Project: Snake & Ladders

Difficulty: Medium

Description

In this project you will be **working in pairs** to make the classic board game snakes and ladders on the Sense Hat.

The aim of the game is simple. Start from the bottom left corner, roll the dice and move along the board. You win once you reach the top left corner of the board. If you land on the bottom of the ladder you go up to the top of the ladder, but if you land on the head of a snake, you get bitten and go back to the tail!

If you are unsure of what this will look like on the Sense Hat, ask a supervisor to show you the game.

Project Manual

To complete this project we are going to break it down into two separate projects, the board and the dice.

There are two ways you can proceed. Either you both work together on the *dice* and then on the *board*, or one of you works on the *dice* and the other works on the *board*. Programming is often done in teams and programmers work together to create the software we use in our day to day lives. So if you decide to work independently on the *dice* and *board* make sure you help your partner if you finish first.

Game features

In this game, one Raspberry Pi is used to make *Dice* and the another Raspberry Pi will have the board.

Dice

- The dice are to be shake activated. Which means the raspberry pi displays random numbers from 1 to 6 when a user shakes it.
- If you are working on the ***Dice*** for the game, go to the folder labelled 'Dice' and follow the instructions in the dice project script.

Board

- You must design the board by placing snakes and ladders in positions of your choosing.
- The board has a moveable cursor that allows players to place their piece along the board depending on the number they get on the dice.
- If the piece lands on the head of a snake, it moves back down to the tail.
- If a piece lands on the foot of a ladder, it moves to the top.
- If the player lands on the top left corner, they win.

- If you are making the ***board*** for snakes and ladders, go to the folder labelled 'Board' and follow the instructions