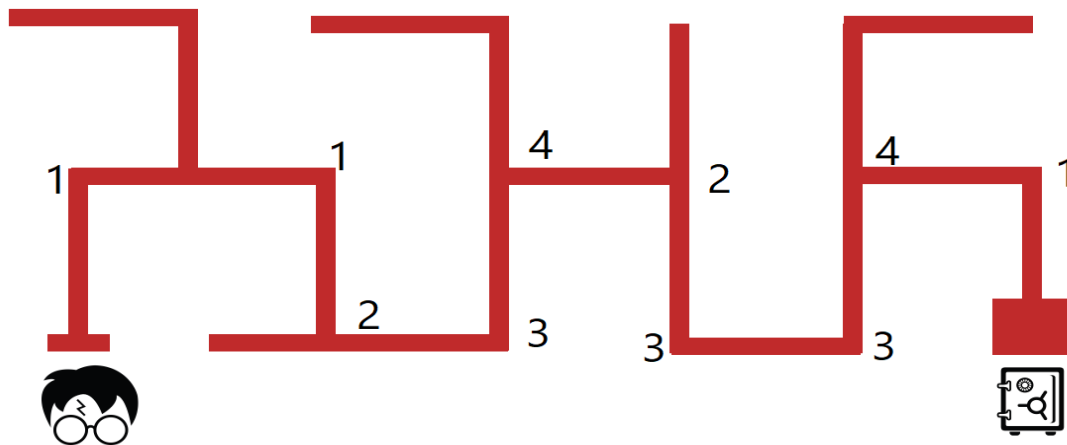


Task 3:

By: Maryam Abdou Abdelfattah

Task 3.2: (Harry in the Maze)

Harry:



In the loop,

1 → the first if condition [if(Frontobstacle == LOW && Rightobstacle == HIGH && Leftobstacle == LOW)] means that he needs to go right and the maze ends in front of him.

2 → the second if condition [if(Rightobstacle == HIGH && Leftobstacle == HIGH && Frontobstacle == LOW)] means that sometimes he needs to go right or left and the two ways are possible.

3 → the third if condition [if(Frontobstacle == LOW && Leftobstacle == HIGH && Rightobstacle == LOW)] means that he needs to go left and the maze ends in front of him.

4 → the fourth if condition [if(Rightobstacle == HIGH && Leftobstacle == LOW && Frontobstacle == HIGH)] means that he needs to go right and the maze did not end.

When nothing of them happens then he needs to move forward.

Safe:

The angle of each encoder is measured by $[\text{counter}/(\text{PPR} \times 4) \times 360]$.

The counter of each encoder is measured by reading the signal A and B of each encoder.

When the angle of first encoder is 37, the angle of second encoder is 10 and the angle of third encoder is 54 the green led is turned on.