# Brief

I have been tasked with making a quiz program. The program will get its questions from an Api hosted on an open-source trivia website called [opentdb](http://opentdb.com/). I will have to turn the non-human readable format returned by the api into human a human readable and interactable program. The stakeholder has specified some requirements for the program.

I’m required to use complex programming techniques to develop this computer program. I will be using a combination of advanced techniques including making classes and objects and saving/reading data from files.

Program making requirements:

* Defining class/classes and creating objects.
* Reading from files.
* Robust error checking.
* Comment code and appropriate variable names.
* Evidence of debugging and error checking.
* Flexible and robust.
* Object oriented Classes.
* Multidimensional arrays.
* Module(s).
* Strings, Numbers and Boolean data types.

Program usage requirements:

* Topic and difficulty selection.
* User selected question amount.
* Randomize questions from file.
* Randomize answers to correct always being bottom.
* File nonexistent error checking.
* Display results at end of quiz.
* Handle multiple users.

# Plan

My program will start with a main menu, it will then have submenus:

* Play quiz
* User manager
* Saves
* Setting?

The play quiz menu will contain some quick play options which will use a local file containing questions. There will also be an option allowing the user to pick category, difficulty, type and amount for a custom quiz.

The user menu will show basic user data. There will be options for new user, delete user and show advanced.

It would be cool to implement saves at some time allowing the player to save the quiz for a later date.

Automatic generation of all required files and file paths.

Automatic replenishing of local questions.

# Logs

## Version 1

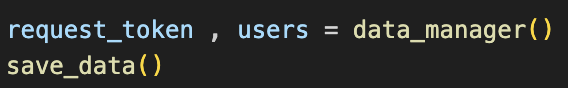
I started by making the automatic file opening and generation as it’s the start of the program.



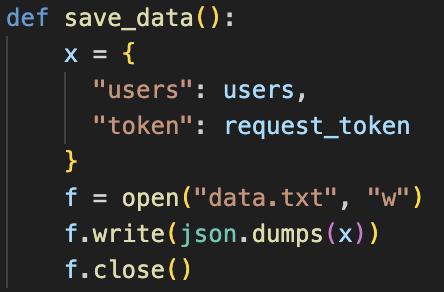
This function runs at the start of the program. It tries to read from the data file, if it can’t read from the file It will return a new token from this function. It requests a new token from the api then either returns the token or prints an error.



and an empty array for the users if there was no data file.



These returned values are then saved using the save data function.



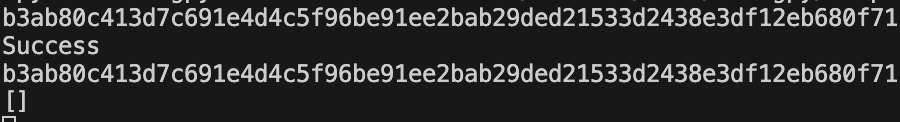
It formats the users and token as a dictionary then writes it to the data file.

The token and users are then printed as a test.

When the file exists, the program prints the token and the array.



When the file doesn’t exist, the program prints the Newley requested token, and its response code. Then the loaded data is printed.



## Version 2

A computer screen with text

Description automatically generated

After the data file is opened the questions, file is opened. If it can’t open the user is asked if they would like a new file generated, if yes 50 random questions will be requested from the api, these questions will be written to the file. Then with subsequent program runs the questions file should open.

A black and white text

Description automatically generated

Question file not found.

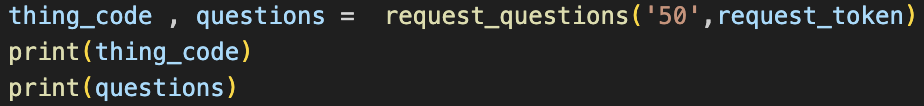
## Version 3

The previous versions manual question file generation was scrapped as it was too clunky.

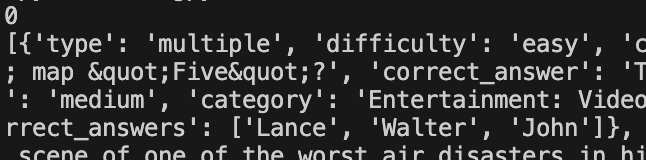
I made a function to request custom questions. You must specify amount and token, but you can also specify category, difficulty and type.



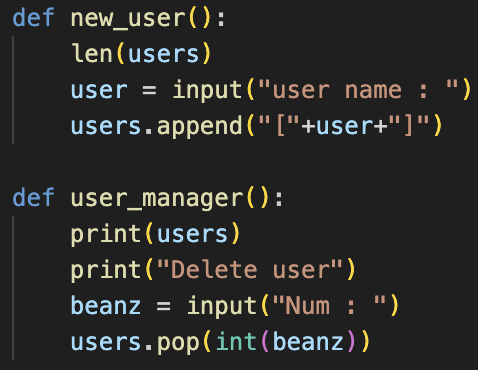
I requested 50 questions.



And I got the correct response.



I started to implement multiuser management stuff but it doesn’t work yet. A new user and delete user function.



## Version 4

I started to implement a proper user system. Make an array that will hold the active arrays.

