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OBJECT-ORIENTED PROGRAMMING (LAB)

PROJECT REPORT

ON

HANGIT!

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INTRODUCTION

Our project is about a game named as HangIT. This project will facilitate people as a source of entertainment as well as it is created for educational purpose.

The user of this application in game player. This application will encourage users to play game as well as learn new vocabulary with fun.

Mega Game:

HangIT

Mini Game:

1. Tic Tac Toe
2. Guess the number
3. Rock Paper Scissor

OBJECTIVES

Here's the logic behind the game- HangIT. The central idea of the game is to complete a particular word using letters to guess it. It's filled with plenty of easy as well as difficult words displayed in random order each time you play.

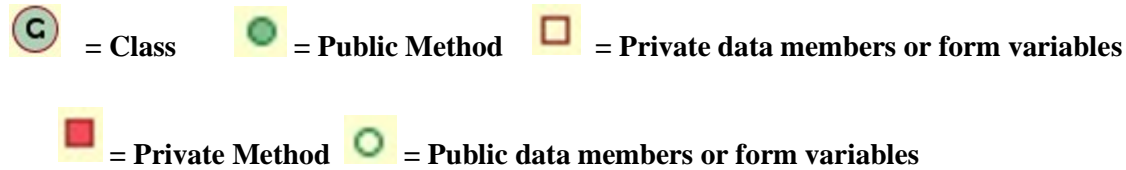
The more mistakes that a player makes in guessing the word and filling the gaps, the lives of the player will be decreased until they reaches at 0 lives. Once the lives reaches at 0, 3 mini games will be enable to play as a bonus live to win.

Here are some other salient features of the game:

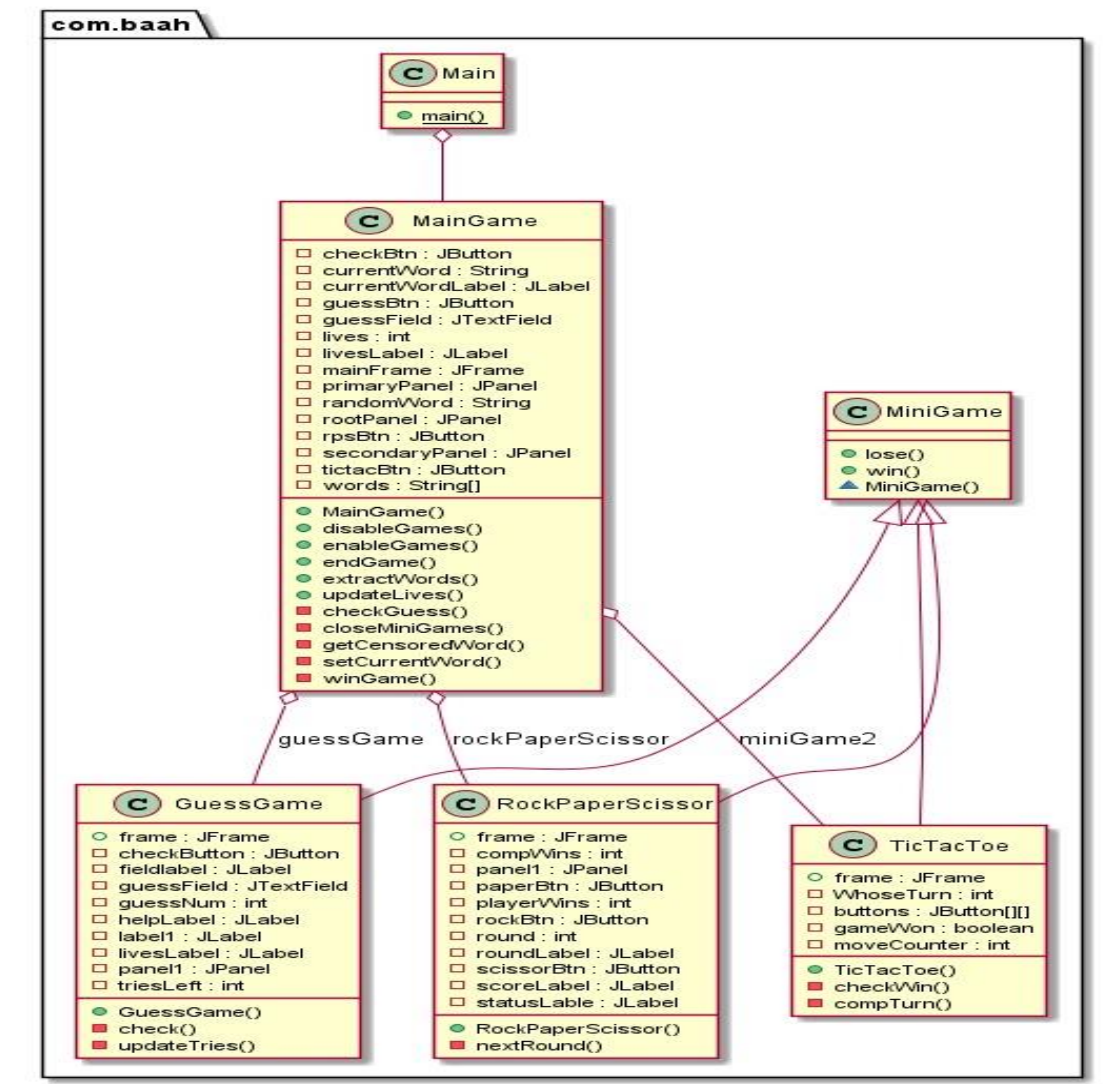
- First the mega game will be started with 3 lives in hand initially.
- If player guesses the letters in the word wrong, the lives would be decremented to 0. And once they reach at 0. 3 mini game will be enable to play according to player preference.
- If the player wins the mini game, he would have +1 live or else he will lose.
- If the player guess the word correctly, he will be allowed to further proceed with another round if he wants.

