Faculty of Computer Science and Artificial Intelligence at Cairo University

Course Name: Structured Programming 1
Course Number: CS112
Dr. Mohamed El-Ramly
TA: Eng. Hagar Ahmed

Assignment: 2

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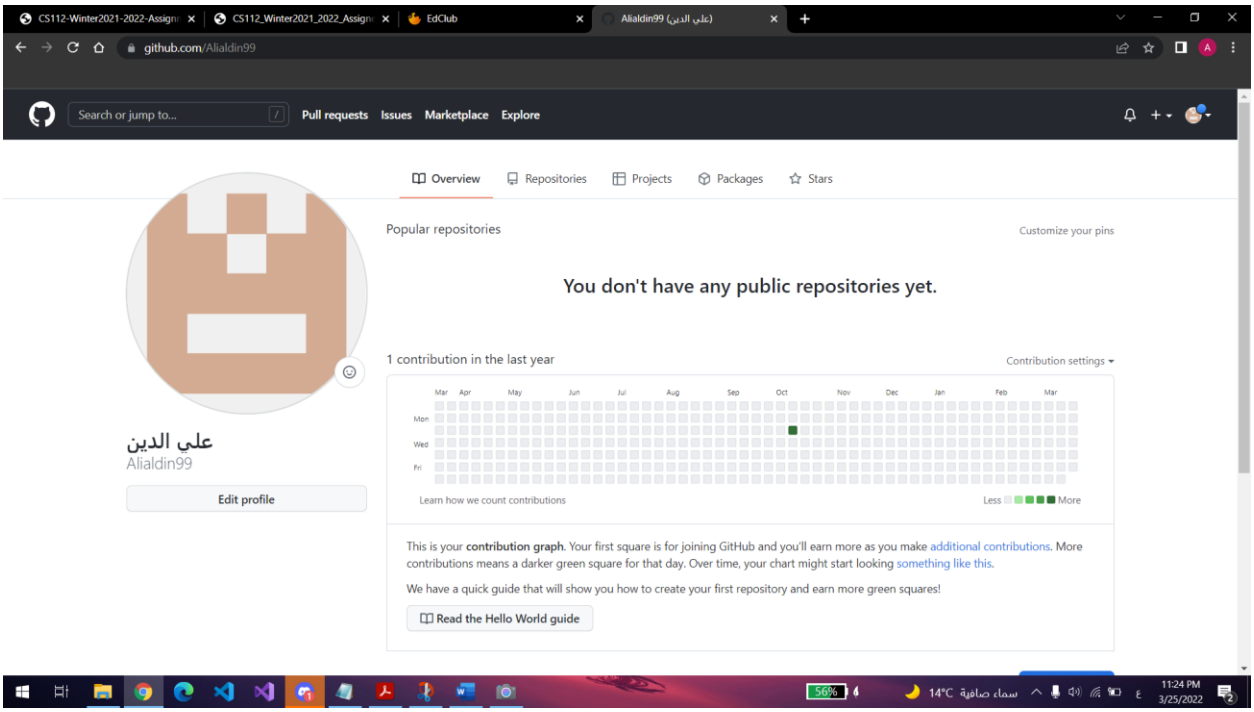
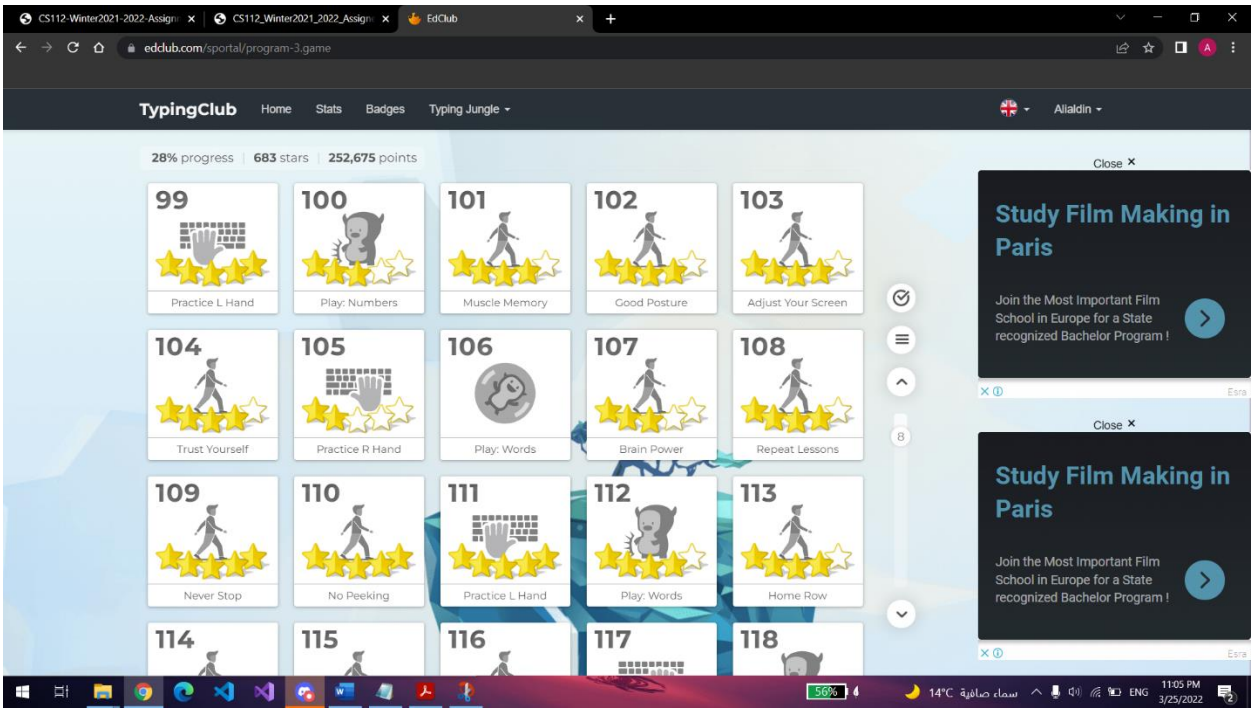
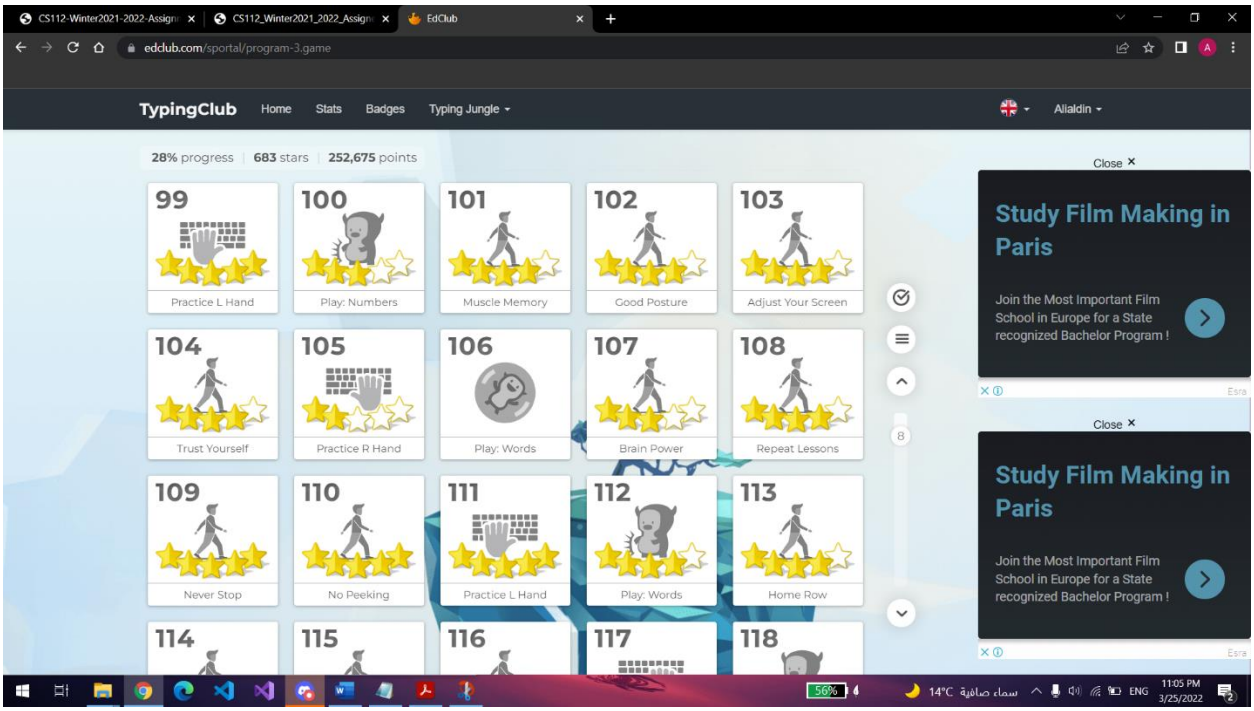
Aly Screens:


