



Universidade de Aveiro
Engenharia de Computadores e Telemática
Robótica Móvel e Inteligente
2020/2021

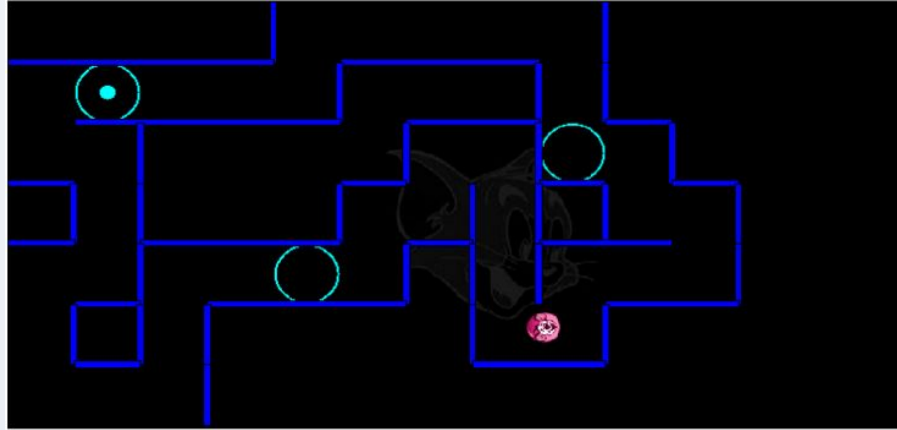
Robotic challenge solver using the CiberRato environment

João Génio	88771
Ruben Menino	89185

Class: TP3

Group: 4

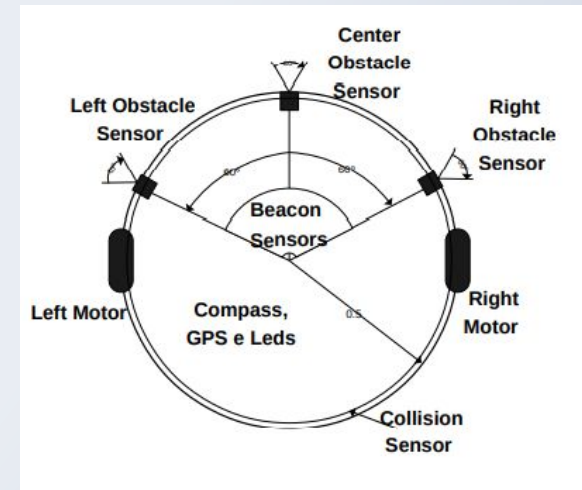
Introdução



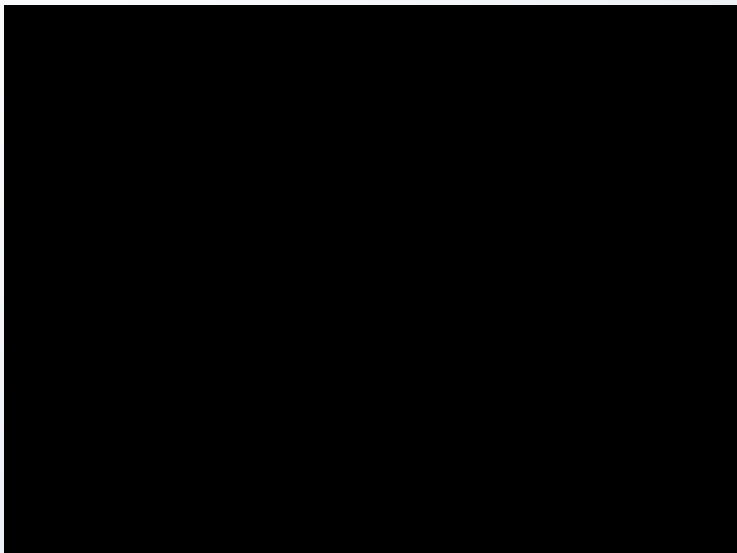
C1 - Desafio de Controlo

C2 - Desafio de Mapeamento

C3 - Desafio de Planeamento



C1 - Desafio de Controlo



Sensores

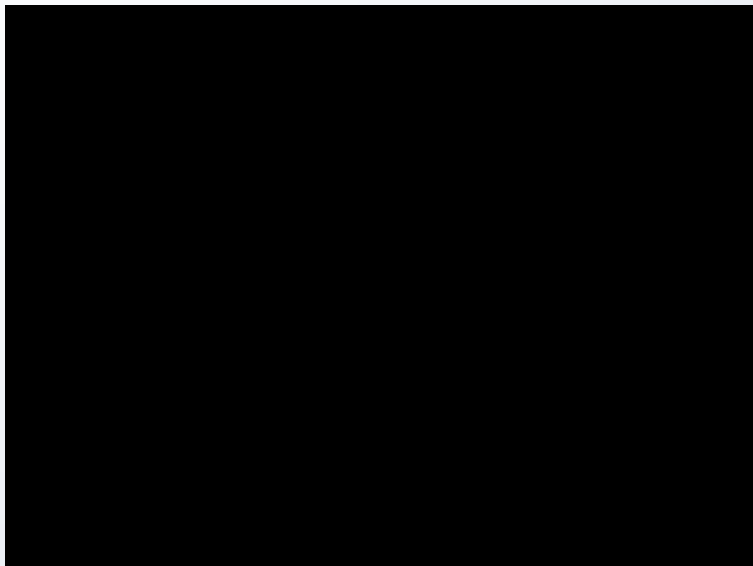
Parede bastante perto

Parede ligeiramente perto

Parede não está perto

ScoreBoard					RMI-2122 C1 Lab	
TIME REMAINING		Name	Time	Collisions	Score	
		 pClient1				2570

