

**Féidearthachtaí as Cuimse**  
**Infinite Possibilities**

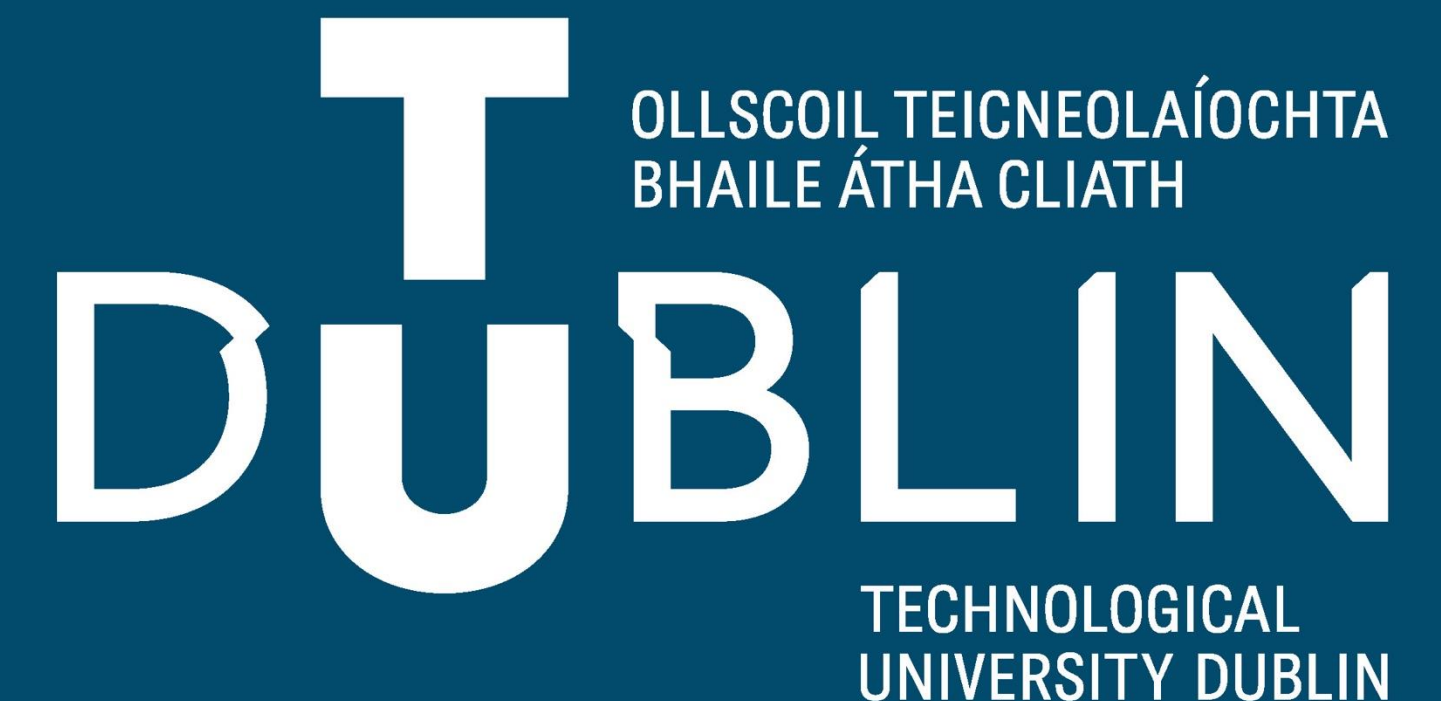
Research Connect MeetUp // September 2024

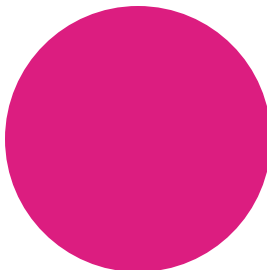
**A SMALL RESEARCH PROJECT I  
HOPE TO COMPLETE IN 2024....**

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School of Informatics and Cybersecurity