HangIT is a game worth to be played by all ages if they know Basic English. This will encourage more and more people to learn and play simultaneously,

PROJECT STRUCTURE



OOP Project Class Diagram



MOTIVATION

The motivation behind the idea is that now a days our youth are diverted towards the gaming. By creating HangIT, we will encourage them to play games which are really interesting along with that they can enhance their English as well as their vocabulary.

FLOW OF APPLICATION

1. When the application is run, initially a random word would be generated with a random letter uncensored as a hint.
2. The player have 3 lives to guess the word correctly. In start the 3 mini games button are disable, once the player lives reaches to 0, the check button and guess field are going to be disable and mini games are going to be enable to play as a chance to win a bonus live.
3. As the user proceeds and start guessing letters correctly, the censored letters will be uncensored and it will be fill by correct letters.
4. If the word is guess correctly, a pop up menu will be opened to ask user if they want to continue and play more or exit game.
5. If player select to continue playing a new word will be generated or the game will be closed.
6. If the user lives reaches at 0 and they play mini games but fails to win it, the game will automatically closed and player will ultimately lose the game.

CHALLENGES AND LIMITATIONS WHILE DEVELOPING PROJECT

Initially, while deciding the flow about how to program will process, we had hard time to find what functions must be included to make our program more efficient keeping in mind that the application will be used by any age group. After deciding the flow we headed toward the programming and starting implementing different logics in order to make our program more efficient. We decided that we will create GUI base application as it is a game so it would be more likely to be attractive and well-organized if it's GUI and interactive. We first started learning about GUI for several websites and YouTube tutorials as it was something new for us but we took this as a challenge. Then after learning and practicing GUI we started implementing logics we started coding but were getting many bugs. To solve this we debug our program. We added some validations and duplications checker in our program which was the requirement of our objective. We then added filing in the code in order to generate random words for users to play game. We created file in which we added more than 2000 different words to make our game more challenging. We then worked with the design of program using Java Forms as we tried to create the user friendly interface which looks easy to understand and more presentable for a new user. We added buttons, text field, Labels, panels and many more to make our application look better as well as we used colors to create an interesting environment for player.

SCOPE OF PROJECT

This application is very useful for a long run. This can be used in schools and educational sectors to provide students an environment where they can enjoy learning with playing games and as well as improving their English. English is the basic necessity now a days as it is an international language. So this application will encourage students to enhance their vocabulary as learn new words as well.

TOOLS AND TECHNIQUES

The language that is used is JAVA and for IDE IntelliJ IDEA is primarily used. Basic concepts of OOP along with GUI are applied.

CONCLUSION

Overall, the project has achieved its objectives. This helps to provide better environment to improve vocabulary with fun. We have tried to find ways to optimize and improve our project to test and learn more, and we have certainly been able to improve our Java OOP skills. If we see this project in a long run, the world is changing and now everything is digitalize so this will be a productive and better technique for students to learn English instead of using the old schools ideas of paper and pen.

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