. You will be using further strategies within the scope of your following courses like BBM104.

Joining Brilliant

Brilliant is an online learning platform that focuses on STEM-related topics. The 60+ courses on Science, Technology, Engineering and Math topics all offer an **interactive and hands-on learning experience**.

It is mandatory to use your **CS e-mail address** as your account, your **student ID b2XXXXXX as your name** and the text **'BBM103' as your surname** while signing up (see Figure 5).

You **must use** the following five **invitation links** to let course instructors to see your solutions and time spent inside the platform. Please be aware that **each link has an application limit of 50 students**; if you encounter any error, try the subsequent links (see Figure 4). **Join ONE link only.**

<https://brilliant.org/classroom/join/a42bzj/>

Additional links will be shared when classes are full join only one classroom.

Figure 4. The links to our BBM103 Brilliant Classroom.

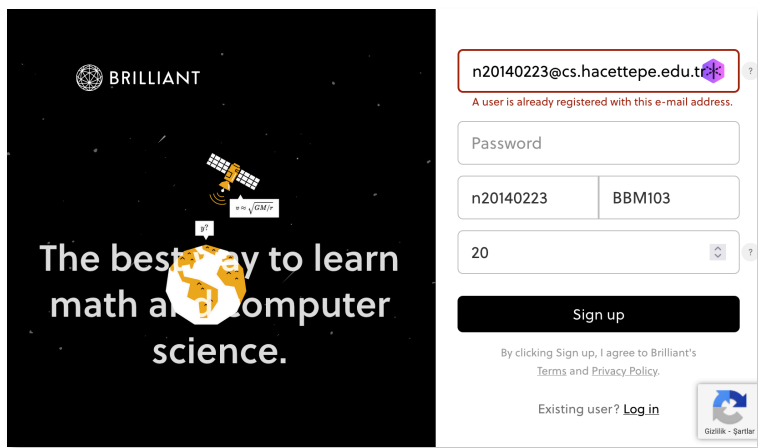


Figure 5. How to join to brilliant.org

Work To Be Done

You are responsible for solving the following three interactive lessons here (see Figure 6) and taking some screenshots while you are **solving the lessons**:

- ❖ 1.2 Computer Science Fundamentals
 - ❖ Making Decisions: 7 screenshots
 - ❖ Searching for Solutions: 6 screenshots
- ❖ 2.2 Introduction to Algorithms
 - ❖ Pseudocode: 3 screenshots
- ❖ A total of 16 screenshots are mandatory.

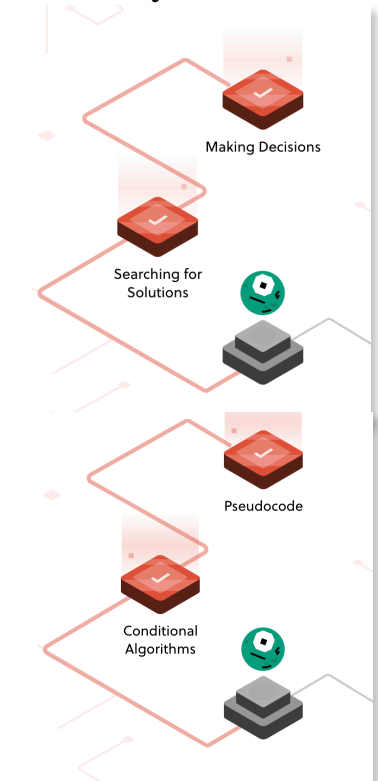
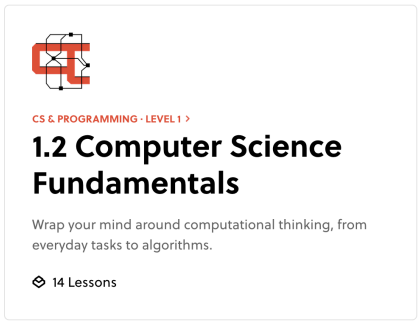


Figure 6. Overall display of the lessons.

If you cannot solve some of these examples correctly, do not worry, the interaction problems include the solutions if you make any mistakes. There will be no point deduction about the spent time and correctness in Assignment 1; we value your effort.