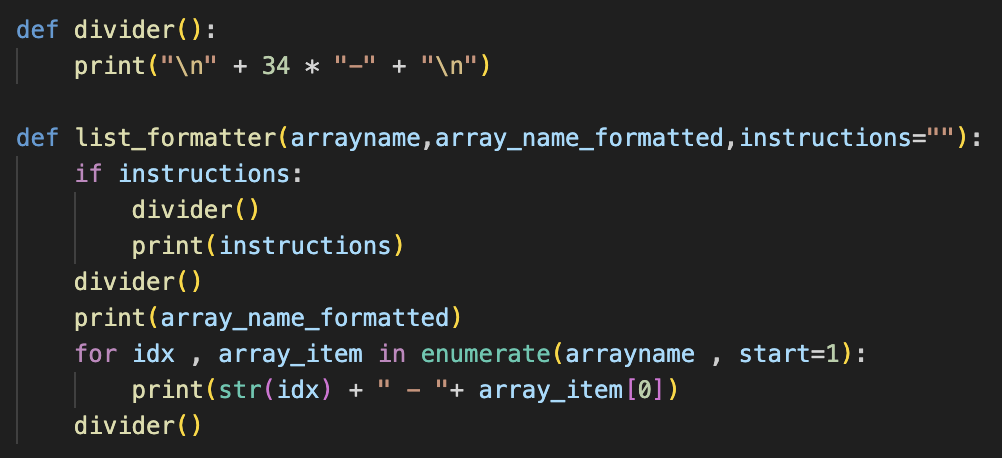


Bug

In the previous version the new user function appended a name in an array, it was meant to just append the name, this was fixed in this version.



A list print function was made.



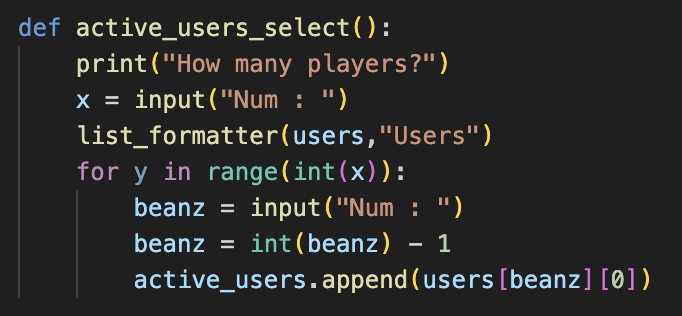
You give it a title, array and optionally instructions and it prints it in a neat format with index numbers for user choice.

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List formatter example

An active user function was also made you tell it how many players then pick from existing users.



They display like this, and return an array of chosen names.

A screenshot of a computer

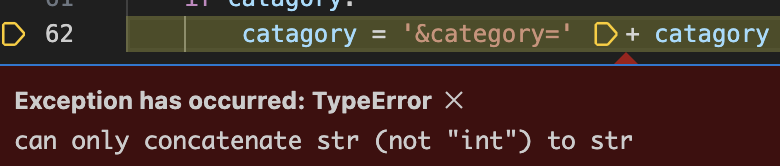
Description automatically generated

## Version 5 Bug

I tried requesting questions with a specific token, it didn’t work.

## 

It gave me a TypeError.



This was easily fixed by putting string around category.

Old:



New:



With this fix implemented the question request worked.

A screen shot of a computer code

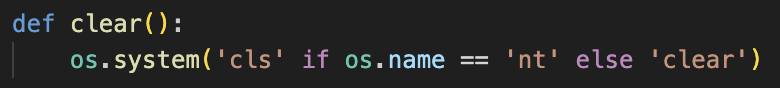
Description automatically generated

## Version 6

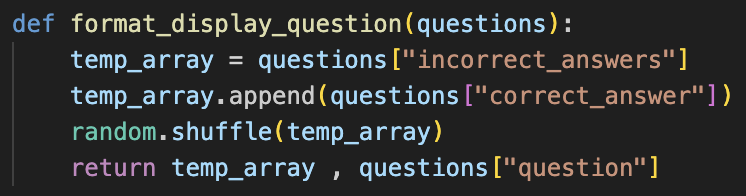
Nothing

## Version 7

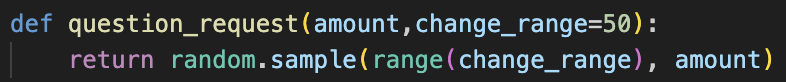
Utility function to clear terminal, required import os.