/ Enterprise Partnership Lead  
TU Dublin Enterprise Academy





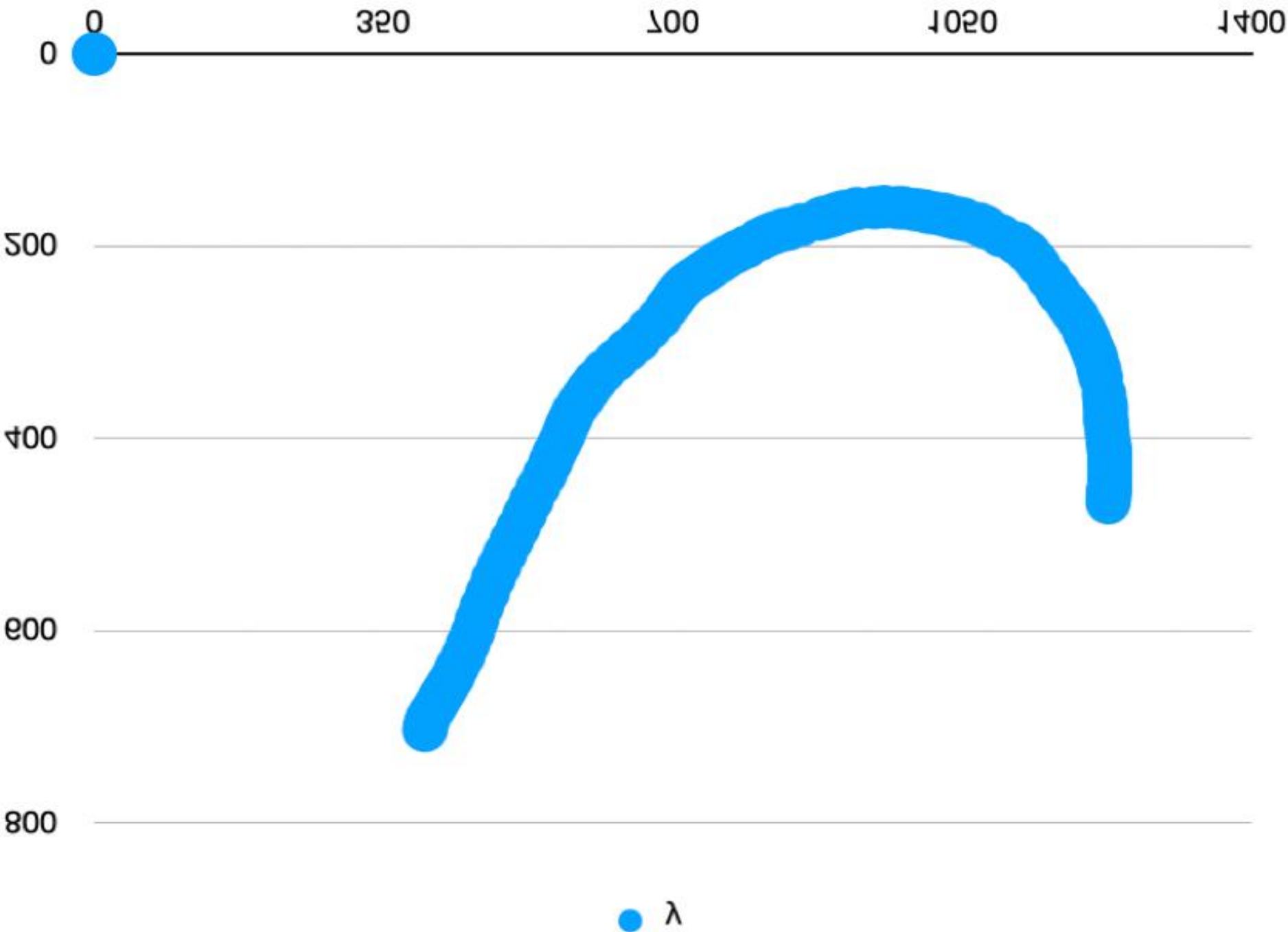
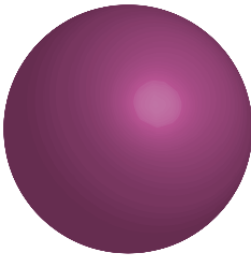
# USER MOUSE PATH ANALYSIS

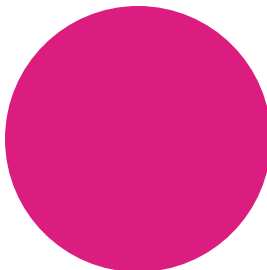
Instructions

Put the ball into the box.

