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## 20 Questions

This project simulates the game 20 Questions, where the user thinks of an object, and the program tries to guess what the user was thinking of by asking a series of yes or no questions. If the program cannot guess what the user was thinking of, the user wins, and the program adds that answer to its database of answers, giving the program a larger pool from which to choose from.

**Vision Statement:** An entertaining game with a flexible architecture that allows for extensive subject choice by the player.

**Motivation:** As a group we thought it would be a fun implementation of a tree style database while building a game with replayability. This is a classic game and won't require large leaps in terms of vision, which will allow our team to focus on writing a solid program and practicing good software development techniques.

**Risks:**

- Team members have no experience working on projects in teams
- Team has little to no experience with GUI
- Extensive content needed by the game in order for it to properly ask questions to narrow down answers

**VCS:**

Github

<https://github.com/Mcrozier5609/20-Questions.git>

### User Requirements

ID	Description	Agile Sizing	Priority
US-01	As a user, I want to be able to click a yes or no button so that the computer gets an answer to its question.	2	medium
US-02	As a user, I want to have a GUI which I can interact with instead of text so that I can enjoy my game experience more.	13	Nice to have
US-03	As a user, I want to be able to see a random word suggestion so that I can get ideas.	3	high
US-04	As a user, I want to be able to choose the category of my object as to narrow the search.	5	high

### Functional Requirements

ID	Description	Agile Sizing	Priority
FR-01	High Score board of how many questions the computer has asked so that the user can see how fast the computer has guessed previously.	2	Low
FR-02	Tree database to store all available answers	13	high
FR-03	Traversal function so that we can navigate the tree to a guessed item.	5	high
FR-04	A counter to keep track of how many questions have been asked. The counter would be displayed as well as kept to know when 20 questions have been asked.	2	medium

### Non-Functional Requirements

ID	Description	Agile Sizing	Priority
NF-01	Optimize and or balance data tree so that the traversal is as efficient as possible.	3	low
NF-02	Have the ability to safely add a new item to the tree so that we can add a large number of guessable items.	8	medium
NF-03	Create a list of a large number of guessable items and guess data so that we can effectively guess them.	13	high

### Methodology:

Agile style

### Project Tracking Software:

Trello

<https://trello.com/b/bYXk9D2D/20-questions>

Project - CSCI-3308 x Shared with me - Go x Collaborators x Functional or non-f... x 20 Questions | Trello x Trello Account Conf... x Agile Methodology x

https://trello.com/b/bYX49D2D/20-questions

Boards New stuff! MC Michael Crozier

### 20 Questions

Potential Additional Features

Add a card...

FR-01

High Score board of how many questions the computer has asked so that the user can see how fast the computer has guessed previously.

Low Priority

Agile Sizing: 2

Add a card...

FR-02

Create the tree structure

High Priority

Agile Sizing: 8

Add a card...

FR-03

Function to traverse tree to find guessed item.

High priority

Agile: 5

Add a card...

FR-04

A counter to keep track of how many questions have been asked which can be displayed and kept track of to know when the computer has asked 20 questions

Agile Sizing: 2

Medium Priority

Add a card...

FR-05

Make the tree pathway for items at the bottom of tree

High Priority

High Priority

Agile Sizing: 8

Agile Sizing: 8

Add a card...

US-01

Make a yes button and no button input responses.

Agile: 2

Priority: Medium

Add a card...

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Nice to have

Agile Sizing: 13

Add a card...

US-03

As a user, I want to be able to see a random word suggestion so that I can get ideas.

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Agile Sizing: 3

Add a card...

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As a user, I want to be able to choose the category of my object as to narrow the search.

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Agile Sizing: 5

Add a card...

NF-01

Optimize and or balance data tree so that the traversal is as efficient as possible.

Low Priority

Agile Sizing: 3

Add a card...

NF-02

Have the ability to safely add a new item to the tree so that we can add a large number of guessable items.

Medium Priority

Agile Sizing: 8

Add a card...

NF-03

Create a list of a large number of guessable items and guess data so that we can effectively guess them.

High Priority

Agile Sizing: 13

Add a card...

Add a list...

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