github.com/Alialdin99
Search or jump to...
Pull requests
Issues
Marketplace
Explore
Overview
Repositories
Projects
Packages
Stars
Popular repositories
Customize your pins
You don't have any public repositories yet.
1 contribution in the last year
Contribution settings
Learn how we count contributions
Less More
This is your contribution graph. Your first square is for joining GitHub and you'll earn more as you make additional contributions. More contributions means a darker green square for that day. Over time, your chart might start looking something like this.
We have a quick guide that will show you how to create your first repository and earn more green squares!
Read the Hello World guide
علي الدين
Alialdin99
Edit profile


edclub.com/sportal/program-3.game
TypingClub
Home
Stats
Badges
Typing Jungle
Alialdin
28% progress
683 stars
252,675 points
99 Practice L Hand
100 Play: Numbers
101 Muscle Memory
102 Good Posture
103 Adjust Your Screen
104 Trust Yourself
105 Practice R Hand
106 Play: Words
107 Brain Power
108 Repeat Lessons
109 Never Stop
110 No Peeking
111 Practice L Hand
112 Play: Words
113 Home Row
114
115
116
117
118
Close
Study Film Making in Paris
Join the Most Important Film School in Europe for a State recognized Bachelor Program !


CS112-Winter2021-2022-Assign
CS112_Winter2021_2022_Assign
EdClub
edclub.com/sportal/program-3.game
TypingClub
Home
Stats
Badges
Typing Jungle
Aladin
28% progress | 683 stars | 252,675 points
99 Practice L Hand
100 Play: Numbers
101 Muscle Memory
102 Good Posture
103 Adjust Your Screen
104 Trust Yourself
105 Practice R Hand
106 Play: Words
107 Brain Power
108 Repeat Lessons
109 Never Stop
110 No Peeking
111 Practice L Hand
112 Play: Words
113 Home Row
114
115
116
117
118
Close ×
Study Film Making in Paris
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Close ×
Study Film Making in Paris
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56%
14°C سماء صافية
ENG
11:05 PM
3/25/2022

CS112-Winter2021-2022-Assign
CS112_Winter2021_2022_Assign
EdClub
edclub.com/sportal/program-3.game
TypingClub
Home
Stats
Badges
Typing Jungle
Aladin
28% progress | 683 stars | 252,675 points
168 Review: W & O
169 Practice: W & O
170 QP Capital Q & P
171 Review: Q & P
172 Practice: Q & P
173 Play: WOQP
174 VM Capital V & M
175 Review: V & M
176 Practice: V & M
177 Travel Index
178 C? Capital C & ?
179 Review: C & ?
180 Practice: C & ?
181 Play: VMC?
182 ZN Capital Z & N
183
184
185 XB
186
187
Close ×
Study Film Making in Paris
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Close ×
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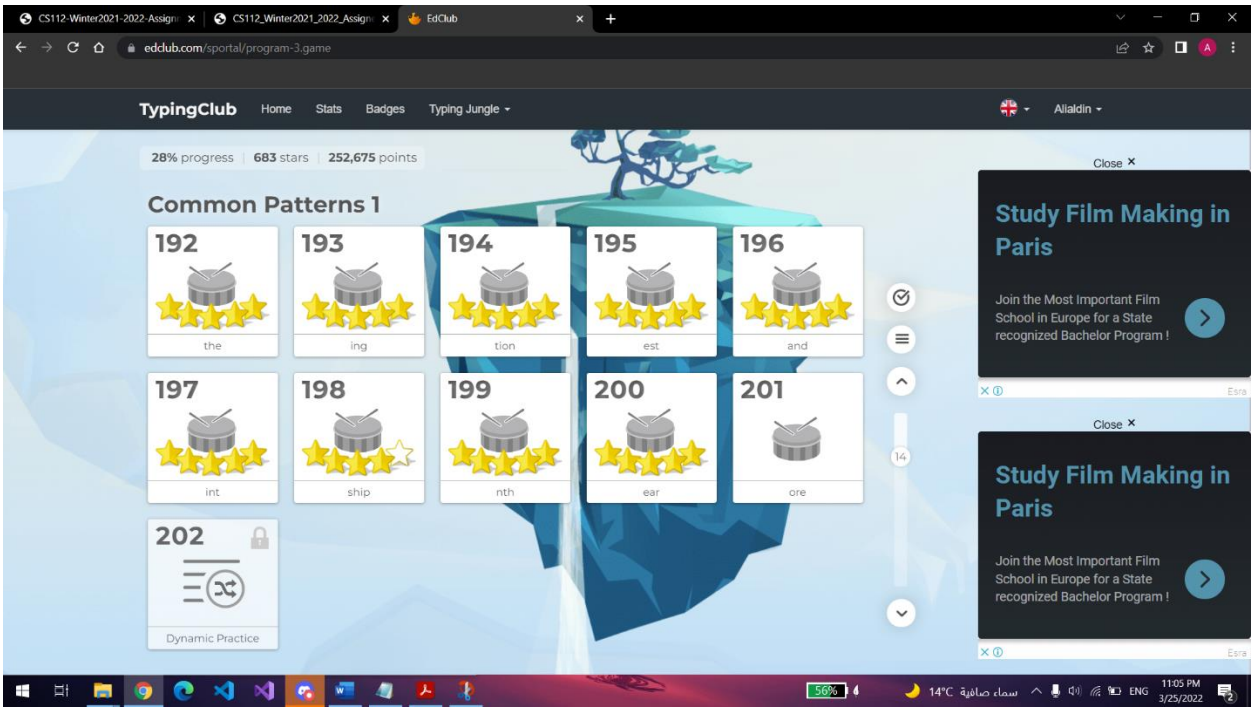
56%
14°C سماء صافية
ENG
11:05 PM
3/25/2022