Screen

2/9

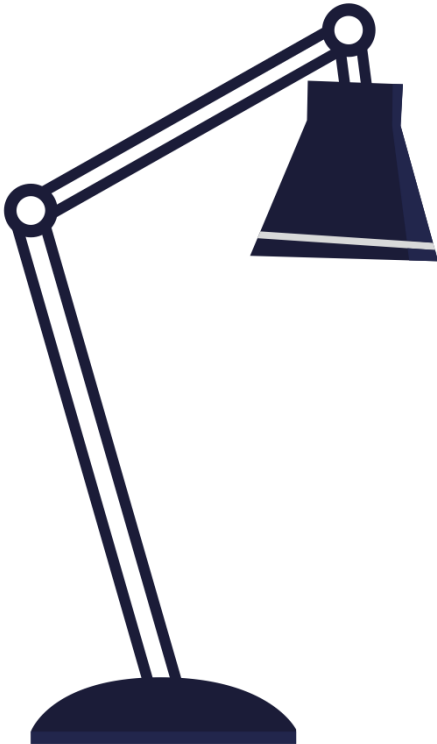




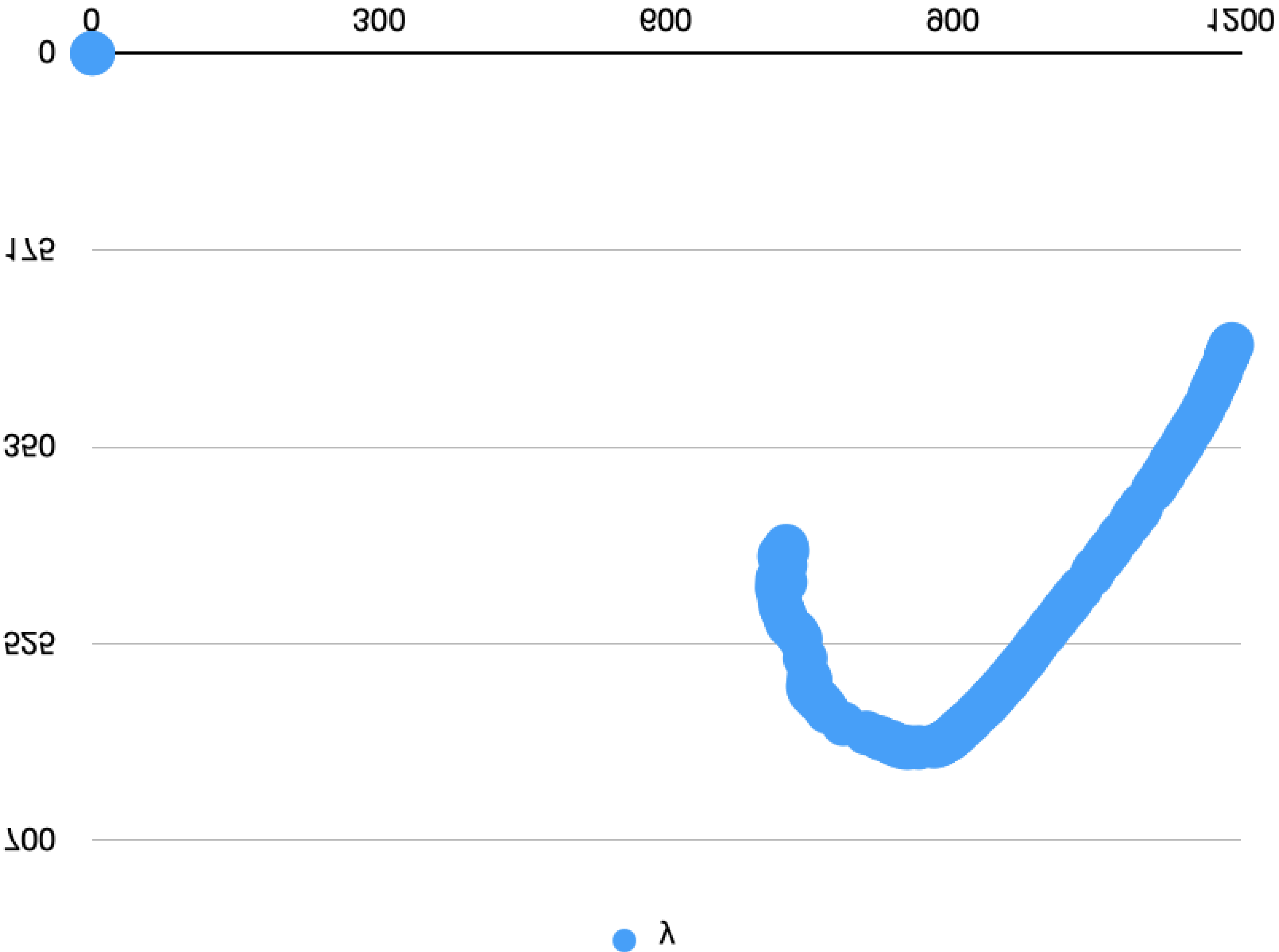
# USER MOUSE PATH ANALYSIS

Instructions  
Put the bulb in the lamp.

Screen  
6/9



Screen 6 - Participant 11



# ● USER MOUSE PATH ANALYSIS

## MAIN QUESTION:

How can we try to automate (i.e. make objective) a measure as to WHICH MOUSE PATH the user followed?

## Sub-questions

- (1) Can we automate the inference of a set of different paths?
- (2) How do we measure the SIMILARITY between 2 mouse paths?