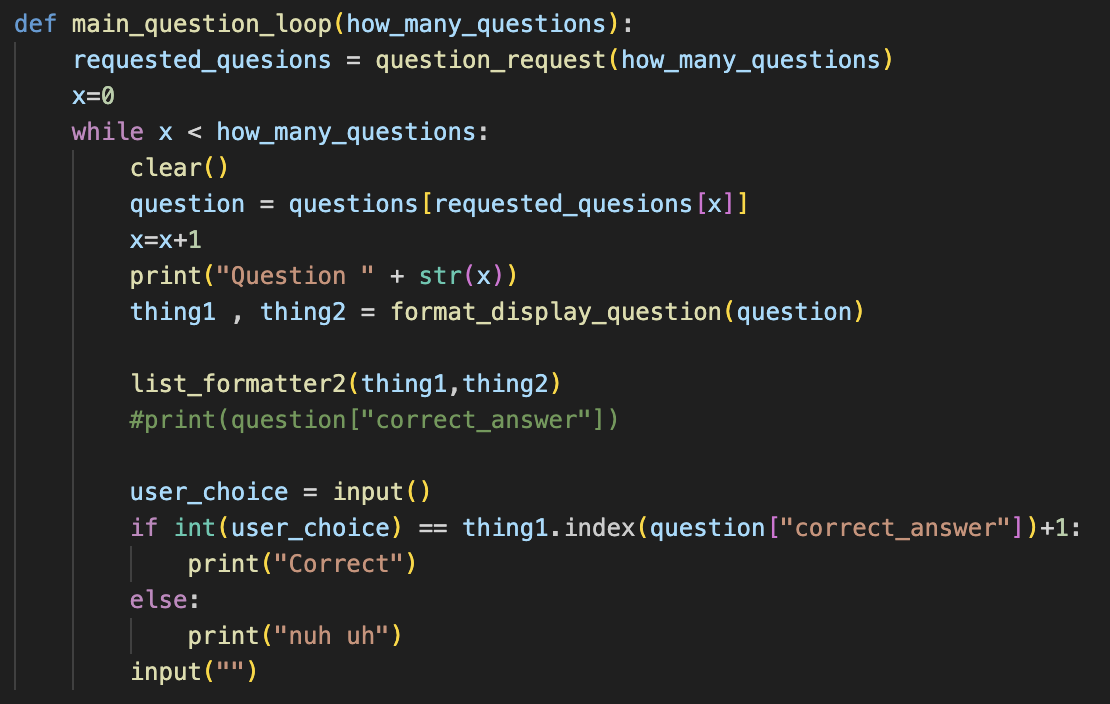
Combines the incorrect and correct answers then randomizes them. Then returns the choices and the question.



Gives array of chosen amount of random numbers within a range. Used to randomize questions gotten from file.



Main question loop. You give it the number of questions you want. It gets an array of randomized numbers to get questions from the file. It then goes through each question displaying it and allowing input, It also shows correct or incorrect. Multi user and score still need implementing.



Proof of working-ness.

A screen shot of a black screen

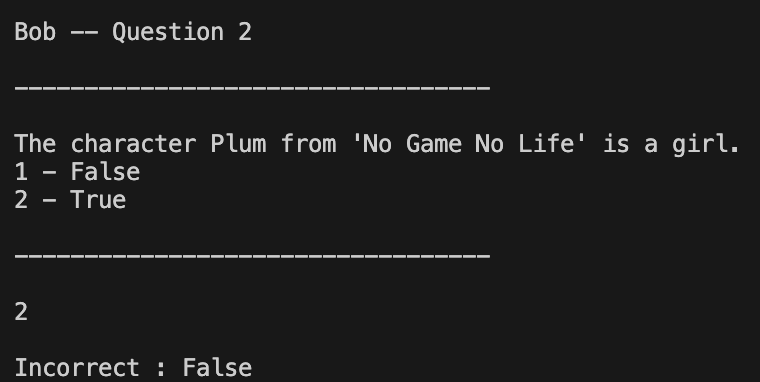
Description automatically generated

## Version 7

I rearranged the main question loop to include multiple users. It does each question for each user and it works. The active user select function is required to run before the quiz to have users in the user array.



Both users got the question and could answer it. Scoring still doesn’t exist.

A screenshot of a computer

Description automatically generated

If you get it wrong, it tells you what the correct answer was now.

## Version 8

Each user is now an array with 2 integers instead of just a name. The first is correct and the second is incorrect.

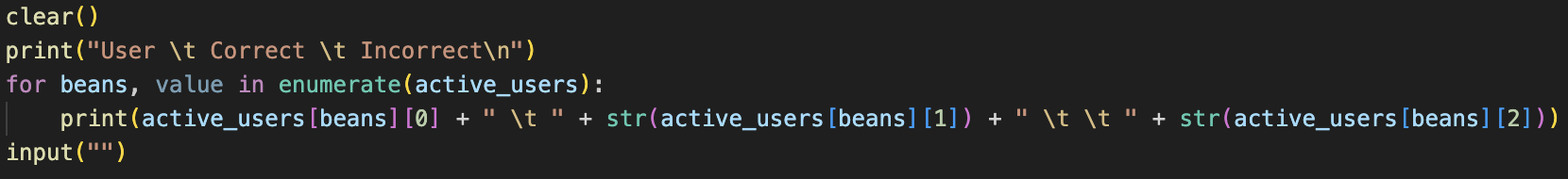
A black and white text

Description automatically generated

When the player gets a question correct or incorrect it will add one to the corresponding value.



The quiz also displays the scores before every new question.

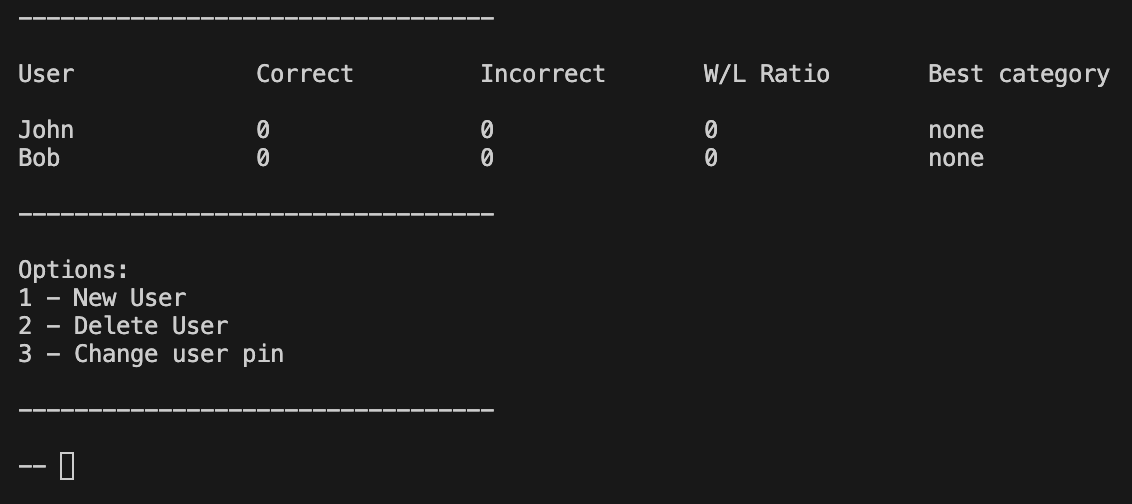


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Description automatically generated

## Version 9

New user management menu.