These lessons should take 5 to 15 minutes each, and the problems are fundamental and similar to your BBM101 slide

examples, so you do not have to worry. In addition, you shall be **taking the following screenshots** while you are solving lessons (see Figures 7, 8, 9):

- ❖ Making Decisions, Page 2
 - ❖ Multiple choice question with your answer
 - ❖ Yes, No question with your answer
- ❖ Making Decisions, Page 3 (Decision Trees)
 - ❖ Decision Tree question graphic with answer
 - ❖ Decision Tree question graphic with answer 2
- ❖ Making Decisions, Page 4 (Creating DTs)
 - ❖ Multiple choice question with your answer)
 - ❖ Multiple choice question with your answer 2
- ❖ Making Decisions, Page 5 (Wrong Decision)
 - ❖ Decision Tree question graphic with answer

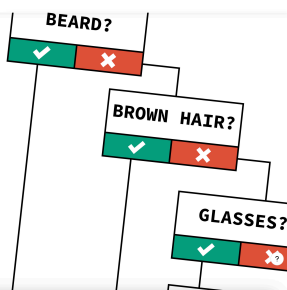


Figure 7. The figure of the lesson Making decisions.

- ❖ Searching for Solutions, Page 2 (The Bridges of Kön.)
 - ❖ Yes, No question with your answer
 - ❖ Multiple choice question with your answer
- ❖ Searching for Solutions, Page 3 (Syst. Exploration)
 - ❖ Yes, No question with your answer
- ❖ Searching for Solutions, Page 4
 - ❖ Multiple choice question with your answer
 - ❖ Two choice question with your answer
 - ❖ Multiple choice question with your answer

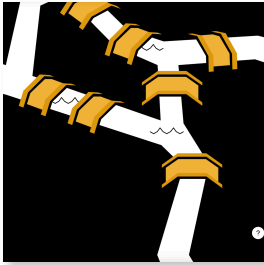


Figure 8. The figure of lesson Searching for Solutions.

- ❖ Pseudocode, Page 2
 - ❖ Multiple choice question with your answer
- ❖ Pseudocode, Page 3
 - ❖ Dragging blocks question with your answer
- ❖ Pseudocode, Page 4
 - ❖ Dragging blocks question with your answer



Figure 9. The figure of the lesson Pseudocode.



Figure 10. The figure of lesson Conditional Algorithms.

Solving the Conditional Algorithms lesson is recommended but optional to ensure you do not get stressed from the first assignment (see Figure 10).

CS Submit System

Finally, Submit your **b2XXXXXXX.zip** folder with your 28 screenshots inside (see Figure 11) to [Submit](#) web page once completed (see Figure 12). **Compression** of the images before creation of the .zip file and before submission **strictly recommended** due to 300 students * 16 images storage costs.

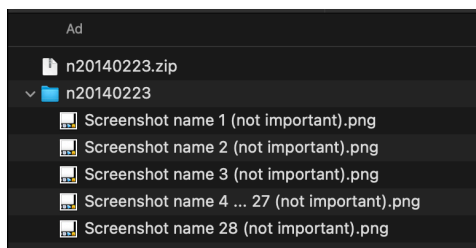


Figure 11. Showing your overall project hierarchy.

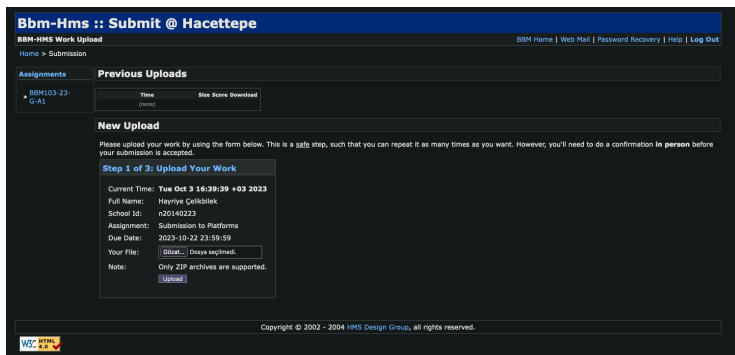


Figure 12. The overall vision of Submit system.

Grading

In evaluating the assignment, the scoring is as follows:

Evaluation	Points	Evaluate Yourself
Academic Integrity Consent (GitHub)	20	
Student ID Card (GitHub)	20	
Missing Student ID Card (Github)	-100	
Wrong Folder, File names and hierarchy	-100	
Solving Brilliant without enrolling with the classroom links	-100	
Joining more than one Brilliant classroom links	-100	
No student ID signup naming in Brilliant	-100	
Missing Submit submission	-100	
Making Decisions (Submit)	20	
Searching for Solutions (Submit)	20	
Pseudocode (Submit)	20	
Total	100	

You may include your evaluation guess as a file into your .zip folder named as "**self-evaluation-table.pdf**" (or any other extension). Sending this self evaluation table is **optional** for feedback purposes about your expectations, self-awareness and effort.



GOOD LUCK CONQUERERS OF THE DECISION WORLD!

At the end of the semester, the first person to solve 100% of the course's last project will be given a small tripod (for a camera or smartphone) as a reward! Better keep things tight from the beginning!