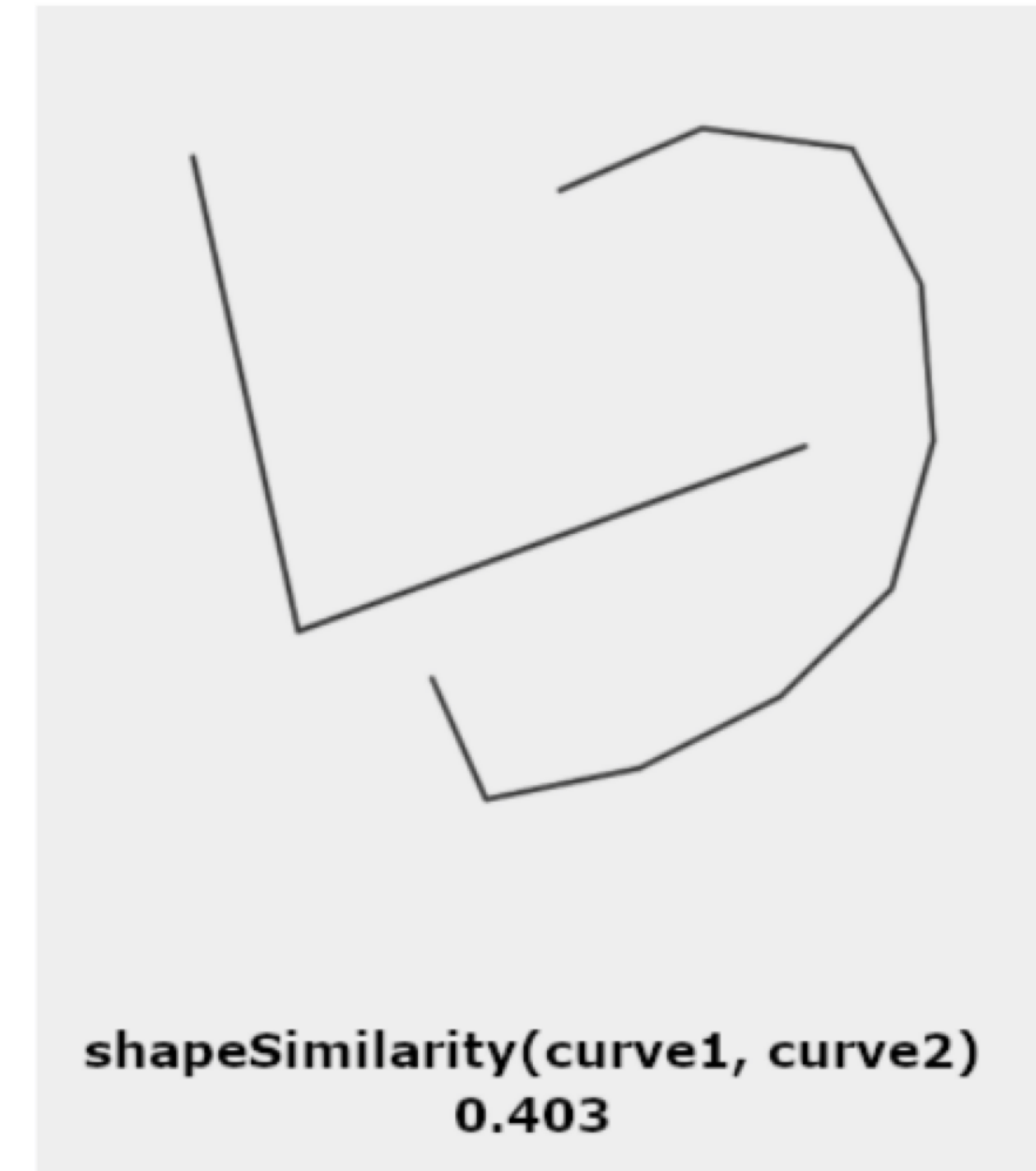
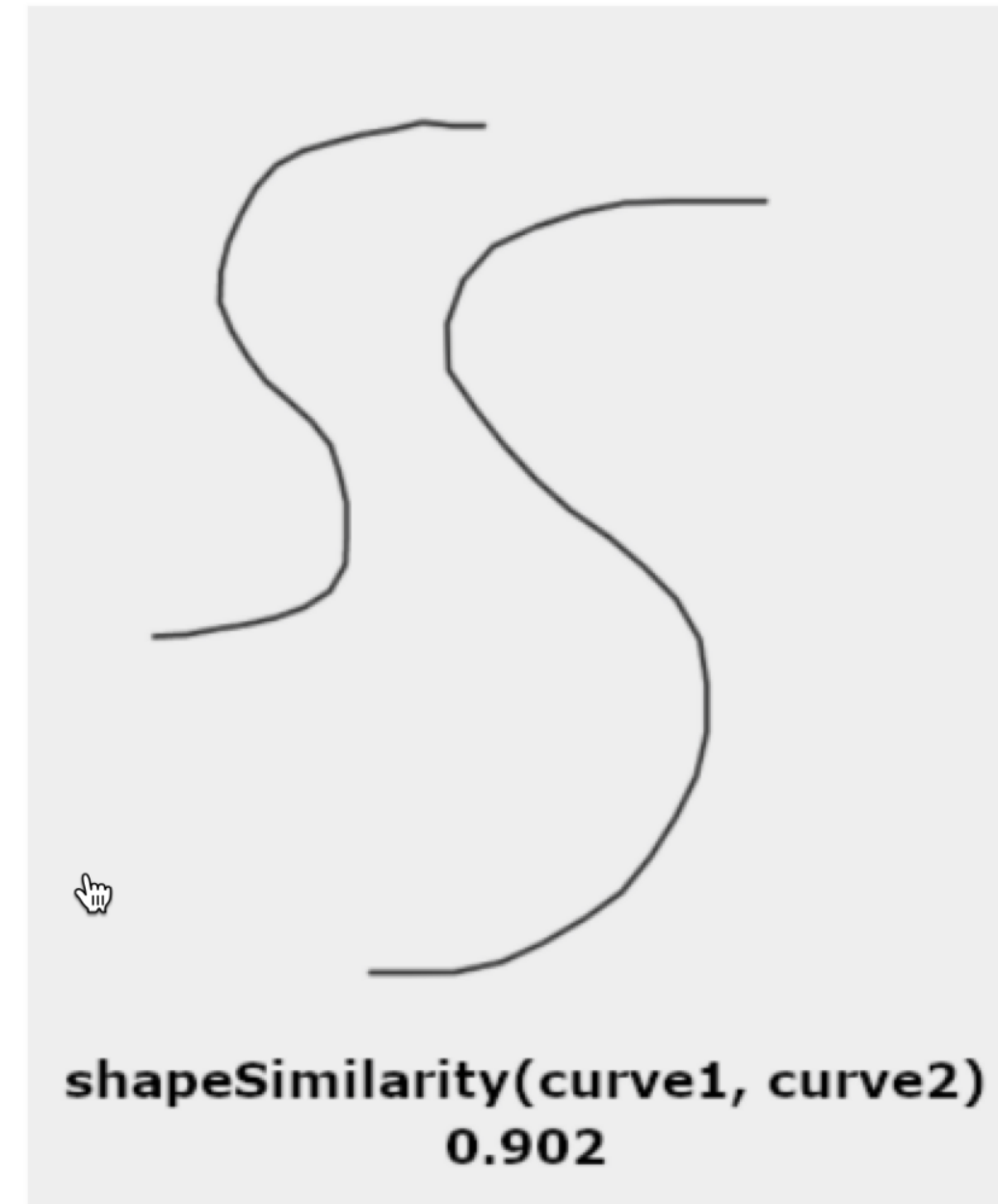




