In the name of GOD
OOP Project Phase 0

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1 Introduction

In this phase we are trying to imagine a path for our project. Which we see how are we going to code and Which classes and methods are we going to use.

2 Questions

2.1 Q1

Time line can be an array with a special type of class which we name Cards. Each player will have a timeline for his/her self and will put card on it with the rules that the game force upon the player and a mix of his/her strategies to achieve the victory!.

So by making a Class for Cards and by using Cards use an array to make a timeline for each player and by putting these two arrays next to each other we have out time lone and we can access every Card on the timeline with a for.

2.2 Q2

We are going to use the games Cards for our game cause of simplicity and the fact that the numbers of health and attacks on those card suit each other much better than giving them some random numbers.

So we use these Cards.

Figure 1: Cards.

2.3 Q3

As explained in the first question we are going yo make a main Card Class and by extending that class we are going to make our Card which the will have different stats and numbers.

After that we are going to make a Player Class which is the basic of a player login an sign up this class will have a lot of parts and a lot will happen in it. Such as timeline, cards that player posses, health bar, golds, etc.

We are also going to have a lot of classes for our menus such as shop menu, main menu, login/sing up menu, game menu, settings and other menus which may seem essential at that time.

2.4 Q4

For this part we are going to use files or to be exact text files. Each players data will be save as a few lines in text such as username, pass, health, cards, etc. For example when a player tries to log in our database which we search in and try to find our player will be a file named Database.txt.

2.5 Q5

In every card that we build there will be a variable called level which starts from 1 to 5. By using money each player can upgrade the level of his/her cards and after upgrading them the level of the players cards will be up by one and it will be saved on the text file. So when we call back the data of the player we will receive the level of cards he/she posses and there will be no data loss.

2.6 Q6

Each player will have two main properties for rating and gifts the first one is experience and the second one will be gold. After each battle the winner gets both gold and experience which later he can use to upgrade his cards. And the loser will have his experience being cut. So a player with higher experience probably has more record in game and is a better player so watch out!!!.

2.7 Q7

This part is probably the hardest and trickiest part cause you can grow this part far far from the level of a normal project (Only this part can be a totally different and separate project). The first thought that comes to mind for this part is a completely random algorithm for selecting which card to use and and what place to put it on which is not recommended at all.

for the next step you can give cards weight base on their stats and using them or another solution that comes to mind is chose a strategy based on your opponent for example if he chooses a card see what card is the best counter for that and use that.

The last idea that comes to mind is the hardest to understand and apply. Trying to use algorithms such as genetic, Decision Tree algorithm, Linear Regression, etc. So by using these every time that the game is over our algorithm works beter and more efficient. Ofcourse at this point at least i dont understand the mathematics behind these but at this level of usage we can still apply them.

3 Github

We were supposed to make a github account and make a repository for our project and add our teammates to it so they can have access to. Cause i hasn't joined a group yet only i have access to the repository and it is a private one to.

You can also go to the github page by using github link though i don't know what happens cause it is a private repository.

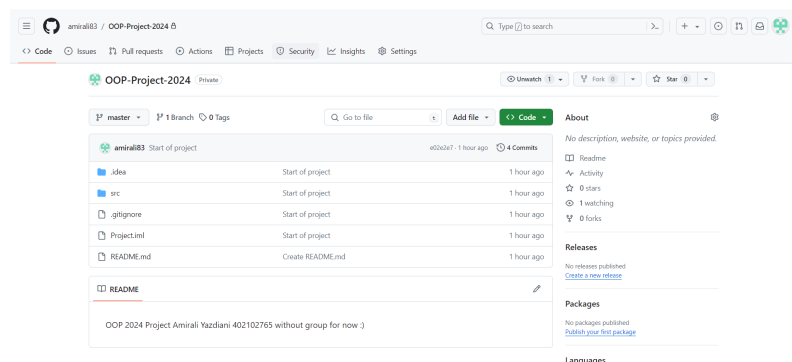At least for now it doesn't have anything special and its only a template.

Figure 2: This is the repository that has been created.

4 Trello
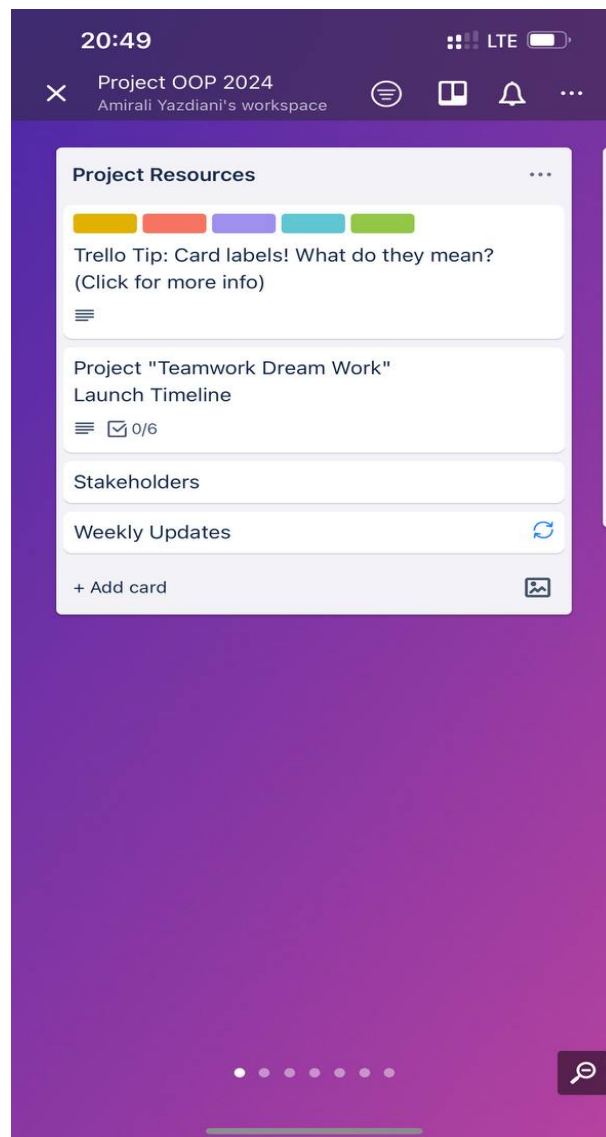
As show in the github section there is not much to show in this part either.

Figure 3: This is the project that has been created.