TypingClub
Home
Stats
Badges
Typing Jungle
Alialdin
28% progress
683 stars
252,675 points
Common Patterns 1
192
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193
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194
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195
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196
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197
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198
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199
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200
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201
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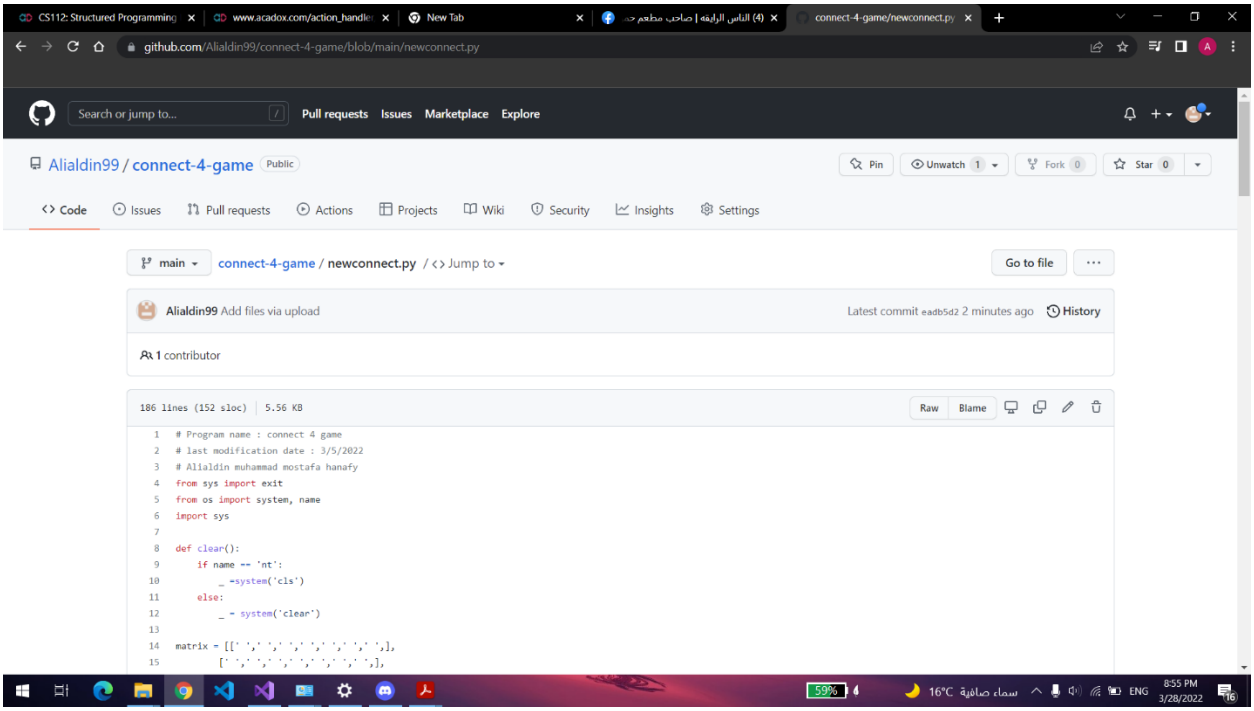
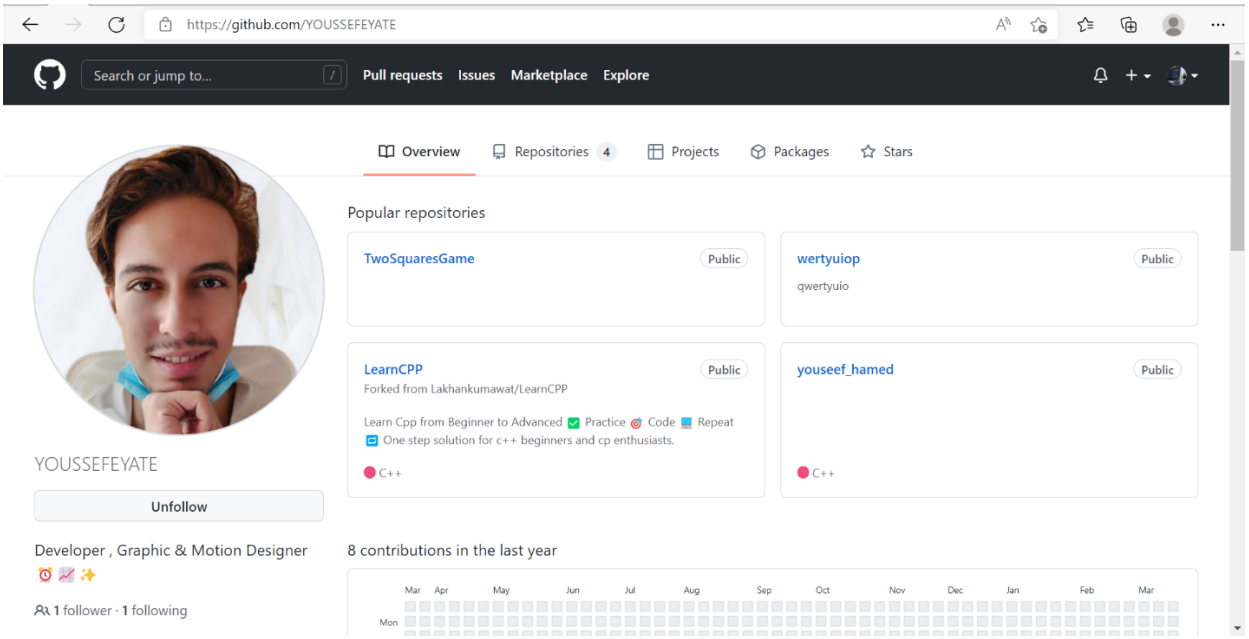
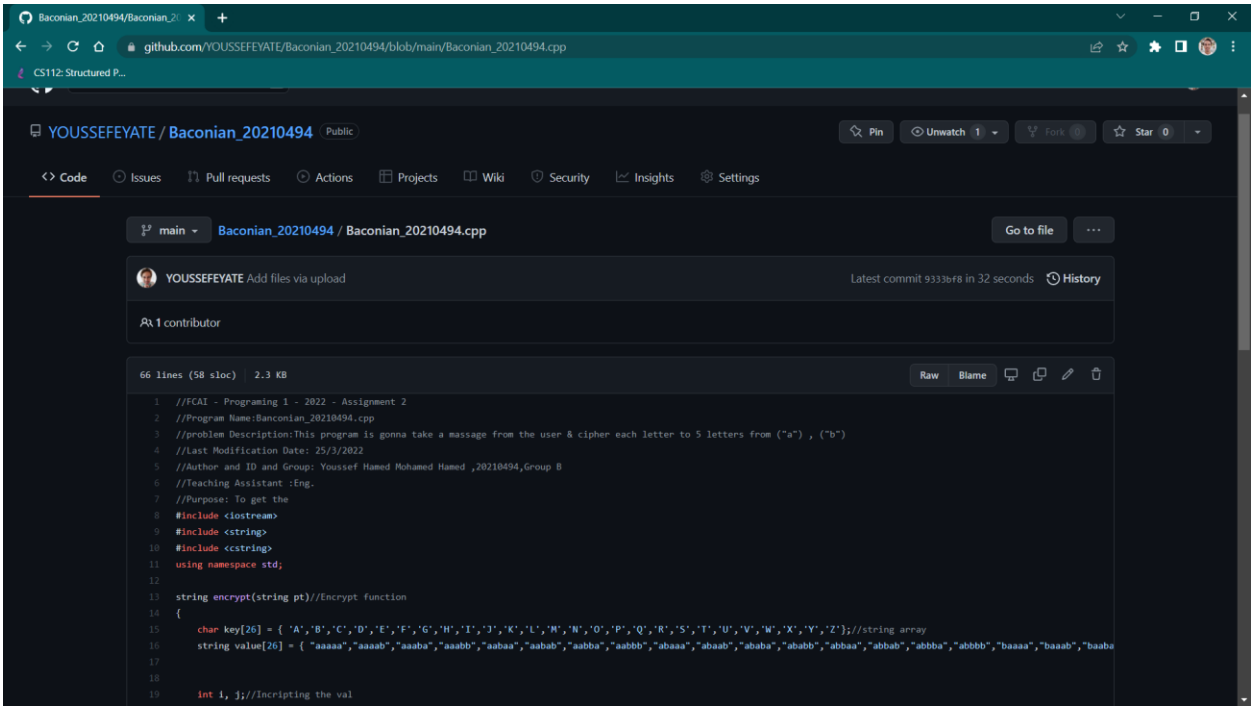
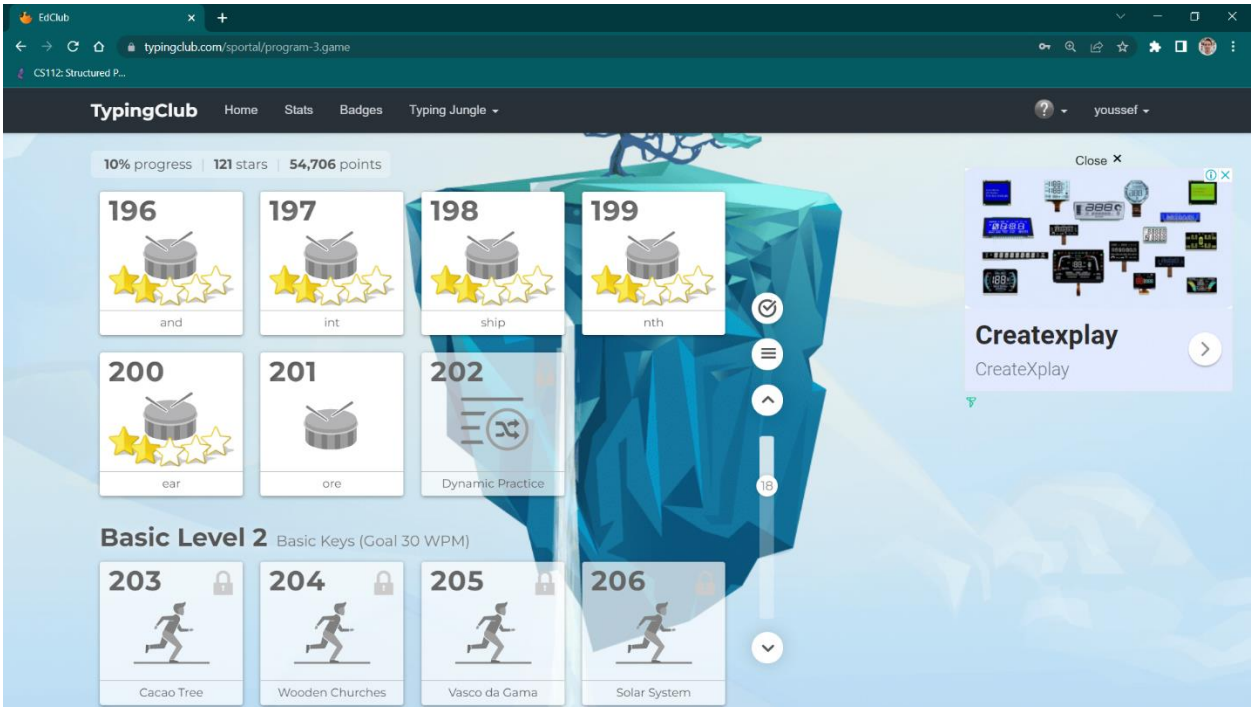
202
Dynamic Practice
Close ×
Study Film Making in Paris
Join the Most Important Film School in Europe for a State recognized Bachelor Program !
Close ×
Study Film Making in Paris
Join the Most Important Film School in Europe for a State recognized Bachelor Program !