# ● USER MOUSE PATH ANALYSIS

(2) How do we measure the SIMILARITY between 2 mouse paths?

YES !



## Fréchet distance

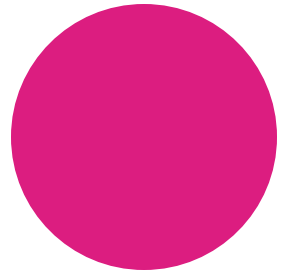
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From Wikipedia, the free encyclopedia

In mathematics, the **Fréchet distance** is a [measure of similarity](#) between [curves](#) that takes into account the location and ordering of the points along the curves. It is named after [Maurice Fréchet](#).



QUESTION:

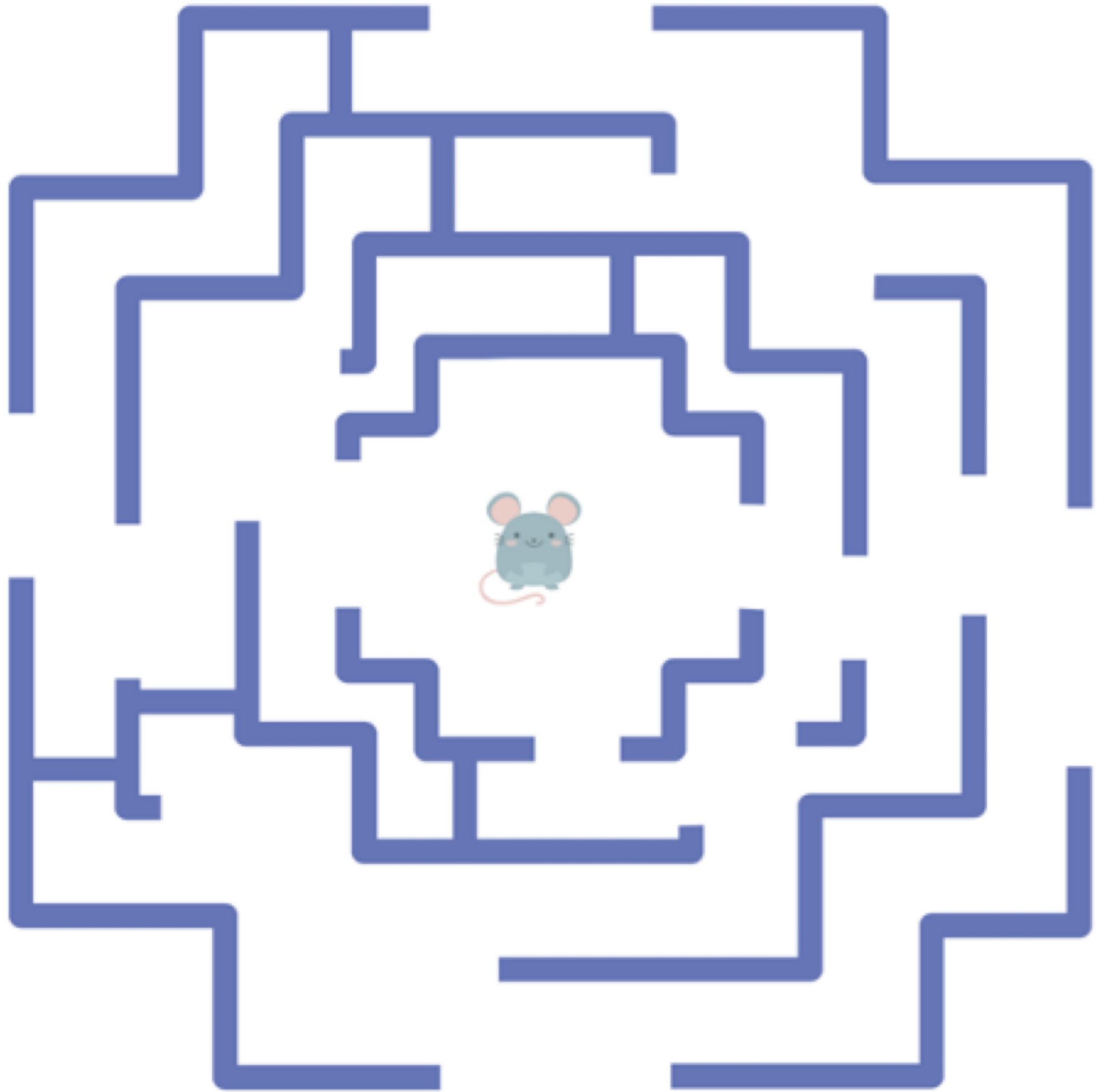
WHAT USER WAS ASKED ...

