

Intro to Java

8 - ArrayLists / Exercise: Hangman

Exercise: Hangman

Let's implement a simple hangman game.

1. getLetterIndexes

Write a method `public static ArrayList<Integer> getLetterIndexes(String word, char letter)` which returns an `ArrayList` that contains the indexes where the `letter` appears in the `word`.

Example: for word `hello` and letter `l`, the method shall return an `ArrayList` which contains `[2,3]`.

2. uncoverLetters

Write a method `public static void uncoverLetters(ArrayList<Character> guess, ArrayList<Integer> indexes, char letter)` which updates the `guess`, uncovering `letter` at position `indexes`.

Example: for guess `[_ , _ , l , l , _]`, indexes `[1]`, letter `e`, it updates guess to contain `[_ , e , l , l , _]`.

Implementing the hangman

Implement the hangman game:

- 1 Read `word` from the user.
- 2 Create an `ArrayList<Character>` long as the length of the `word`, containing only underscores `'_'`. This represents the letters currently guessed by the user. When a user guesses a letter contained in `word`, the `guess` is updated, showing letters successfully guessed.
- 3 As long as the `guess` created in 2. contains at least one underscore:
 - ask the user for a character.
 - update the current guess showing the guessed letters in `word`.
 - print the new `guess`.
- 4 When the `guess` does not contain any underscore, write "You won the game" to the screen!

HINT Use the methods from 1. and 2. for implementing the game, or any other method you find in `ArrayList`.

Made with ❤ by teachers at [ReDI School](#).