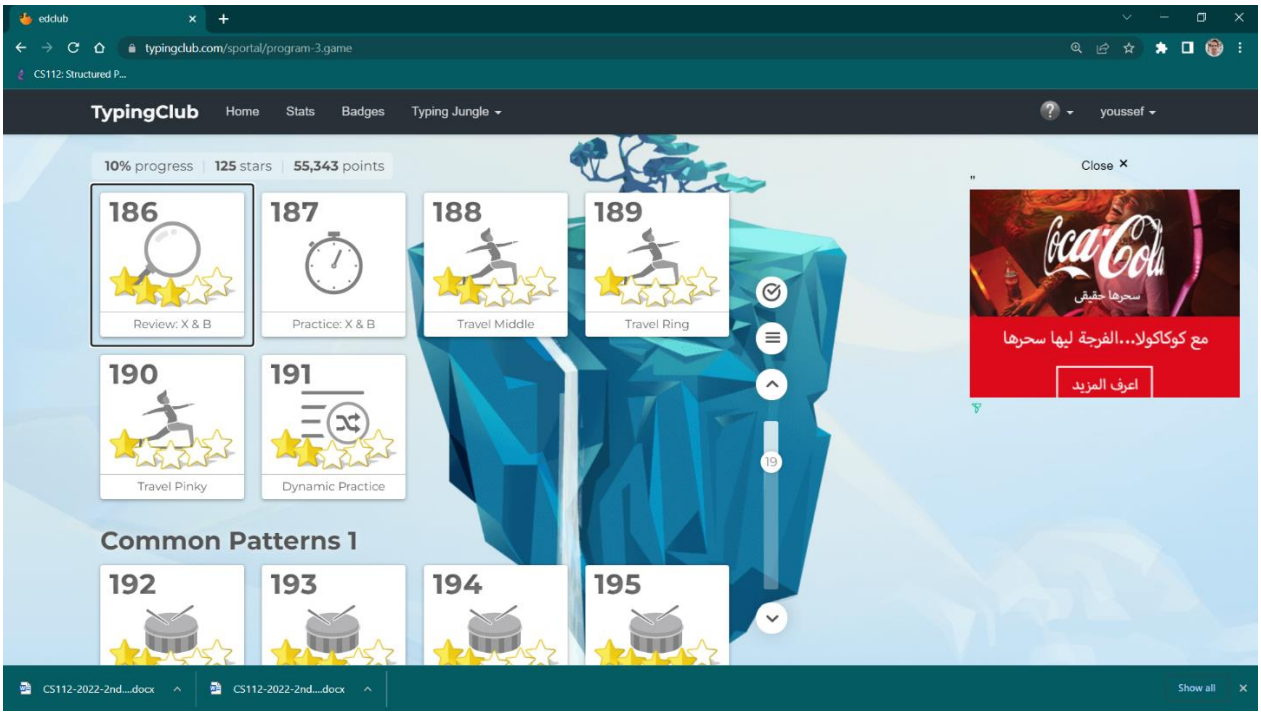

github.com/Alialdin99/connect-4-game/blob/main/newconnect.py
Search or jump to...
Pull requests
Issues
Marketplace
Explore
Alialdin99 / connect-4-game
Public
Pin
Unwatch 1
Fork 0
Star 0
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
connect-4-game / newconnect.py
Jump to
Go to file
Alialdin99 Add files via upload
Latest commit eadb5d2 2 minutes ago
History
1 contributor
186 lines (152 sloc) 5.56 KB
Raw
Blame
# Program name : connect 4 game
# last modification date : 3/5/2022
# Alialdin muhammad mostafa hanafy
from sys import exit
from os import system, name
import sys
def clear():
if name == 'nt':
_ =system('cls')
else:
_ = system('clear')
matrix = [[' ',' ',' ',' ',' ',' ',' ',],
[' ',' ',' ',' ',' ',' ',' ',],

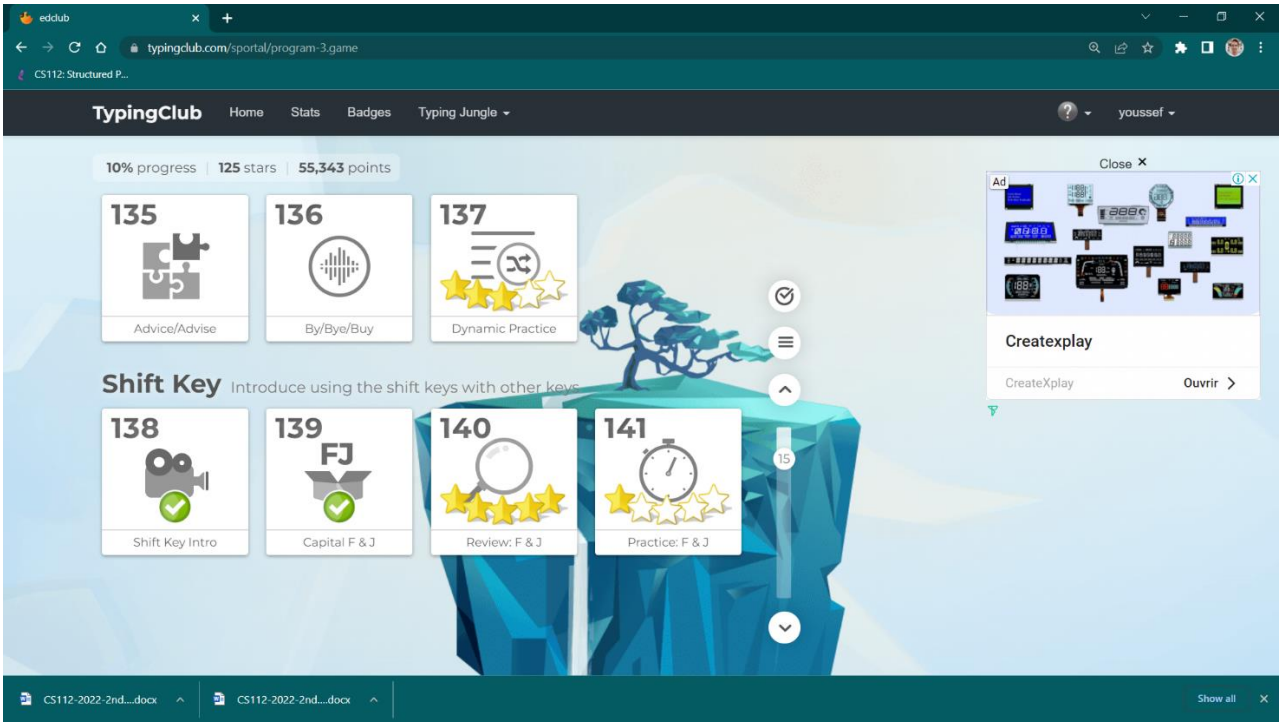
Yosseif screens:

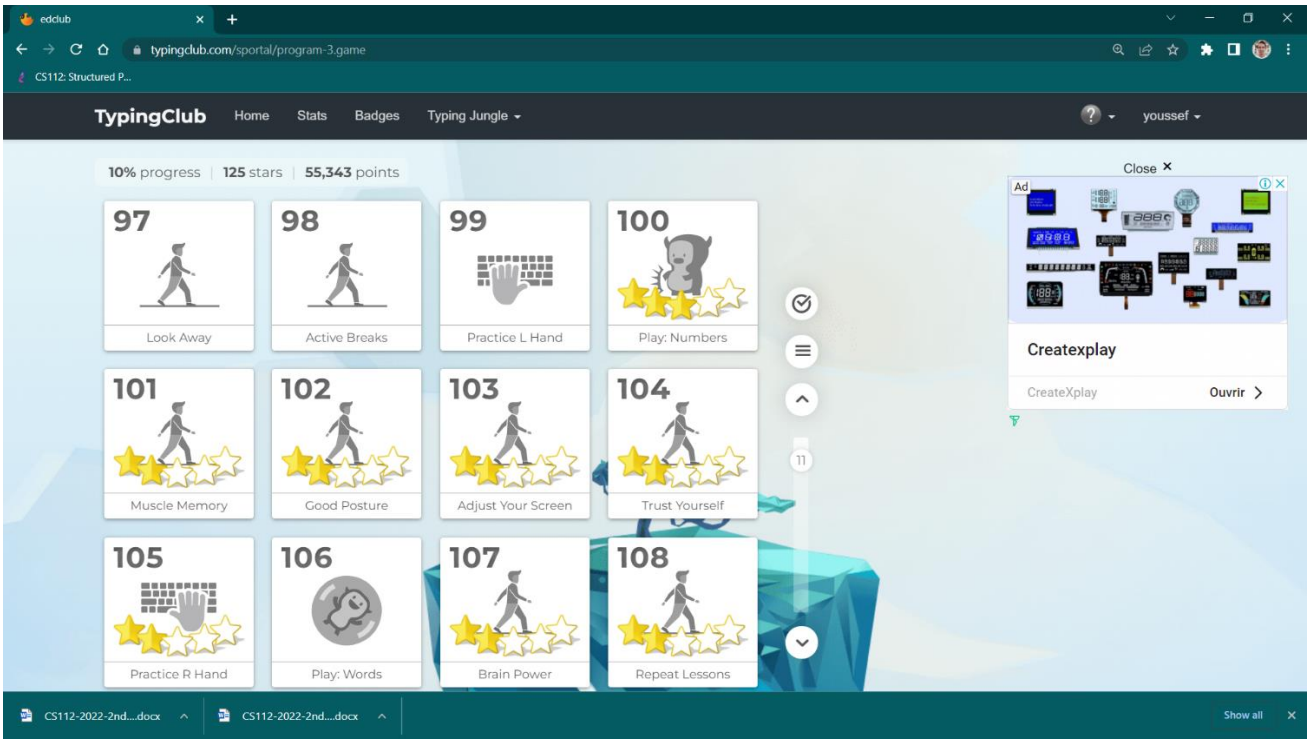




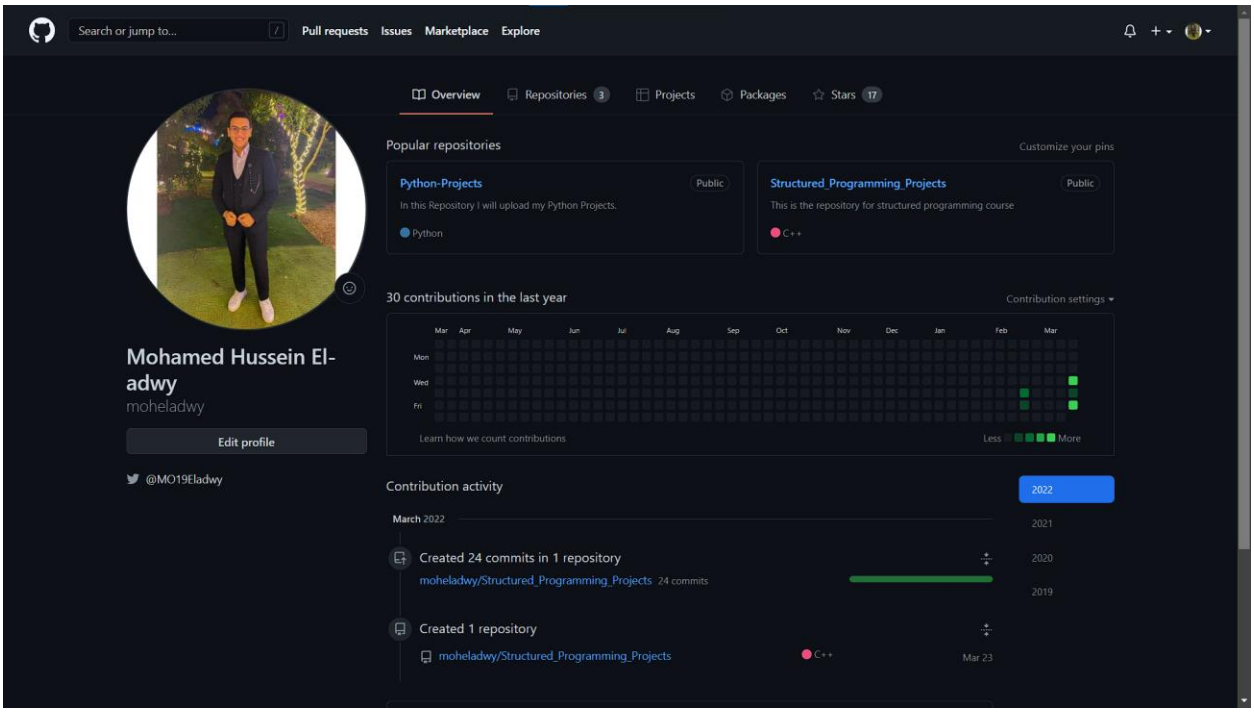

EdClub
typingclub.com/sportal/program-3.game
CS112: Structured P...
TypingClub
Home
Stats
Badges
Typing Jungle
youssef
10% progress | 121 stars | 54,706 points
196
and
197
int
198
ship
199
nth
200
ear
201
ore
202
Dynamic Practice
Basic Level 2
Basic Keys (Goal 30 WPM)
203
Cacao Tree
204
Wooden Churches
205
Vasco da Gama
206
Solar System
Close
Createxplay
CreateXplay