Instructions

Move the mouse out of the maze.

Screen

9/9

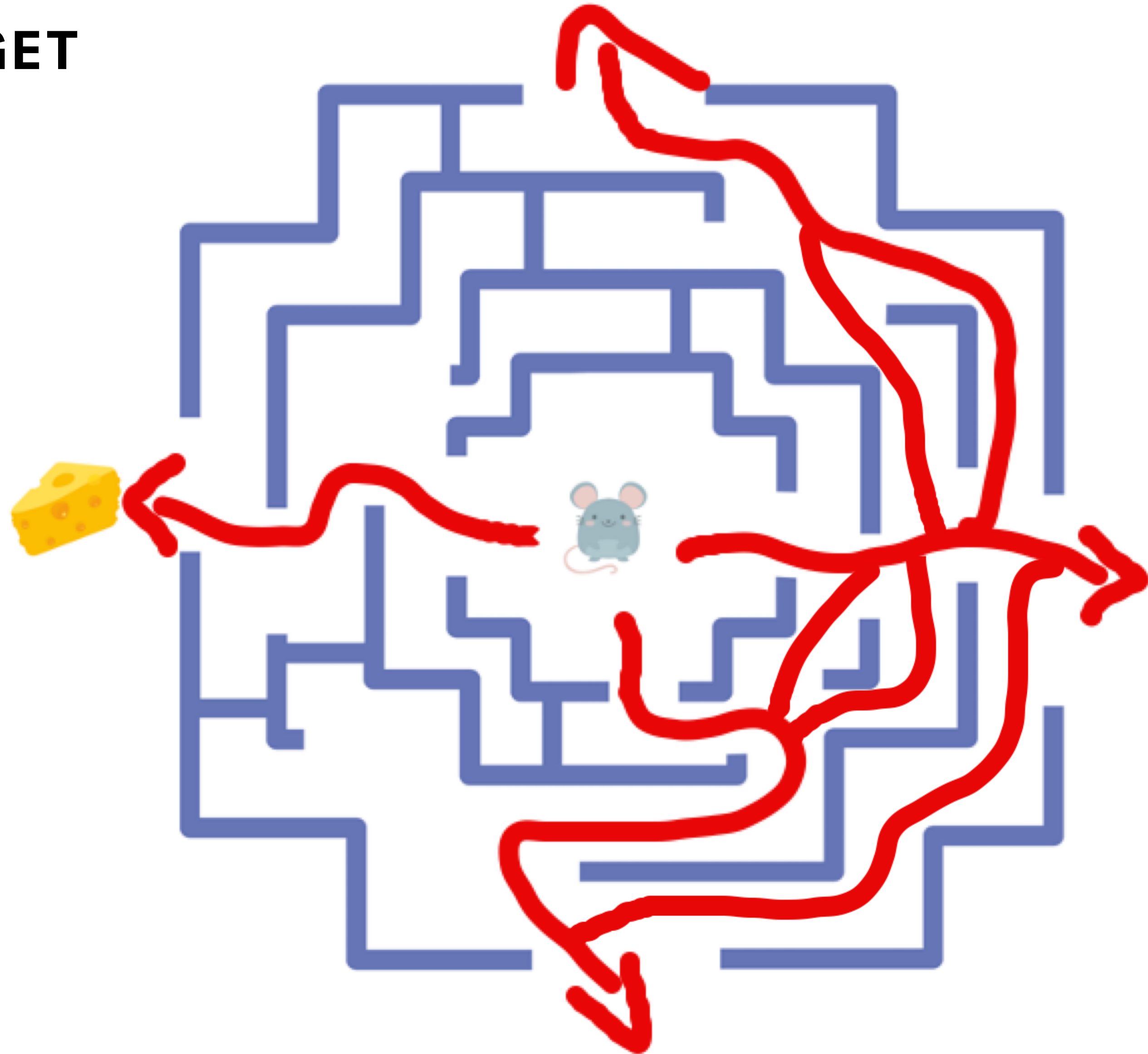


Move the mouse out of the maze.

9/9

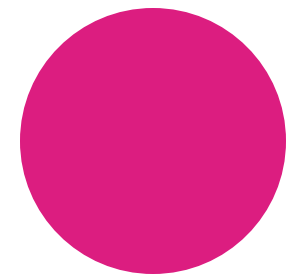
QUESTIONS:  
