Game instruction for Little Professor

Gruppe05 Einhörner

Improve your mental arithmetic skills!

Set Up

```
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################################################################

The little Professor will help you to train your math skills while playing.
Please enter your username.
Between 3 - 12 characters

Enter "quit" to quit.
```

The little professor is a single person game.
To start the game, enter your name. You can later return and retrieve your high score by re-entering the same name. Your name and high score will be saved encrypted in the users.txt file.

Playing the Game

```
#############################################################################
#  Username:user                           Highscore:0                    #
#############################################################################
#                              ##############                             #
#                              #            #                            #
#                              #     -      #                            #
#                              #            #                            #
#                              ##############                            #
#         ##############       ##############                            #
#         #            #       #            #                            #
#         #     +      #       #    --      #                            #
#         #            #       #            #                            #
#         ##############       ##############                            #
#                                                                         #
#                                                                         #
#                                                                         #
#                                                                         #
#                                                                         #
#############################################################################
#  Level:1        |  Time:94                    Score:0   /  8            #
#############################################################################
```

After entering your name, you will find yourself in the hallway of the house. This is the room in the middle marked with "- - ". After every move, you will return here.

You can see rooms marked with a mathematical operation +, -, * or / around you.
On the top bar, the *username* and your personal *high score* are displayed, on the bottom, you can see the current *level*, the remaining *time*, the current *score* and the *minimum amount of points* required to pass the level.

Watch out: The timer is running (descending towards 0), the console only shows the current state which will be updated next time when you are back to the hallway. So, try to complete the current Level within the Timer limit.

Your next move can consist of one of the following commands:

```
LEFT: left
UP: up
RIGHT: right
DOWN: down
HELP: help
QUIT: quit


Enter "quit" to quit.
|
```

"help" will give you further instructions and "quit" will end the game.
"left", "up", "right" and "down" will move you to the according room. Keep in mind, that you can only enter the rooms, that are displayed.

```
You entered the room with the mission to solve questions of the operation +.
Finish before the time runs out!

###############
#             #
#       +     #
#             #
###############

Solve: 7 + 9
Your answer: |
```

Once you're inside a room, a set of questions according to the room's operation will start. Type in your answer and gain one point for each correct solution.

After you have completed a room, it will be marked as such and you will be in the hallway again, ready to move into another room.

```
############################################################
# Username:user                    Highscore:0            #
############################################################
#                       ###############                   #
#                       ###############                   #
#                       ######-########                   #
#                       ###############                   #
#                       ###############                   #
#      ###############  ###############                   #
#      #             #  #             #                   #
#      #      +      #  #     --      #                   #
#      #             #  #             #                   #
#      ###############  ###############                   #
#                                                         #
#                                                         #
#                                                         #
#                                                         #
#                                                         #
############################################################
# Level:1        | Time:84              Score:5  /  8     #
############################################################
```

It is possible to repeat completed rooms but be aware of the running timer and the fact, that you can only accomplish a level successfully if all displayed rooms are completed.
As soon as all rooms are completed and enough points are collected (each level requires another minimum score to be reached), the current level is finished, and you move into the next one

The levels differ in their degree of difficulty, which consists of the domain of the numbers used in the questions, the number of rooms, the operations of rooms, and whether the questions can contain doubles or not.
The difficulty degree *beginner* is the domain [0, 10], *intermediate* reaches [0, 20] and *advanced* [-20, 20].

Level 1 contains two rooms with the operation "+" and "-" whereas the difficulty is set for *beginner*.
Level 2 differentiates from the first level by extending the difficulty to *intermediate*.
Level 3 and 4 consist both of two rooms with "*" and "/", for beginner and *intermediate*.
Level 5 and 6 contain all rooms with a degree of difficulty of *advanced*.

Ending the Game

```
The time is up.
Your score will be written to the highscore file and the game will end here.


Unfortunately you could not successfully complete the game with a score of 2.


Would you like to play again? ('y' for yes)

Enter "quit" to quit.
|
```

The game ends if one of the following situations occurs:
1. The time is up because your timer has reached 0. The points that are collected in the room, in which the time ran up will still be added.
2. You have completed all displayed rooms, but you did not collect enough points.
3. You have reached the final level and mastered it successfully.

In each of these cases, you can choose to replay the game.

Questions

Q: How many questions are there per room?

A: There are five questions in a room.

Q: How is the minimum to be achieved points per level calculated?

A: At least 80% of each room's questions must be answered correctly. So, in a level of 2 rooms, you need to 8 points, in a level of 4 rooms, you will need 16 points.

Q: How much time do I have per level?

A: It is displayed on the console when you enter a new level and you find yourself in the hallway.

Q: What happens after I have mastered the final level?

A: In this version the game ends and you have the option to replay the game.

Q: Will there be more levels?

A: This software is written such that you can add more levels, see LevelFactory class in our source code.