New user format, corresponds to titles in menu.



Can now easily make new users and delete users, user pins will be added later.

## Version 9

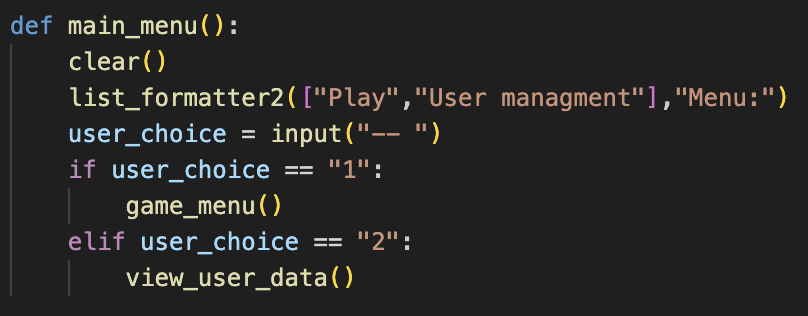
User pin menu and functionality implemented and working.

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Description automatically generated

Functions re shuffled to be in order.

Main menu made.



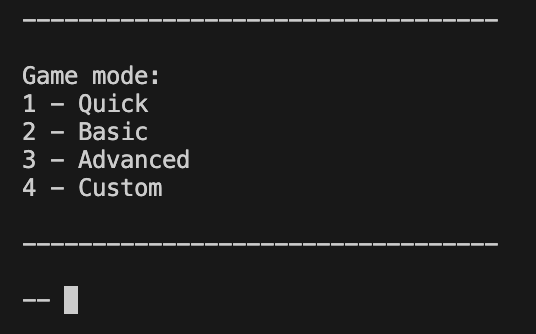
A black screen with white text

Description automatically generated

And game menu made.

A computer code with colorful text

Description automatically generated



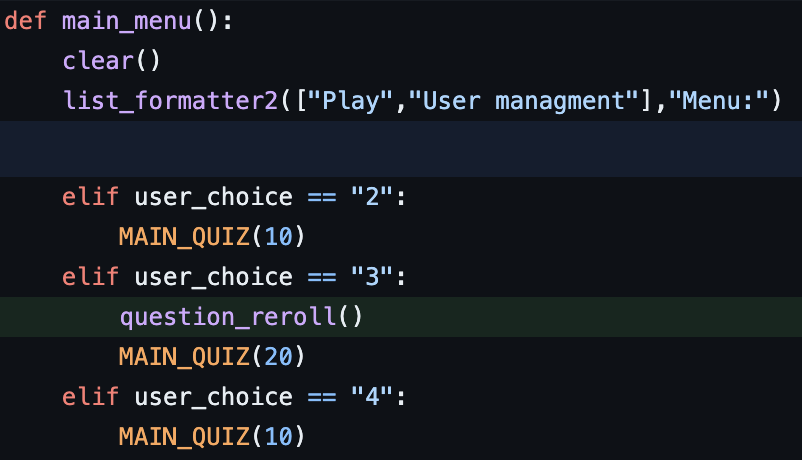
Each game mode is just a different number of questions. Custom will allow the user to pick category, difficulty, etc.