4 EXITS:

SEVERAL ROUTES TO GET  
TO EACH EXIT



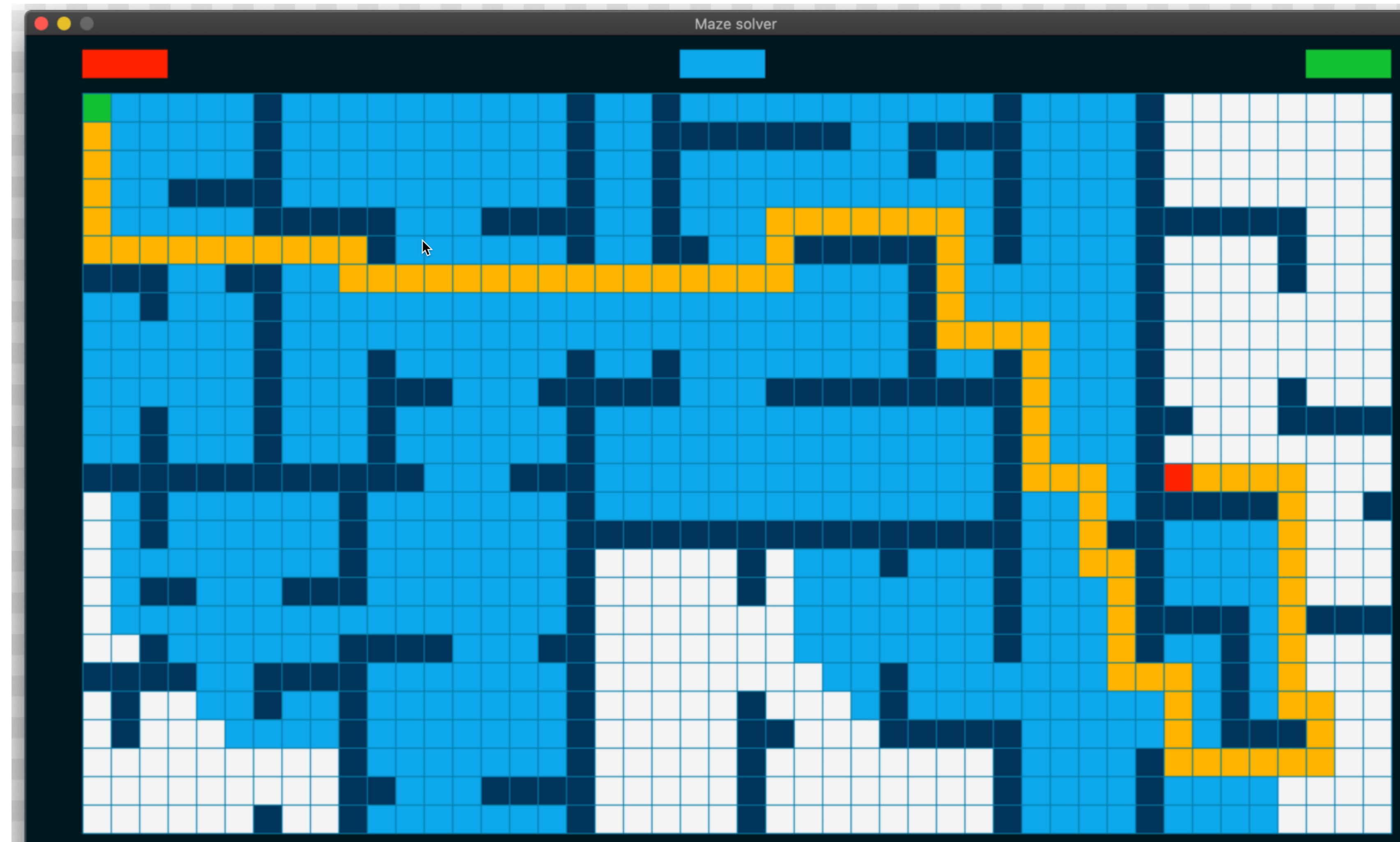
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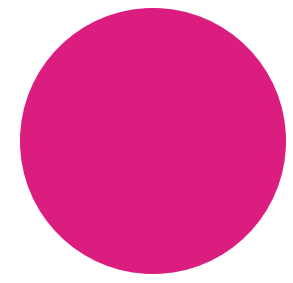




