

## DATA533 Package Description

### **‘py-quizlet-kahoot’**

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A package for taking Quizlet and Kahoot quizzes in Python.

#### **Introduction**

The subpackages and functions that follow will all be contained within two new classes: **QA()** and **Quiz()**. **QA()** stands for ‘question-answer’, and will contain question string, answer string, user input string, and correct/incorrect designation. **Quiz()** will contain an array of **QA()** objects, quiz name, quiz grade, quiz settings, quiz-taking method, plotting methods, question-retrieval method, and quiz-creation method.

## 1. 'Core' Subpackage

All the core functionalities of the QA() and Quiz() classes.

### 'quiz-main' Module

#### Method 1: 'quiz-settings'

Upon initializing a Quiz() object, prints default options, then asks user if they want to change options. If yes, loop over options one at a time, user must enter one of allowed variables for each option.

Proposed options include: quizTopic, displayResults, hint, tolerance, guessNum, translate, and quizNum.

#### Method 2: 'quiz-creation'

Once options are set inside Quiz(), these are passed to webscraping functions. Webscraping returns questions and answers as a dataframe, which are then assigned to the appropriate number of QA() objects. An array of these QA() objects should then exist in that instance of Quiz().

#### Method 3: 'quiz-taking'

Once the QA() objects have been created, this method is called automatically. It loops through all QA() objects, printing the question each time. Control flow of questions is dictated by Quiz() settings. User input must be checked against answer variable in order to continue to next question.

### 'quiz-methods' Module

#### Method 1: 'plotting'

Produces a pie chart showing the distribution of correct and incorrect answers.

#### Method 2: 'tolerance'

A function called by 'quiz-taking' if settings require it. Allows a user's input to be X letters off from answer and still be considered correct. Value of X is set by user in 'quiz-settings'.

#### Method 3: 'hint'

After 1 wrong guess, prints a single letter surrounded in underscores (# of letters in answer) as a hint. Can be turned on or off in settings.

#### Method 4: 'displayResults'

If set to 'on' (default), will automatically call plotting methods after quiz is finished.

## **2. 'Network' Subpackage**

Anything that involves internet connection.

In order to satisfy the inheritance requirement, the network methods will be contained within a 'network' parent class / superclass. This superclass will contain 'check-internet', puller methods and builder methods. The first child class will be 'webscraping' which will override the puller methods if a URL is supplied instead of a topic. The second child class will be 'translate', which also inherits from 'network'. It will override internal 'network' methods if translate option is turned on by user.

### **'webscraping' Module**

Method 1: 'quizlet-puller'

Obtains the appropriate URL for quiz by searching Quizlet. Is called by 'quiz-creation'. Pipes a URL to 'quizlet-builder'.

Method 2: 'kahoot-puller'

Obtains the appropriate URL for quiz by searching Kahoot. Is called by 'quiz-creation'. Pipes a URL to 'kahoot-builder'.

Method 3: 'quizlet-builder'

Iterates over questions on HTML page from 'quizlet-puller' URL output. Outputs an array of questions and an array of answers as a dataframe.

Method 4: 'kahoot-builder'

Iterates over questions on HTML page from 'kahoot-puller' URL output. Outputs an array of questions and an array of answers as a dataframe.

### **'translation' Module**

Method 1: 'get-languages'

Prints all the languages available to which the quiz can be translated.

Method 2: 'translate'

Translates input in English to output in user chosen language. Iterates over question/answer dataframe from builder methods.

Method 3: 'check-internet'

Pings <https://google.com> to check for an internet connection. Called first-thing whenever a Quiz() object is created. Quiz() objects cannot be created without an internet connection, so if this method returns FALSE, the creation of the object will be aborted.