Final Project Checklist
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Object Tracker

Object Tracker will check the position of the car against the terrain boundaries. Feedback will be provided to inhibit the car from traversing in certain directions so as to not cross boundaries. Functionality will be demonstrated by preventing the car from continuing when it is next to a virtual boundary.

Display

Display will show the position of the car on the screen as well as the selected terrain elements. The car will be a skeletal image (corners only) with proper positioning and orientation marked. Functionality will be demonstrated through either virtual car coordinates or coordinates passed in from the position calculator and displayed on the screen. If time permits, the car will be displayed as a car graphic.

Maps

Maps will control which map terrain is displayed on the screen. Predefined maps can be selected using the switches and the maps changed using the change_map button. Functionality will be demonstrated by changing the map that is displayed on the screen. If time permits, more terrain maps and more complicated terrains will be added such as a "snake game" for open terrain, minefield explosions, and timers for the maze and racetrack.

Position Calculator

The Position Calculator will analyze a video input and determine the location of the car by tracking colored LEDs placed on car. It will pass on the calculated coordinates. The functionality will be demonstrated by displaying the video input along with the marked LEDs on the VGA display.

Movement

Movement controls the movement of the car from the Labkit buttons. Functionality will be demonstrated by moving the car when signaled by the corresponding depressed button.