SE Project proposal

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Project Description :
- Create a small game (a maze game) on a computer and turn the Arduino into a controller.

Major Software Components:

- Create a small game on a computer.
- Function the implemented buttons on the Arduino as replacement for the needed keys on the keyboard in order to play the game.

Prototype plan:

We plan on using an evolutionary prototype plan in our project. In the beginning, we want to establish the basic goals that this project should achieve, such as successfully taking in button inputs correctly and building a functioning game. Since we will develop our initial prototype to possess all the essential functions of this project, further progress will implement secondary features such as secondary user inputs, adding other features to the game and perfecting the game's UI. These minor features will be added along the development of the project and the core aspects of this project will perfected during the development of the first prototype, which corresponds to the evolutionary prototype plan as discussed in class.

Hardware used in this project:

- An Arduino Uno R3 or an alternative of Arduino
- 4-5 push buttons serving as controller inputs
- Breadboard
- Appropriate amount of wires to connect the push buttons and connecting the Arduino board to the computer
- Resistors, one for each buttons of the controller

Challenges:

- Implementing the buttons on the Arduino and making it represent the key that it is intended to correctly.
- Protecting the Arduino from pressure by human pressing on the button.
- Counting the times of button pressed by each press action correctly.
- Splitting the game that was planned to create into pieces to tackle.
- Writing the code for the game to make the game playable.