## Version 10

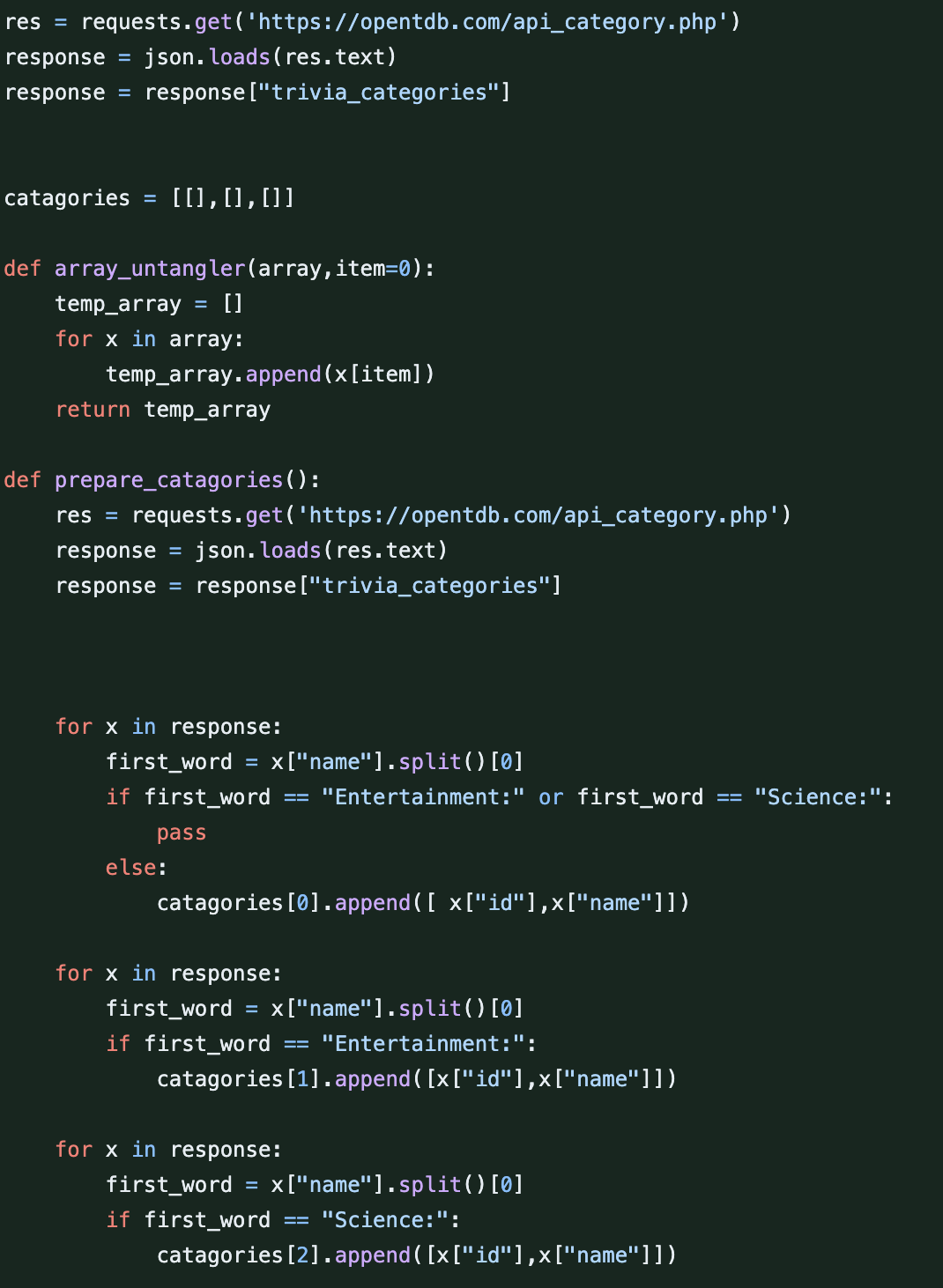
I made a function that gets new questions.



I then tested if it worked by putting it in the game menu.



## Version 11



I get the categories from the api then sort them by type for use in the advanced game menu.

New advanced game user menu allows user to pick specific catagories.



Menu:

A black background with white text

Description automatically generated

## Version 12

Get category’s runs once then saves to the data file. It then doesn’t need to be run again.