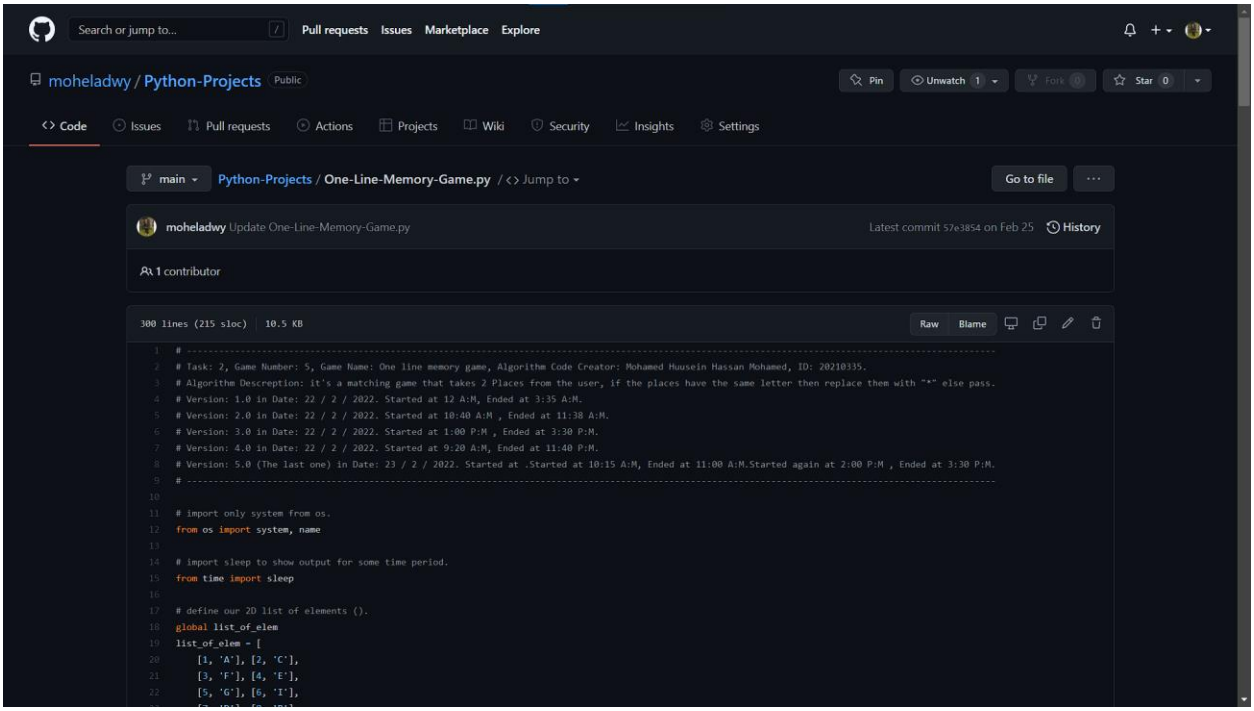

edclub
typingclub.com/sportal/program-3.game
CS112: Structured P...
TypingClub
Home
Stats
Badges
Typing Jungle
youssef
10% progress | 125 stars | 55,343 points
186
Review: X & B
187
Practice: X & B
188
Travel Middle
189
Travel Ring
190
Travel Pinky
191
Dynamic Practice
Common Patterns 1
192
193
194
195
Close
مع كوكاكولا...الفرجة ليها سحرها
اعرف المزيد
CS112-2022-2nd....docx
CS112-2022-2nd....docx
Show all


edclub
typingclub.com/sportal/program-3.game
CS112: Structured P...
TypingClub
Home
Stats
Badges
Typing Jungle
youssef
10% progress | 125 stars | 55,343 points
135
Advice/Advise
136
By/Bye/Buy
137
Dynamic Practice
Shift Key
Introduce using the shift keys with other keys
138
Shift Key Intro
139
FJ
Capital F & J
140
Review: F & J
141
Practice: F & J
Close
Ad
Createxplay
CreateXplay
Ouvrir
CS112-2022-2nd....docx
CS112-2022-2nd....docx
Show all


edclub
typingclub.com/sportal/program-3.game
CS112: Structured P...
TypingClub
Home
Stats
Badges
Typing Jungle
youssef
10% progress | 125 stars | 55,343 points
97
Look Away
98
Active Breaks
99
Practice L Hand
100
Play: Numbers
101
Muscle Memory
102
Good Posture
103
Adjust Your Screen
104
Trust Yourself
105
Practice R Hand
106
Play: Words
107
Brain Power
108
Repeat Lessons
Close
Ad
Createxplay
CreateXplay
Ouvrir
CS112-2022-2nd....docx
CS112-2022-2nd....docx
Show all

Mohamed Screens:





Algorithm of Task 3, cipher number 1 (**Caesar cipher**):

CIPHERING:

take input from the user (text, number of shifts, direction of shifts)

if the user chose shifting to the left: {

make the number of shifts -ve

}

for each character in the text: {

    x = ascii value assigned to it

    x += number of shifts

}

DECIPHERING:

it is pretty similar to the ciphering

the player has to input (ciphered text, number of shifts used to cipher, direction of shifts used to cipher)

if the user chose shifting to the left: {

    make the number of shifts -ve

}

for each character in the ciphered text: {

    x -= number of shifts

}

Algorithm of Task 3, cipher number 5 (**Simple Substitution Cipher**):

1- Define a counter = 0, to count the number of times that the user used the program
2- Define 3 Variables (message, choose, key) to use.
3- Make the user gets method of the 3 methods from (1-cipher, 2-decipher, 3- both, 4- exit) to do.
4- If the options not equal to 4 then the program will do
   a- Get the key from the user.
   b- then make the encryption that depends on the key given from the user.
   c- Then get the message from the user.
   d- If the method that the user choose is “Cipher”, then the message will be encrypted then print the encryption message.
   e- If the method that the user choose is “Decipher”, then the message will be decrypted then print the decrypted message.
   f- If “both”, then we will do (d and e) together
   g- After the progress be done, we will as the user if he wants to use the program again
      1) If yes, we will call the program function again and increase the counter by 1
      2) If not, will close the program.

