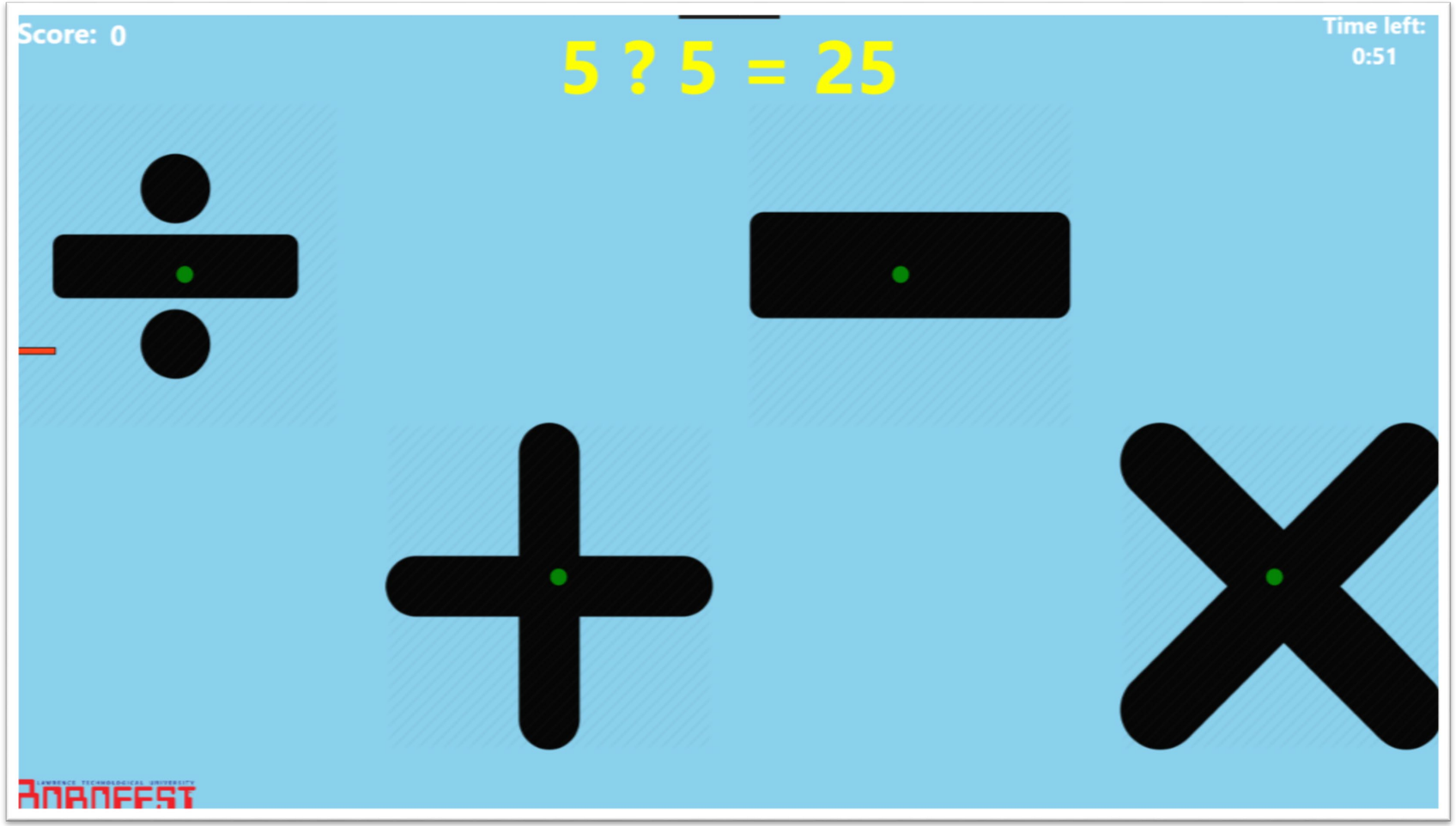
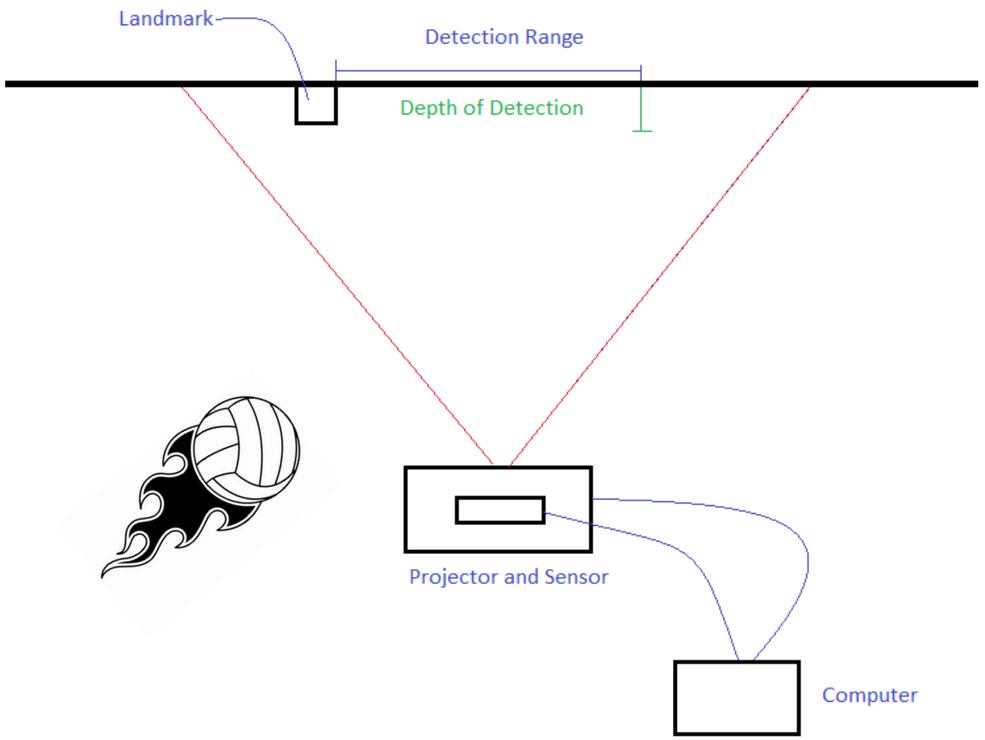
Hit the Math Operator



