Human Pencils Instruction Manual
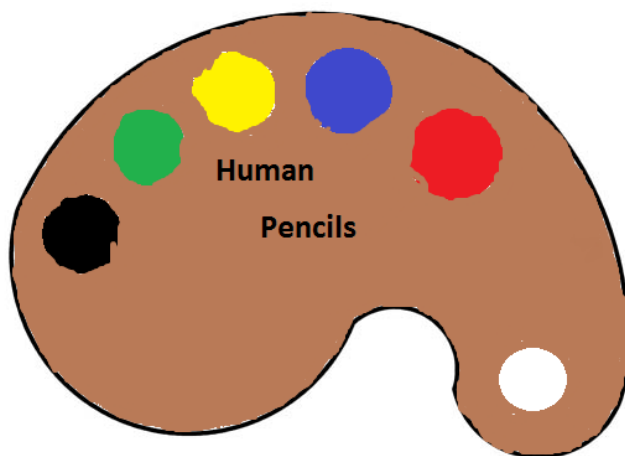
Group 5

Team Members

Liam Clark	4303423
Mitchell Hoppenbrouwer	4243889
Martin Koole	4217500
Ike Rijsdijk	4294106
Jorai Rijsdijk	4282264

Introduction

Human Pencils lets multiple participants draw on a large projected canvas, were they themselves are functioning as pencils. They are able to freely roam the field, creating 'brush strokes' by hovering their hand above the floor and swiping along. The strokes people leave behind will remain projected on the floor, which will also be shown on the wall. This second projection provides the players with a clear view on what they've created so far, indicating the painted colours and the player's position on the canvas.

For this playable spike the body movement can be simulated by using a keyboard. You will be in control of up to nine players. You will be able to switch between players at will. Let your artistic side take over and start painting. Make the art you want to create.
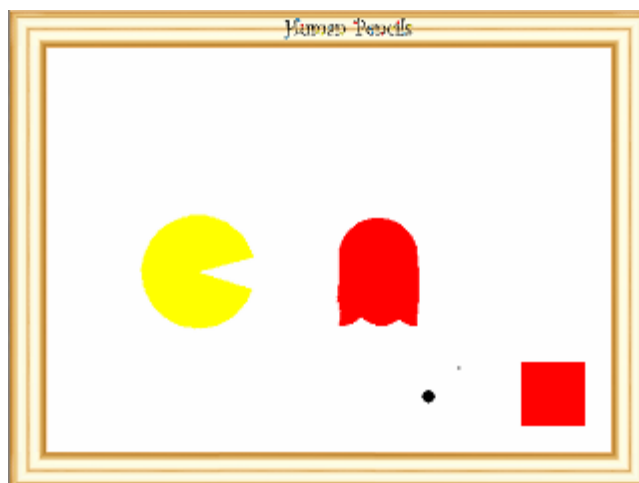
Controls
The playable spike uses the keyboard for it's controls. The following list shows the function of each key in the game.

W: Move the player in an upwards direction.
A: Move the player to the left.
S: Move the player in a downwards direction.
D: Move the player to the right.
Up: Increase the radius of the brush.
Down: Decrease the radius of the brush.
Left: Rotate the brush counter-clockwise.
Right: Rotate the brush clockwise.
Space: Draw.
C: Change the brush colour.
1 up to **9:** Select the current player.

How to play the game.
You can start the game by pressing the play button. Now you have your canvas. You can move your player by using the w, a ,s and d keys. In order to rotate your brush you can use the right arrow key to rotate clockwise and the left arrow key to rotate counter-clockwise. To draw hold down the space button. This creates a starting point and when you release the space button you make an end point. These two points will simulate your arm movement.
By using the up-key you move the brush farther away from the player and with the down-key it moves closer. If you want to change colour, you can use the c button. It will cycle through the colours red, blue yellow. The square in the bottom right corner shows your current colour. If you want to change the player you are controlling, you can use your number keys. For player 1 you use number key 1, for player 2 you use number key 2, etc.

Known issues
In this playable spike the user can draw over the frame. This issue will be dealt with in the next sprint,also because of the late introduction of the frame around the game screen, the border detection is a little bit off because the frame moves the border,however the logic hasn't changed yet We haven't been able to link all our logic together. the image processing is still completely separate at this point, however a video displaying its capabilities is included at the end. The video of the image-processing doesn't reflect the performance very well due to codec factors of the video file used here.

Attachments
Included with this manual is the executable for the game. Also a video showing the image processing. This shows our detection algorithm, which will be used to control the game. The video can be found here: https://youtu.be/DHni78OuOys