Game instruction for Little Professor

Little Professor is a learning game for everyone to improve their mental arithmetic skills.

Set Up

```
###########################################################
#                                                         #
#                                                         #
#                                                         #
#                                                         #
#  ,  .   .                           .                   #
#  |. |   |                           |                   #
#  | ) ) ,-. |,-. ,-. ,-.-. ,-.      |- ,-.               #
#  |/|/  |-' | |  | | | | | |-'      |  | |               #
#  ' '   `-' ' `-' `-' ' ' ' `-'     `-' `-'              #
#                                                         #
#   .  .   .   .                                  .   .   #
#  | o |   |   |                          ,-           |  #
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#  | | | |-' | | |  | | `-' |-' | | `-' | `-' `-' `-' '   o  #
#                                                         #
#                                                         #
#                                                         #
#                                                         #
###########################################################

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.
```

This game is a single person game.

To start the game you enter your name. This will be your ID, which a personal Highscore will be referenced to.

Playing the Game

```
##################################################################
# Username:syd                          Highscore:10             #
##################################################################
#                         ###############                        #
#                         #             #                        #
#                         #      -      #                        #
#                         #             #                        #
#                         ###############                        #
#        ###############  ###############                        #
#        #             #  #             #                        #
#        #      +      #  #      --     #                        #
#        #             #  #             #                        #
#        ###############  ###############                        #
#                                                                #
#                                                                #
#                                                                #
#                                                                #
#                                                                #
##################################################################
# Level:1         | Time:49               Score:0               #
##################################################################
```

Now you have entered the House and you find yourself in the Hallway. This is the room in the middle marked with "- - ". After every move, you will be here again.

You can see rooms marked with a mathematical operation +, -, * or / around you.
On the top, the Username and your personal Highscore is displayed, on the bottom you can see the current Level, the remaining Time and the current Score. 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 consists of following command:

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


Enter "quit" to quit.
|
```

"help" will give you further instructions, "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 these 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 moving into 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 this room, it will be marked as completed and you will be in the Hallway again, ready to move into another room.

```
############################################################
# Username:syd                 Highscore:10                #
############################################################
#                     ###############                      #
#                     ###############                      #
#                     ######-########                      #
#                     ###############                      #
#                     ###############                      #
#     ###############  ###############                     #
#     #             #  #             #                     #
#     #      +      #  #     --      #                     #
#     #             #  #             #                     #
#     ###############  ###############                     #
#                                                          #
#                                                          #
#                                                          #
#                                                          #
#                                                          #
############################################################
# Level:1        | Time:72                 Score:4         #
############################################################

You are in the Hallway right now. Type any of the following commands to enter a room.
```

It is possible to retake 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 amount of a minimum to be achieved points) the current Level is finished and you move into the next one.

The Levels differ in their difficulty degree that consist of the domain of the numbers used in the questions, in the number of rooms and the operations of rooms.
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 difficulty degree 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 either of following situations occur:

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 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 have to 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.