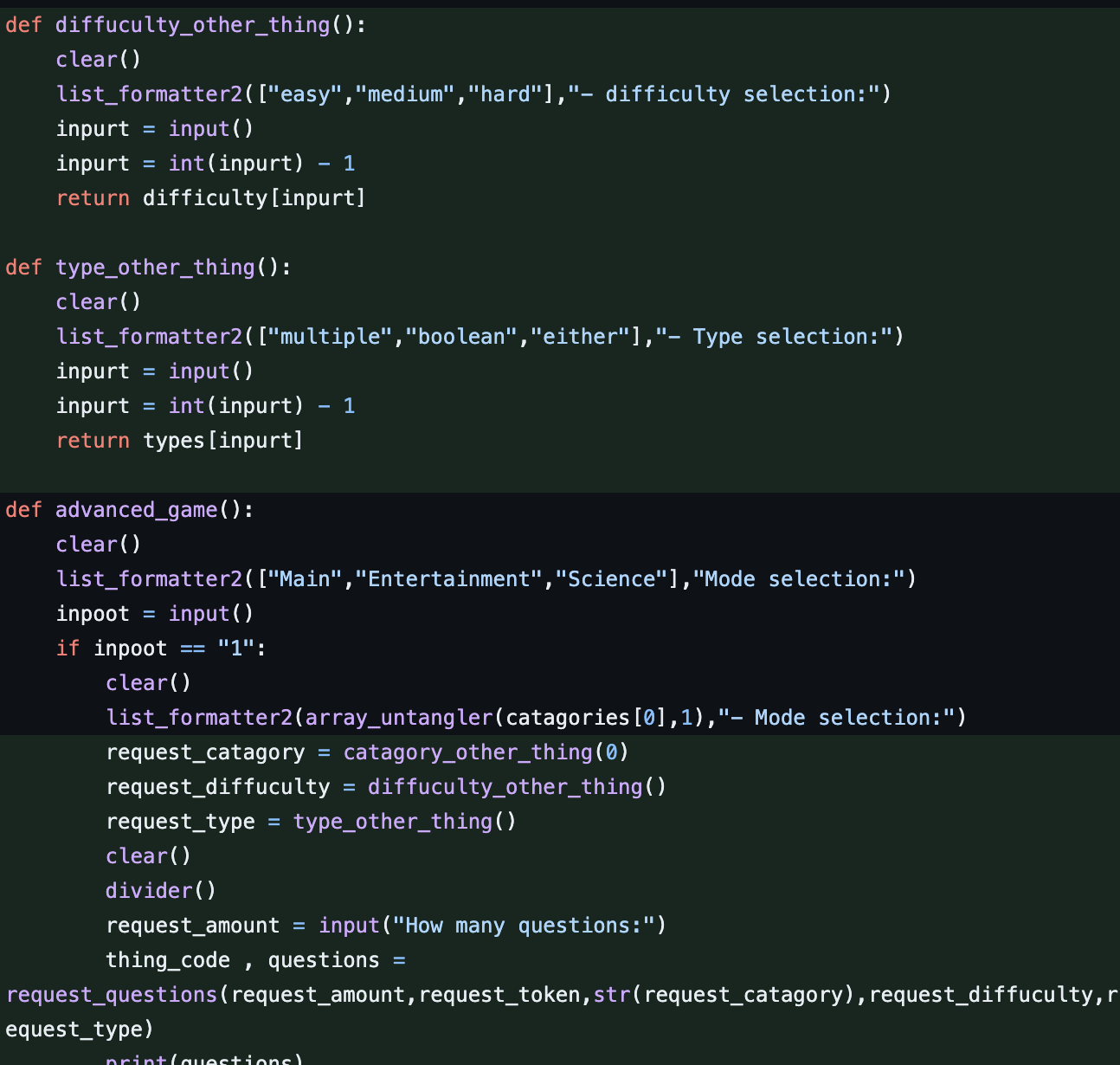
A screen shot of a computer program

Description automatically generated

## Version 13

Depreciated the question reroll function.

Added difficulty and type options to advanced game.



## Version 14

Bug

When making a new file It got mad that there was no array for the categories, fixed it by adding another empty array.



## Version 15

Minor fixes

## Version 16

Moved token to end as I’m not using it now and the parsed category id would be where token went.



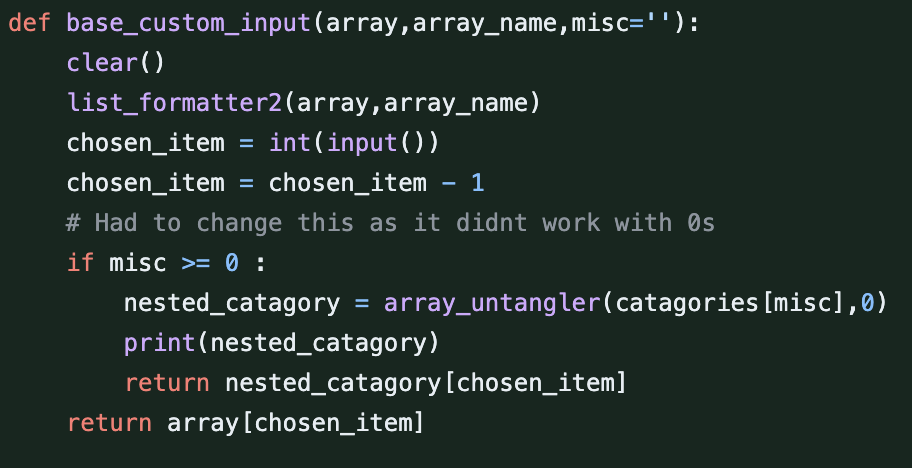
Can now choose either type instead of just one or the other

A screenshot of a computer

Description automatically generated

## Version 17

Input function for advanced game menu.



Implementation of advanced game menu input function.

A screen shot of a computer program

Description automatically generated

## Version 18

Cleaned up advanced game menu functions.

## Version 19

Minor changes

## Version 20

All automatic function were moved to a new file to test their function. If no data file is present, it will automatically get and sort categories. make a file then save the respective data to that file.

## [Version 0.16.1](https://github.com/Puskalincer/yr13_python/commit/b8c39216d30c250c5d22e3199c7fdadb3e91a664)

Previous automatic start test moved from separate file to main file.

## [Version 0.16.2](https://github.com/Puskalincer/yr13_python/commit/7e99702a9c8b83538a22e79bfa5917ee10432b82)

Added ability to choose any difficulty.

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Description automatically generated