An interactive wall PE game

Gitae “Joe” Jeon

- The program uses Kinect sensor and the Microsoft Kinect SDK 1.8 to calculate the depth of the wall and the ball that is thrown
- When the program is ran, calibration is required. During this calibration, the sensor looks for the wall and calculate the wall distance threshold
- During the calibration, the sensor also searches for the “landmark” to figure out the position of the four target points, shaped in squares, according to the position of the “landmark”



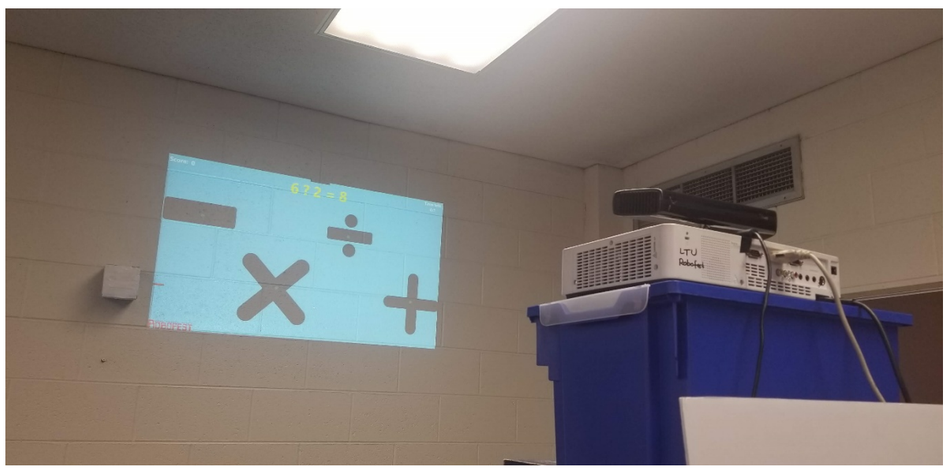
- After the game starts, the sensor constantly searches for blobs, an object, within certain distance between the wall distance and a distance of set value. When the blob is detected within the target square, score is updated as well as triggering the event to give a new set of targets and a question
- Players can access the high scores of other players that played the game previously

Setup

- The Kinect sensor is put on top of the projector. Position does not matter because it calibrates the four points to where ever the landscape box is located.
- It is important to not touch or move the sensor after it is calibrated, because it will mess up the calibration.
- For this reason, the sensor needs to be held firmly and adjusted on the projector.

Setup

- The sensor and the project needs to be approximately 5 - 8 feet away from the wall.
- Tape is needed to be placed on the ground to let the player know where to stand.
- On the picture on the right, tape is placed to make sure the cart does not move, and is always placed on the right place so that it is not in an angle.



Test Videos & Photos

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