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**EE-383 Team Project Proposal**

**Overview:**

We will be making a remote controlled marble maze using two TI Tiva microcontrollers, one for controlling movement via servos and the other as a remote control device.

**Supplies:**

-Radio communications (receiver and controller antennas)

-Accelerometer booster pack for each TI Tiva system (receiver and controller, note that the receiver accelerometer is for allowing its radio to be attached)

-Two servos (One to control each axis of rotation, x and y)

-Wooden marble maze with two axis control knobs

-Other various supplies (wires, marbles, etc.)

**Description:**

We will start by modifying the wooden marble maze to allow for mounting the servo on each control knob. Then, we must wire the servos to the receiver TI Tiva system to allow it to adjust the rotation of each servo. The receiver TI Tiva system will then be mounted with a radio receiver to allow it to communicate with the other TI Tiva system, which has a transmitter on it.

The transmitter will communicate with the radio antenna to the receiver TIVA system, which will control the servos fixed onto either sides of the maze. This other TI Tiva system will use the accelerometer booster pack again mounted right underneath the transmitter to convert its own pitch and yaw into activating the servomotors that control the pitch and yaw of the wooden marble maze. After this is accomplished, the user will be able to move the first TI Tiva system, tilting it in different directions, to control the marble maze through the second TI Tiva system responsible for the servo movement. It will function as a gyroscope to in which the servos will control the platform of the maze to move in 3D axis.