COMP140 Project

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1 Introduction

I plan to make a flying simulator in which you can control a plane with a more realistic controller made using an Arduino.
The user will have some of the more important buttons and switches for flying a plane instead of re-assigning the keys on a keyboard. A pre-flight manual will be available to describe what the different buttons do. There will also be a throttle and joystick to control the speed and direction.
Before take-off the user will have to complete an in-game checklist to make sure they understand the controls. They will then be able to take-off and fly around and attempt to land again at the airstrip.

2 Design

Resistors and switches will be used for the toggle controls (with LEDs to show on/off) and i will use a potentiometer for the throttle adjustment. These controls will be built into a solid dashboard and labeled underneath to ensure a more user friendly experience. Steering the plane will be done with an old Logitech joystick which i will redesign by removing the buttons and smoothing out where they were so that it feels more like an authentic joystick in a plane might feel.

3 User Stories

"There should be both a first and third person camera" - I will implement a switch to toggle the camera.
"Will there be multiple places to land?" - As a stretch goal i will add more landing strips and airports.
"You should give the game a purpose" - As another stretch goal i will add a couple of missions such as passenger or cargo flights.
Use a toy plane with sensors instead of a joystick. LEDs in toy plane. Haptic feedback.