C2 - Desafio do Planeamento



Mapeamento: 100%
Tempo restante: 700 ticks

Estados do movimento (RE)

Info → [TryLeft | TryFront | TryRight | TurnAround] → Go

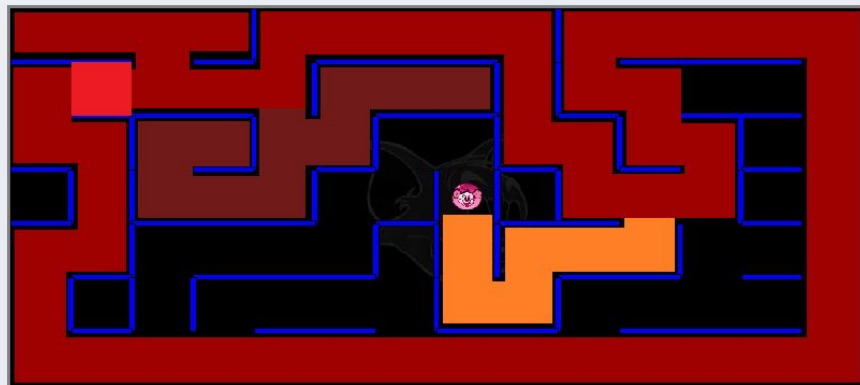
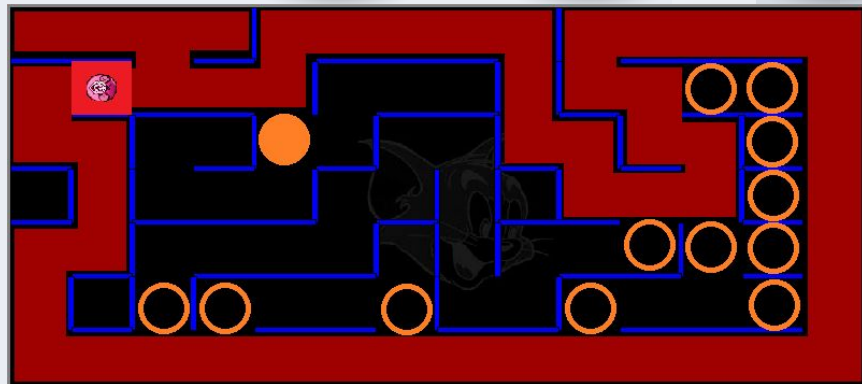
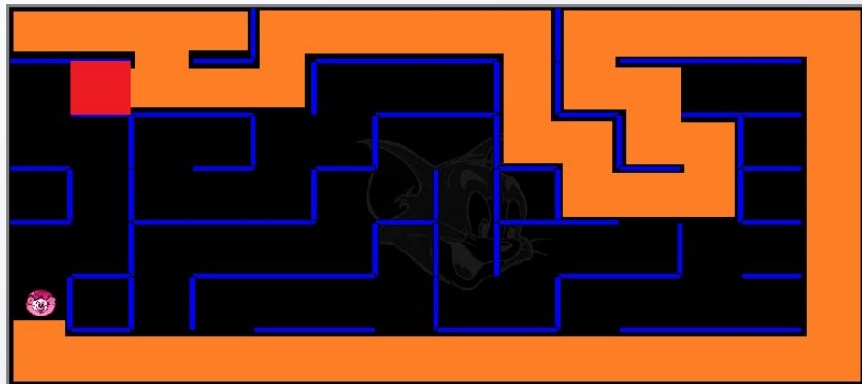
Estados do mapeamento

