

Educational Video Game

"AstroQuiz"

User Documentation

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1. INTRODUCTION

Welcome to AstroQuiz, an educational video game designed to make learning fun and engaging! This user guide will walk you through the various aspects of the game, from installation to gameplay, and provide essential information to enhance your gaming experience. Thank you for choosing AstroQuiz! We hope you enjoy playing while learning valuable knowledge about space and beyond.

1.1. *System Overview*

AstroQuiz is a space-themed educational video game where players navigate a spaceship through asteroid fields while answering educational questions. The game combines classic arcade-style gameplay with learning opportunities to create an immersive and interactive experience for players of all ages.

1.2. *Project References*

This game project was developed by Tailor Burkham, Ahmed Krubally, Calvin Leavy, and Michelle Orru. The project plan version 1.1 (dated March 6, 2024), served as the foundation for the development of AstroQuiz.

1.3. *Where to get help*

If you encounter any issues or have questions while playing AstroQuiz, you can reach out to any member of our team at our GitHub account. We are here to assist you with any inquiries or technical difficulties you may experience.

1.4. *Organization of Manual*

This user guide is organized into sections to help you navigate through different aspects of using AstroQuiz:

- 1.4.1. System Summary
- 1.4.2. Using the System
- 1.4.3. Administration and Maintaining the System
- 1.4.4. Appendices
- 1.4.5. References

1.5. *Acronyms and Abbreviations :*

- 1.5.1. ACM Ethics – Association for Computing Machinery Code of Ethics
- 1.5.2. Pygame – Python library for game development
- 1.5.3. Python – High level programming language

2. WHAT'S NEW IN APP VERSION 2.0

Version 2.0 of AstroQuiz introduces enhanced gameplay features, improved graphics, and additional educational content. Players can now enjoy a more immersive gaming experience with updated visuals and challenging questions spanning various subjects.

3. SYSTEM SUMMARY

3.1. *System Requirements*

- 3.1.1. Compatible with Windows and macOS platforms
- 3.1.2. Visual Studio Code required to store necessary files

- 3.1.3. Internet connection required for initial download and updates

3.2. *Downloading and Installing*

- 3.2.1. Visit the github designated for AstroQuiz and download all the included files.
- 3.2.2. Navigate to the correct directory and run "main.py"
- 3.2.3. Once installed, launch the game to begin playing.

3.3. *Data and Function Flows*

AstroQuiz utilizes data flow to deliver educational questions to players during gameplay. Function flows are used to manage game mechanics, such as player movement and asteroid interactions.

3.4. *Caveats and Exceptions*

Please note that AstroQuiz may require periodic updates to ensure optimal performance and access to new features. Some features may vary depending on the device and operating system.

4. USING THE SYSTEM

4.1. *Starting the app*

Once you run main.py this is the screen displayed, where you will be greeted with the main menu. The options displayed are

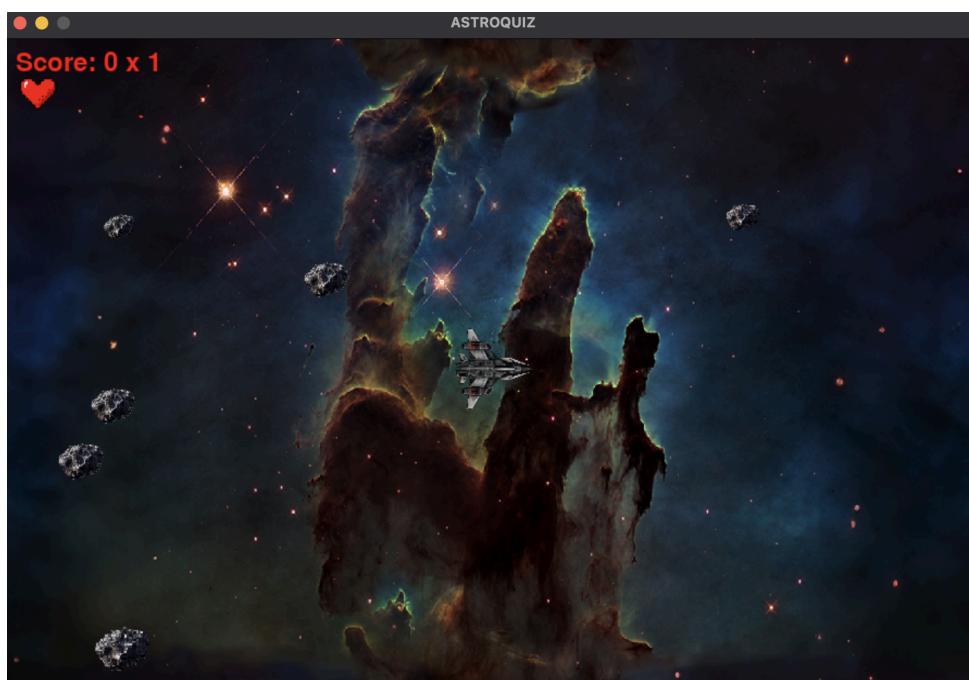
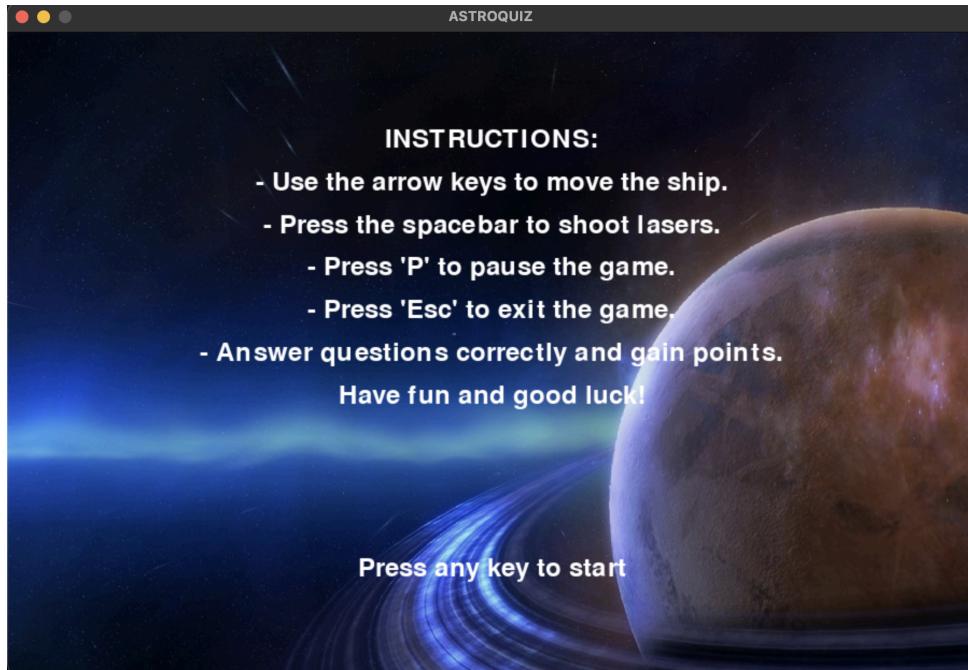
- Play game
- High Scores

