

Security solutions on question answer game

The aim of the program and how it operates

- Program is question answer game for 2-4 players.
- More questions your answer right more points you get.
- Winner is player who has most points end of the game.
- Game include one question file but user can also add own question file to the game.
- Program is implemented on python and unit test are implemented using python's unit test framework.
- Program is not based on earlier work.

Secure programming solutions

- The main security issue focused is user input validations.
 - Regexs
 - Allowed character lists
 - Correct data type checks
 - Maximum character amounts
- Error handling
 - Informs users when something went wrong and program does not crash.
- Question file parsing everytime because someone could have modified it and that way try to input some vulnerabilities inside the program.
- Race condition cannot arise because program is not running on multiple threads.

Tests and results from them

- Some classes has unit test: validator, questionObject and player.
- Manual testing was used to make sure program runs the way it should and testing regexs.
- Some small problems for error handling was found during manual testing.
- Some problems on validate functions found during unit tests.
- All tests passes now.