
Assessment Criteria #5:

Input validation, Output encoding, Use of official Python APIs

Input validation

Within the code for my educational hangman game, input validation does exist in components, allowing the game to run smoothly without any risks of crashes or bugs. For example, using buttons on screen rather than your keyboard allows for only letters of the alphabet to be guessed, with no support for special characters such as hyphens and numbers. As such, it fully ensures that players are making only legitimate guesses and thus having the fullest potential to learn new vocabulary.

Output encoding

Within the code of my hangman game designed for younger generations, output encoding is within my code to remove the extremely real risk of being targeted by malicious and dangerous injection attacks, potentially spreading computer viruses to the system that steal personal information and data. With the use of Pygame support fonts, these fonts are automatically protected by encoding, negating all risks of HTML or SQL injections from malicious third parties. As such, no virus will be downloaded unknowingly when installing this educational program.

Use of Official Python APIs

Within my code for this attempt at creating the classic hangman experience, only three APIs had been exclusively used to develop this project - Pygame, Math and Random. Both Math and Random are fully supported and ingrained within Python itself, with no need to install these APIs after the installation of Python. As such, these libraries are extremely secure with the official python program download from their website ensuring that you are receiving their product with no unwanted viruses or malware. However, the Pygame library is not hardcoded into the regular python installation, instead having it be completely community run. However, the library is generally still safe, with it being constantly maintained and updated by a full team of passionate developers and is exclusively installed with PIP, ensuring no tampering to your device is being done when installing Pygame.