- Edit Questions
- Edit Settings
- Quit



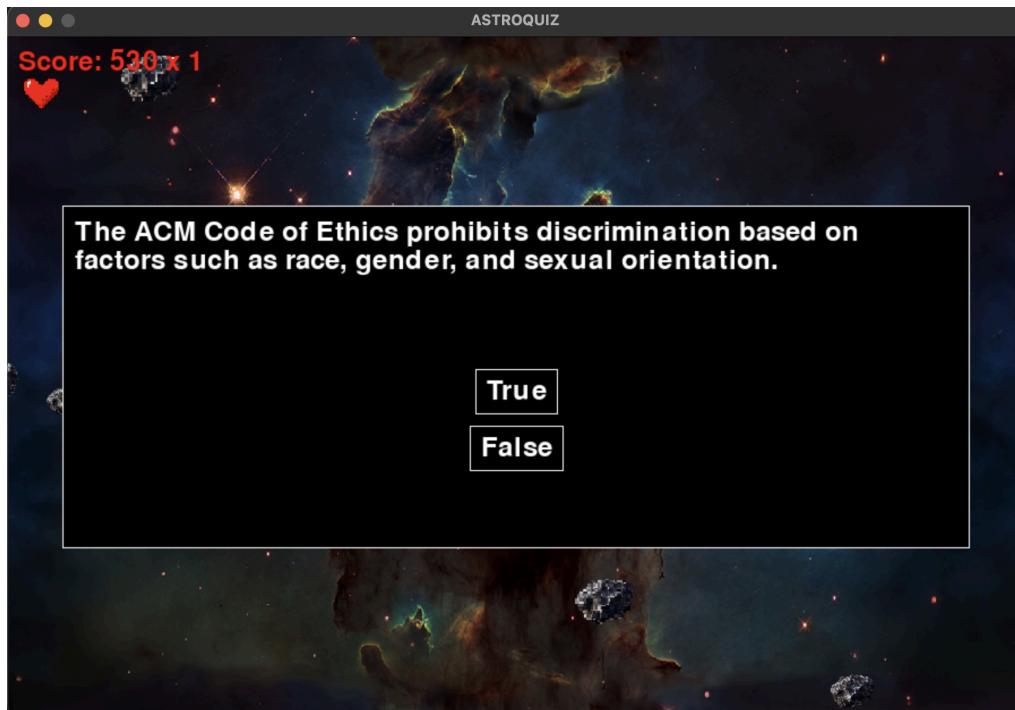
4.2. Play Game

Once Play Game is pressed an instruction screen is displayed, with basic directions on how to play the game. Then once any key is pressed the game will start. Score is initialized to 0 and the Heart displays the number of lives.