Algorithm of Task 3, Cipher number 4 (BACONIAN CIPHER):

CIPHERING:

Take input from the user (plaintext) “Enter plain text”

If the input is Alphabets

    Continue…

Else

    Print ” invalid input”

Array 1 char [A..Z]

Array 2 string [aaaaa..bbbbb]

Loop for Searching for each input char in Array 1 and print from Array 2 the string with the same index

Encpt1 = Encpt1 + Old value

Nested for loops to run the outer for loop as many times as the number of char presented in the plain text

Print “ The Encrypted Text is : ” the encrypted text

DECIPHERING:

It is pretty similar to the ciphering

It will loop in Array 2 and get the index of each string and change it with the char with the same index from Array 1

decpt1 = decpt1 + old value

Print “ The Decrypted Text is : ” the decrypted text

END

Algorithm of the Problem Number 14 in book, Task 4:

1- We will ask the user to enter the time as (hh:mm:ss) format.
2- Then we will check the input
3- If the input is matching with the format.
   a- We will split the input to hours, minutes, and seconds.
   b- Then check the limit of the numbers that he entered.
   c- If the numbers are inclusive the interval
      1) We will calculate the total number of seconds then print it.
   d- If the numbers are out of the intervals then we will ask him again to enter the time in the following formatting (hh:mm:ss).
4- If the input doesn't match the format, then we will ask the user to enter the input again.

Algorithm of the Problem Number 6 in book, Task 4

Salary Per Hour = 16.78;
Over time pay = 0
`health Insurance = 0`
`and define every withheld amount`
Input (hours Worked, dependents)

If hours Worked are more than 40 hours{
    Extra Hours = (hours Worked - 40);
    overtime Pay = extra Hours * (salary Per Hour * 1.5);
    hours Worked -= extra Hours;}

if dependents are more than=n 3
    health Insurance = 35;

gross pay = (salary Per Hour * hours Worked) + overtime Pay

1-calculate every withheld money by multiblying it's percentage by the gross pay

2-output each withheld amount

3-subtract each withheld amount from the gross pay

4-output the take home pay

Algorithm of the Rational Number Calculator:

1- Print the Instructions of the calculator
2- Get the input from the user
3- If the input equal ‘exit’, then the program will close.
4- If the input is an operation, then we will split the input to number_1, operator, and number_2
5- Check the validation if the three parts of our input
6- If all correct, we will split every number to nominator and denominator then calculate the number itself, then calculate the whole operation which is (number_1 operator number_2), then print the result as rational number (nominator/denominator).
7- If the input is invalid then we will ask the user to enter the input again.

Algorithm of Problem Number 13 in the book, Task 4:

1-We will ask the user to enter two points .

2- Then we will subtract the two point .

a-subtract the two point’s Y axis .

b-subtract the two point’s X axis .

3- M = (y2-y1) / (x2-x1) .

4- Print The equation of the linear equation is C=y1-(m*x1) .

5-End

Git Summary

Youssef Summary:

GitHub is a Git repository hosting service which provides a web-based graphical interface. GitHub helps every team member to work together on the project from anywhere and makes it easy for them to collaborate.

Features of GitHub:

1)Easy project management:

GitHub is one place where project managers and developers coordinate, track, and update their work so projects stay transparent and on schedule.

2)Increased safety with packages:

The packages can be published privately, or within the team or publicly for the open-source community. The packages can be used or reused by downloading it from the GitHub.

3)Effective team management:

GitHub helps all the team members to stay on the same page and stay organized. Moderation tools like issue and pull request locking helps the team to focus on the code.

4)Improved code writing:

Pull requests help the teams to review, improve and propose new codes on GitHub. The implementations and proposals can be discussed before changing the source code.

5)Increased code safety:

GitHub uses tools to identify and analyze vulnerabilities to the code, that other tools tend to miss. Development teams everywhere work together to secure the software supply chain, from fork to finish.

6)Easy code hosting:

All the codes and documentations are present in one place. There are millions of repositories on GitHub and each repository has their own tools to help you host and release code.

7) Drag and Drop Gist Code:

Gist is GitHub's very own facility that allows you to host code snippets. You can also browse and find many code snippets of a variety of languages. Using Gist is downright easy and should be intuitive. But did you know that you can add codes directly from files? Simply drag and drop the files on the Gist, the codes within the files will be immediately copied. It's quick and saves you a lot of time!

8) File Finder:

Besides creating new files, you can also navigate through the files in any repository quickly**.** This feature is not visibly obvious as it comes in the form of a keyboard shortcut**.**

9) Linking Lines:

Sometimes, you might want to share and point out specific lines within the file of your repository. GitHub allows you to do this by adding #L followed by the line number at the end of file URL

10) Using GitHub Emoji:

Emojis or emoticons are tiny icons that depict an expression of some sort (mostly in the form of faces). In Facebook and Twitter, **people often express their feelings with emojis.** You **can also show emojis in GitHub**. Find all the Emoji characters and codes in the emoji cheat sheet. The emojis can be added in README.md file of the repository, Wiki, and in the Issues thread.

Aly Summary:

summary of what I learned in the get course I can make a repository

(It contains the files of the project) and any one can take a clone of it to fix some bugs or add some features.

I can take a clone of the remote repo using the command<git clone "repo's link">.

when I am done with the changes, I must commit the file to my local repo with the command <git commit "a message of what you have done">.

after committing I can upload the file to the remote repo using <git push origin "branch name">.

If you are not the owner of the repo you must make pull request in order to push the file you can also pull files from the remote repo to the local repo using command<git pull origin>

you can configure the repo (local or remote) using <git config --"global or local" "configuration like user.name">

you can see the list of configurations using the command <git config -l> or view the full manual< git help config>

you can make a key instead of having to inter username and password using command<ssh-keygen -t rsa "number of bits" -c "email"> then you

can enter passphrase, which is like a password, then a key will be generated, then you have to go to github and go to ssh key and add a key. now when you open your cmd and want to connect to your github account you will use the command<ssh -T git@github.com>

you can create your own local repo through the cmd using the command <get init> which initializes empty git repo in the location where you wrote the command

you can make a file using touch "fileName.extention".

you can add the file to the local repo using <git add "fileName.extention">, then you can make the remote repo using command <git add remote origin "link of the repo from the site">

Mohamed Summary:

Git is an **Open-Source Distributed Version Control System**.

Which is make the connection between the team is very easy.

Git Commands:

(git clone <URL>): It gets the repository from the server to your own computer.

(git Status): It tells u about the last updates in the repository.

(git add “Name of the file”): it adds the files to your own clone.

(git commit -m “Comments”): “Initial Commit” is the commit message here. Enter a relevant commit message to indicate what code changes were done in that particular commit.

(git push -u origin branch): it uploads the commits to the remote server.

(git pull origin master): it downloads the final updates to your pc.