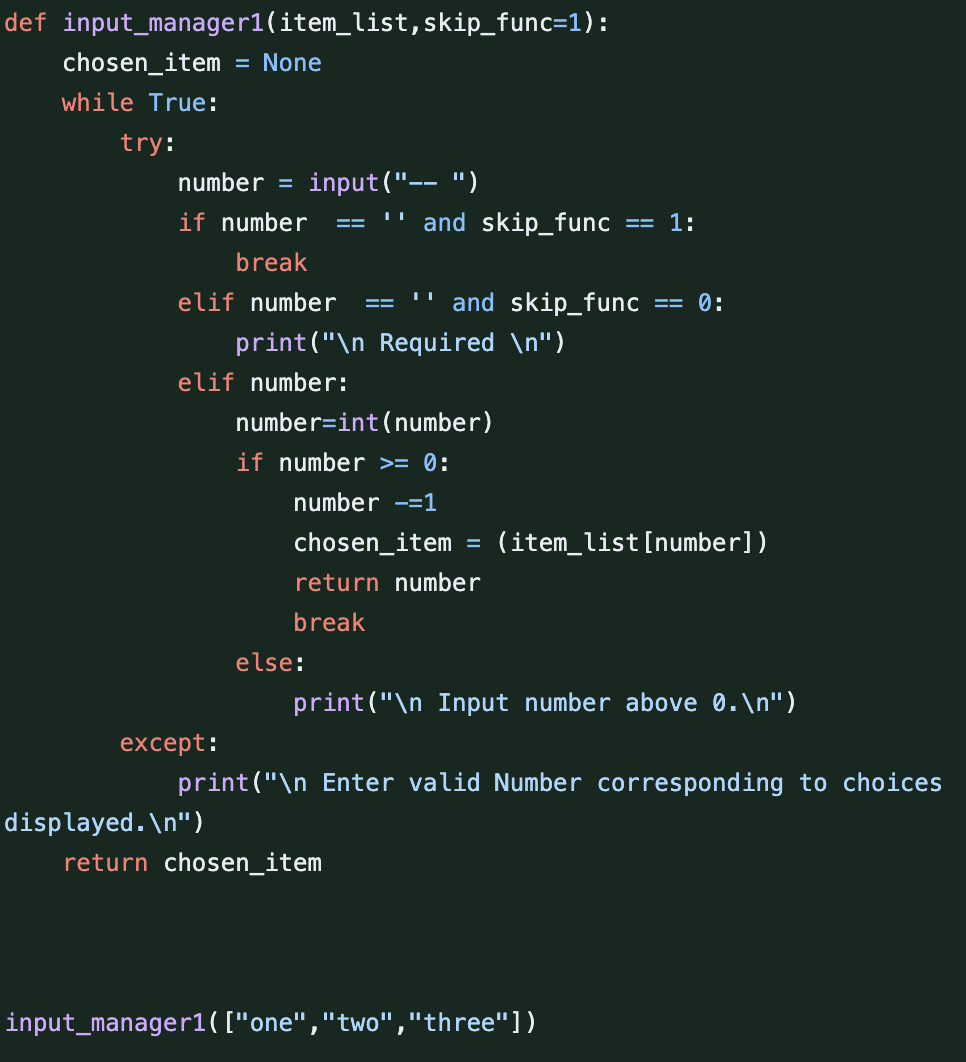
## [Version 0.16.3](https://github.com/Puskalincer/yr13_python/commit/b8c39216d30c250c5d22e3199c7fdadb3e91a664)

Turn html encoded string into readable text.

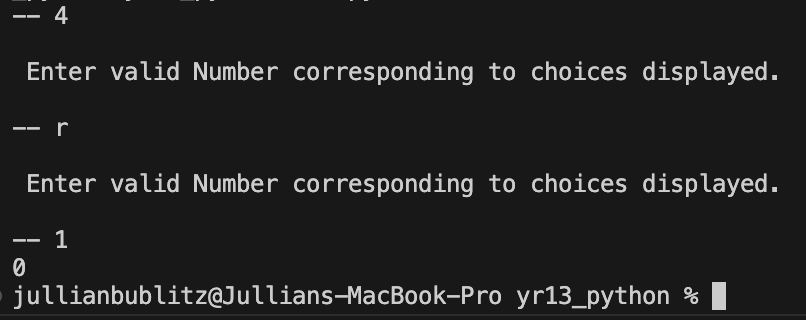


## [Version 0.17](https://github.com/Puskalincer/yr13_python/commit/8466a78df03fa0e0ded8968d355cccf2123c9868)

Testing new input function, will replace all inputs in code to stop out of bounds entries.



It works in range.



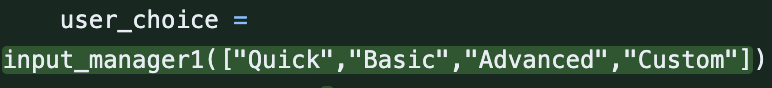
## [Version 0.17.1](https://github.com/Puskalincer/yr13_python/commit/0f48b68e3daf7a336773b3afa76f80b896a6900b)

Implement previously made input manager on main menu.



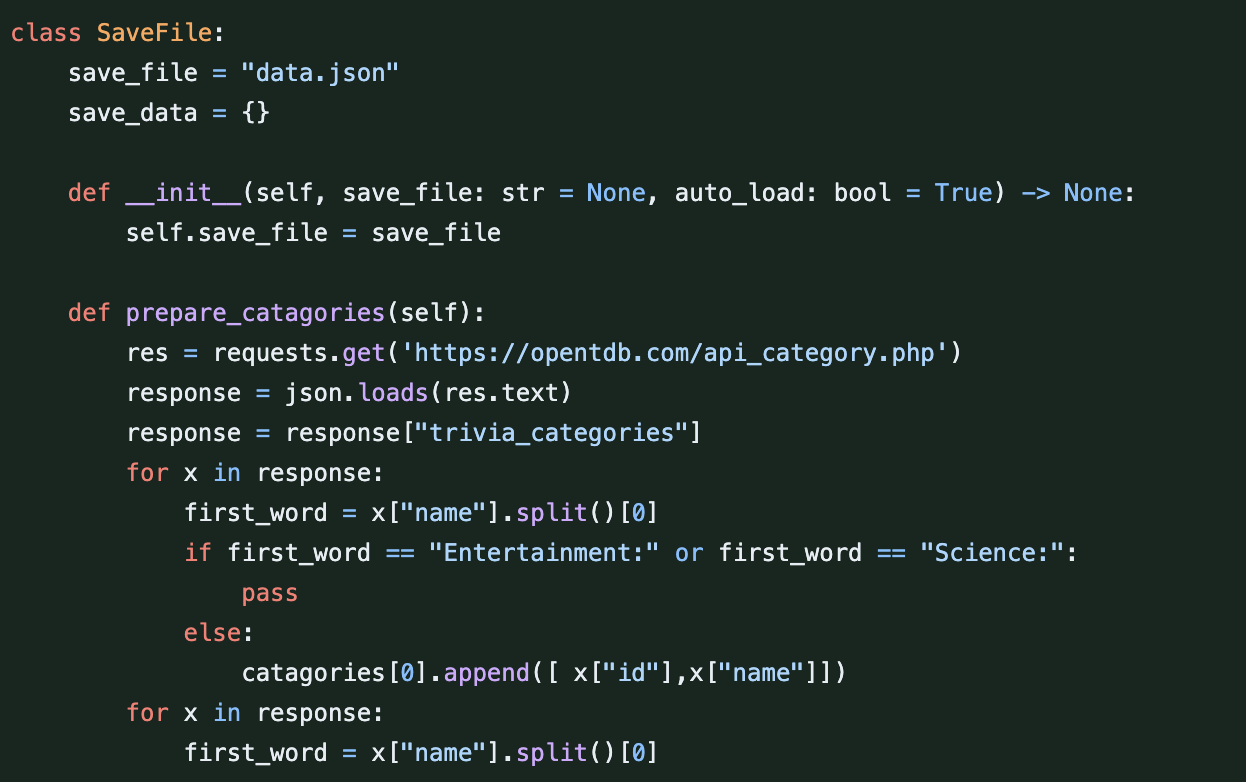
## [Version 0.17.2](https://github.com/Puskalincer/yr13_python/commit/6aee84288949bc042d7676276f9cda808b8bb24a)