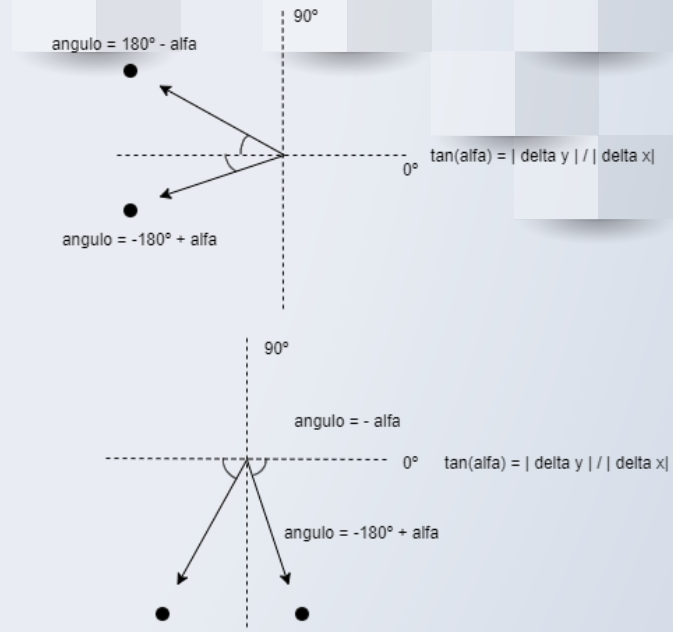
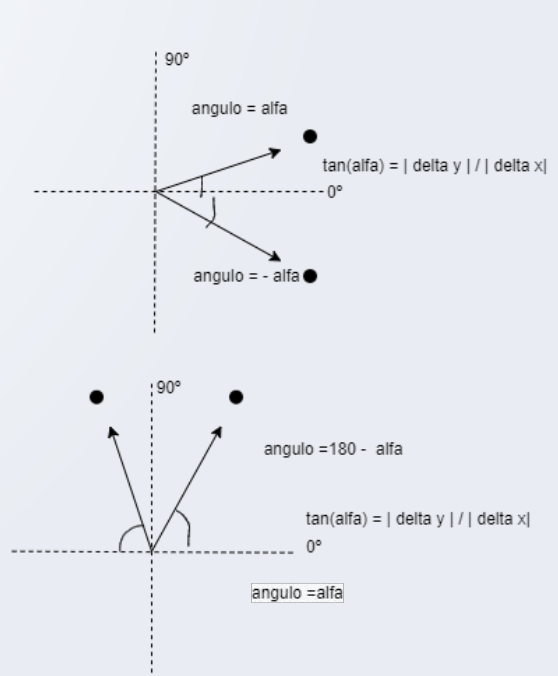
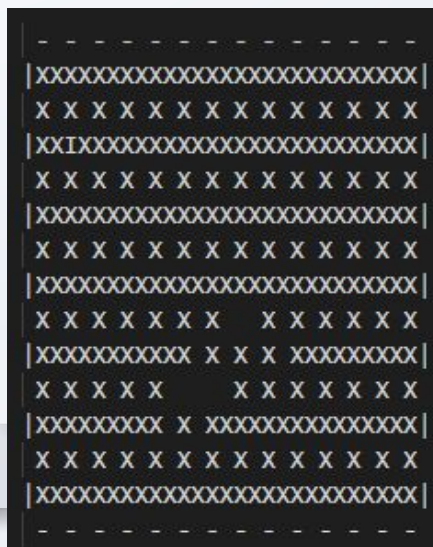
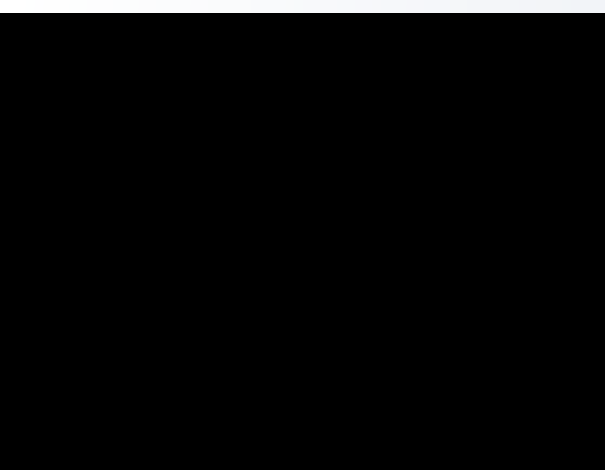
Circuito Fechado?

Não → (RE)

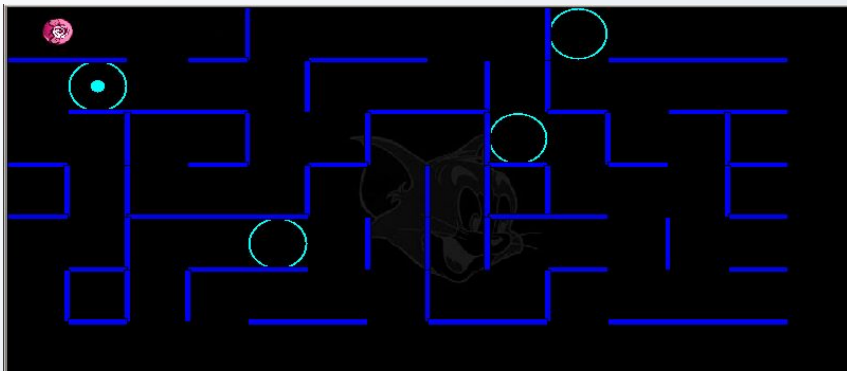
Sim → Calcular **candidatos** → Seguir Dijkstra
mais curto → (RE)

C2 - Desafio do Planeamento





C3 - Desafio do Mapeamento



```
[64, 0, 1, 2, 3, 0]  
[54, 0, 1, 3, 2, 0]  
[60, 0, 2, 1, 3, 0]  
[54, 0, 2, 3, 1, 0]  
[60, 0, 3, 1, 2, 0]  
[64, 0, 3, 2, 1, 0]
```

- Grafo com todas as células navegáveis
- Custo para cada beacon