QUESTION:

**(OLD STYLE) AI PATHFINDING – E.G. A\* ALGORITHM**



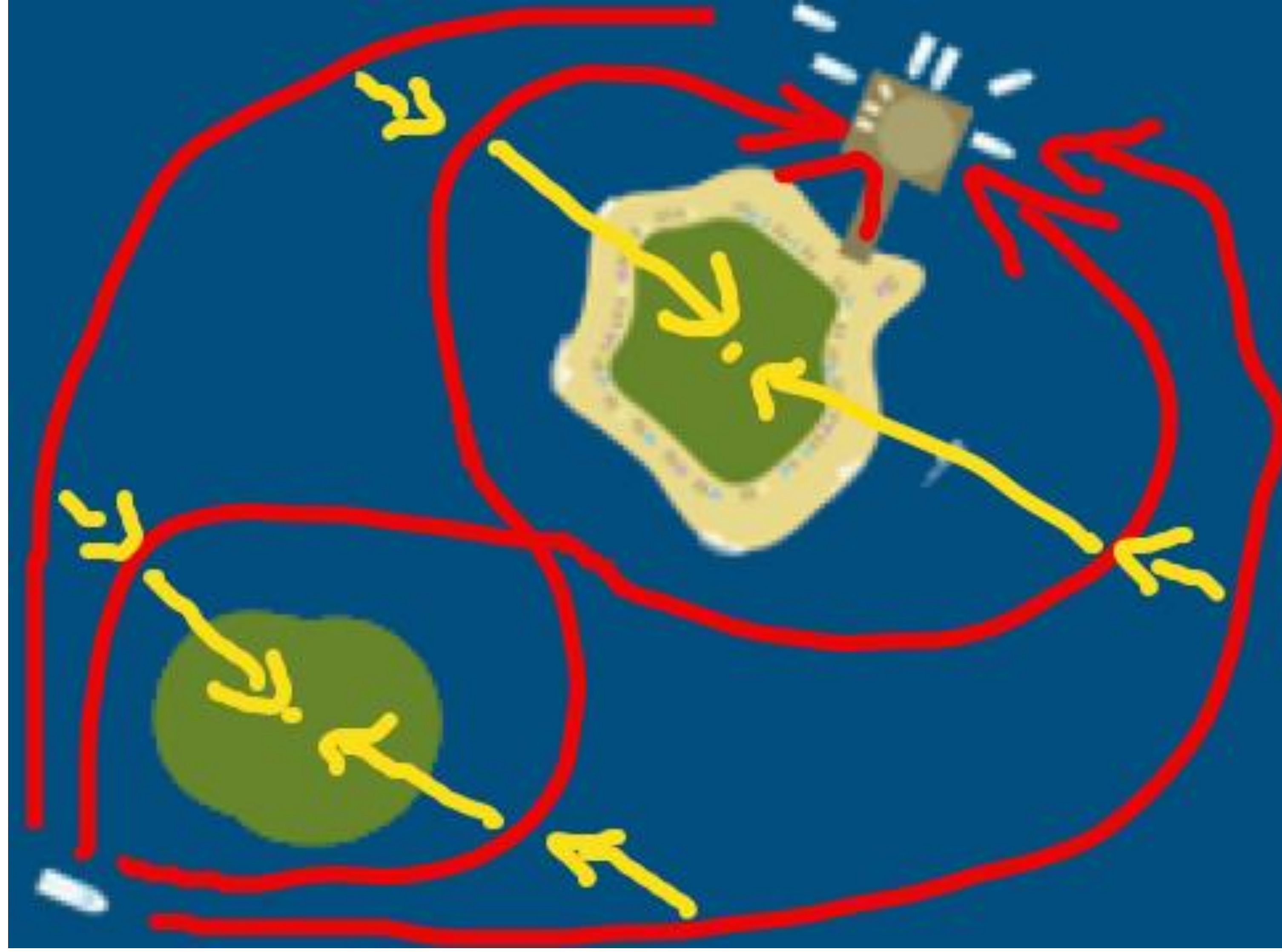


QUESTION:

**GREEN – HIGH “COST” OBSTACLE**









ANY QUESTIONS?