Implement previously made input manager on game menu.



## [Version 0.18](https://github.com/Puskalincer/yr13_python/commit/cbb3fb8ebc3f81b7baa42d855ce680a18ca5fb2ehttps:/github.com/Puskalincer/yr13_python/commit/cbb3fb8ebc3f81b7baa42d855ce680a18ca5fb2e)

Put all the save data in a class.



Some little gremlin tagged my work.



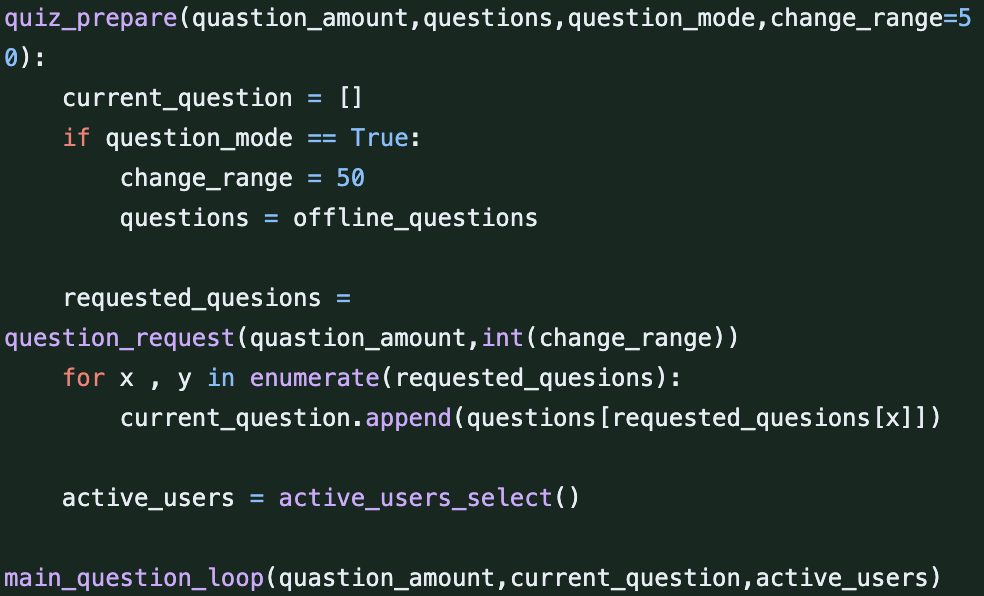
## [Version 0.18.1](https://github.com/Puskalincer/yr13_python/commit/57bf5459b337cc9f6bf1614654afb051dc431678)

Replaced list formatter with updated list formatter 2.

## [Version 0.18.2](https://github.com/Puskalincer/yr13_python/commit/b6a9d893dca88a0e6fe55401ef72cb57f14ccaf8)

Moved utility’s and api utilities to separate files.

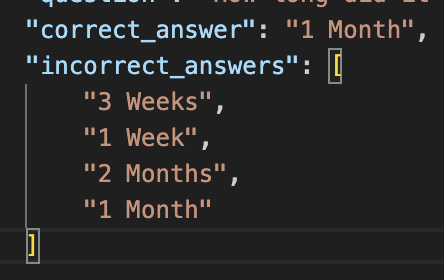
## [Version 0.19](https://github.com/Puskalincer/yr13_python/commit/e2e56d389a81b21542a051d9a56138a2bbedb773)



A black background with white text

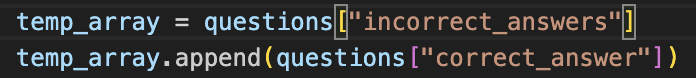
Description automatically generated

### Bug fix

A computer screen with text

Description automatically generated

Each question has either 4 answers or 2. I had a problem where when a save is made the question you saved on ends up with 5 potential answers. I found that the problem was caused by this line.



I thought that this would make the temp array variable have the same contents as the incorrect answers variable, it turns out it links them which is bad as I add the correct answer to the temp array. I fixed this issue by making a new array and adding the contents from incorrect answers to temp array. This fixed the issue as seen in the top left screenshot.