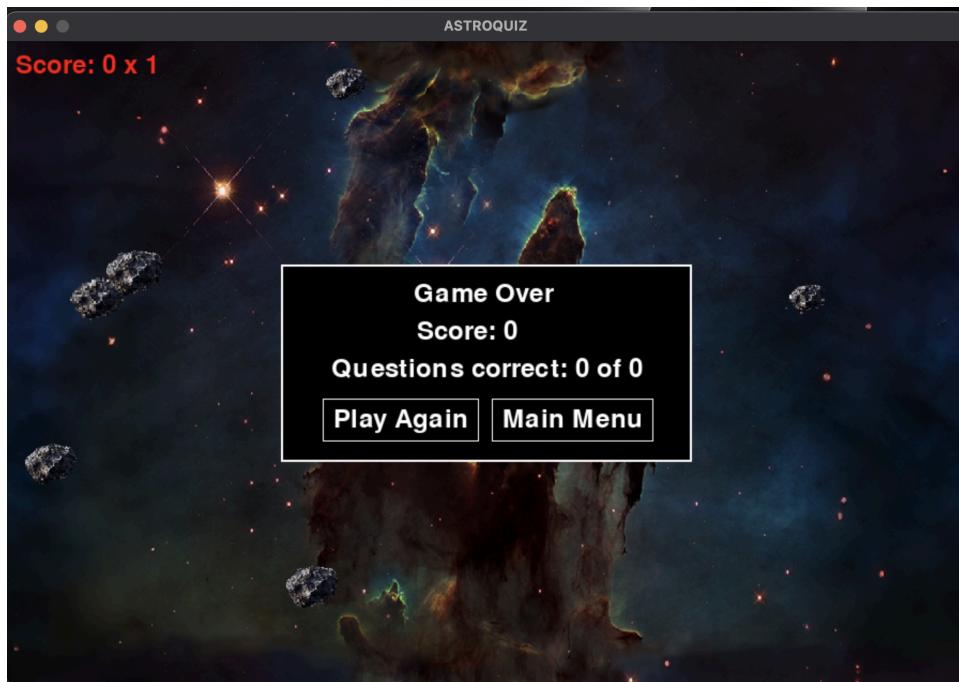
4.3. Playing the game

While you're playing the game, questions will show up after you've hit a certain number of questions. Once you have answered the question you will get additional points and lives if answered correctly and you'll lose points if answered incorrectly



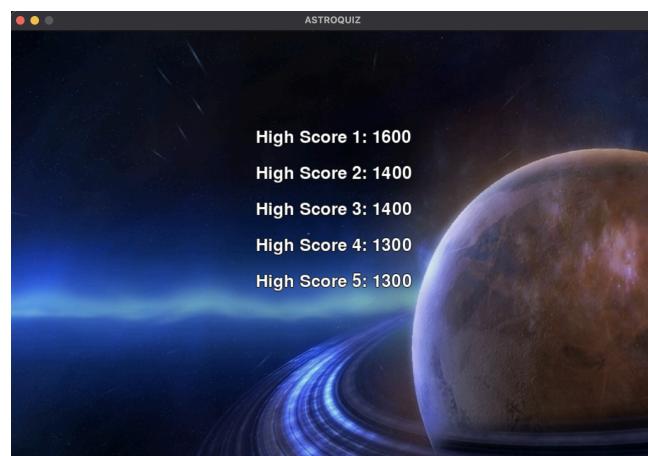
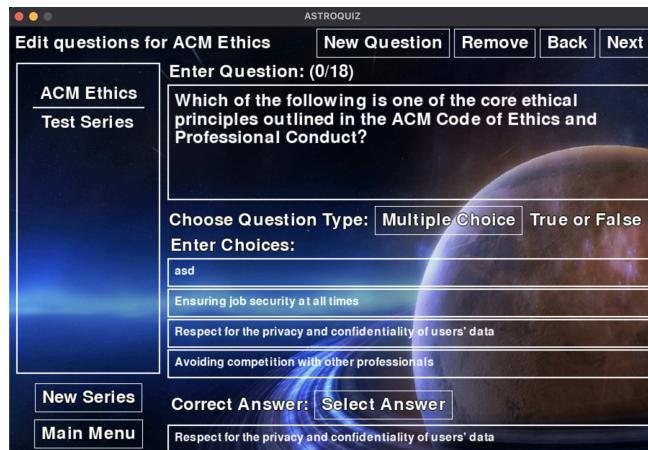
4.4. *Expected input / Expected Output*

If you get hit by an asteroid you'll die and see the game over screen. If you have multiple lives you'll lose a life every time.



4.5. Other screens in the game

Once you are back in the game menu, these are the other three screens that will be displayed when you respectfully select the chosen option.



5. MAINTAINING THE SYSTEM

5.1. Administration Tasks

Administration tasks for AstroQuiz include managing updates, monitoring performance, and addressing technical issues.

6. REFERENCES

- 6.1.** ACM, "ACM Code of Ethics and Professional Conduct," Association for Computing Machinery, Jun. 22, 2018.
<https://www.acm.org/code-of-ethics>
- 6.2.** IEEE, "IEEE Code of Ethics," ieee.org, Jun. 2020.
<https://www.ieee.org/about/corporate/governance/p7-8.html>