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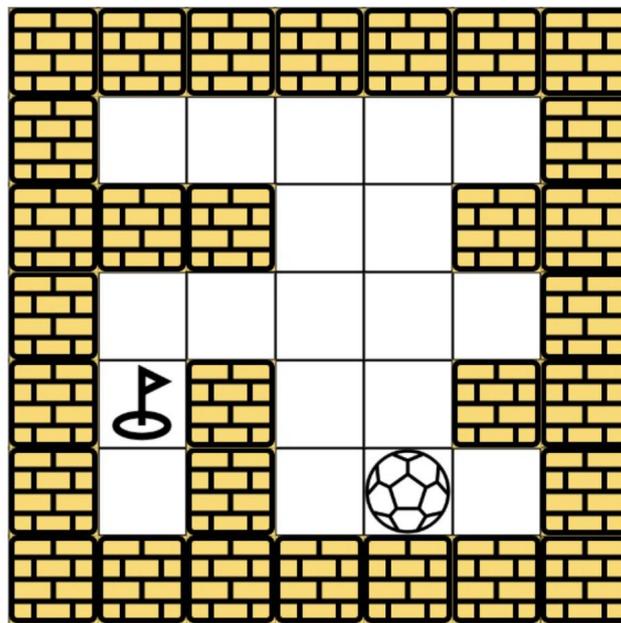
# Parallel Functional Programming

Final Project Proposal: Maze Game

## Introduction

In this project, I will use Haskell's parallelism to solve a maze game. Given a maze with walls and empty spaces, there is a ball and a hole in it. The ball can move up, down, left and right through the empty spaces and it won't stop until hitting a wall. And the ball will choose the next direction to move if it stops. If the ball goes through the hole, it will drop into the hole.

The initial position of the ball and hole is defined by the player. My program will determine if the ball will drop into the hole after a series of movements. If it is possible for the ball to drop into the hole, the program will generate the instructions that the ball should follow to drop into the hole with the shortest distance. That is, the minimum number of empty spaces the ball has traveled from the start position to the hole.



## Expectations

My goal is to find an efficient solution to solve the maze game using parallel programming in Haskell. In addition, I will compare the performance of using sequential and parallel programming to solve this problem when the given maze is large in size.