

Term Project

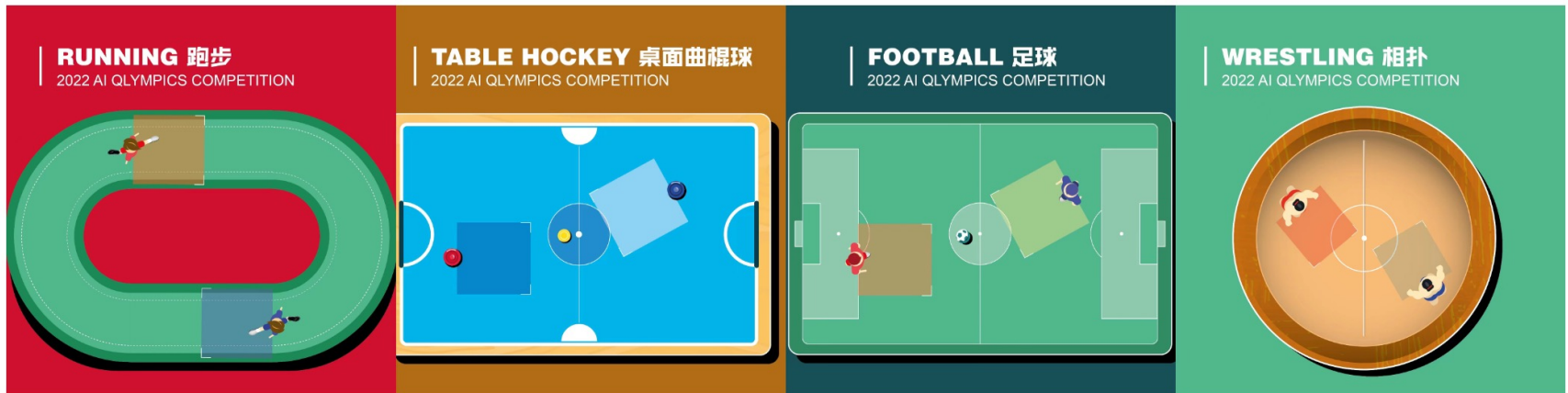
- AI Olympics -

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Environment

◆ AI Olympics



- Running, Wrestling
- 승리 조건
 - 상대 에이전트 energy 0
 - Running
 - 상대 에이전트보다 빠르게 결승선 통과
 - Wrestling
 - 상대 에이전트가 경기장 이탈

Environm

◆ State

- `state[agent_idex]['obs']['agent_obs']`

◆ Action

- 연속되는 행동 공간
- Force
 - 자동차의 엑셀
 - [-100, 200]
- Angle
 - 자동차의 운전대
 - [-30, 30]

◆ Reward

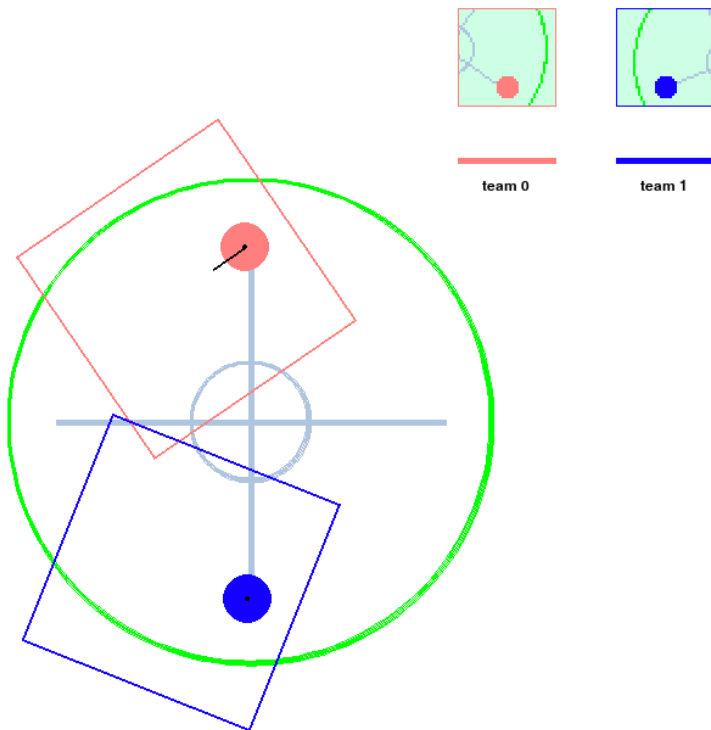
- 승리
 - +1
- 그 외
 - 0

```
3 ('all_observes',
[
  {
    'obs': {
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        [
          [0., 0., 0., ..., 0., 0., 0.],
          [0., 0., 0., ..., 0., 0., 0.],
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          ...,
          [0., 0., 0., ..., 0., 0., 0.],
          [0., 0., 0., ..., 0., 0., 0.],
          [0., 0., 0., ..., 0., 0., 0.]
        ]
      ),
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      'game_mode': 'NEW GAME',
      'energy': 1000
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  {
    'obs': {
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          ...,
          [0., 0., 0., ..., 0., 0., 0.],
          [0., 0., 0., ..., 0., 0., 0.],
          [0., 0., 0., ..., 0., 0., 0.]
        ]
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      'energy': 1000
    },
    'controlled_player_index': 1
  }
]
```

Environment

◆ Wrestling Observation

Step: 9



`state[0]['obs']['agent_obs']`

40x40 2D matrix

Team 0: 10

Team 1: 8

경기장: 1

중앙선: 4

Environment

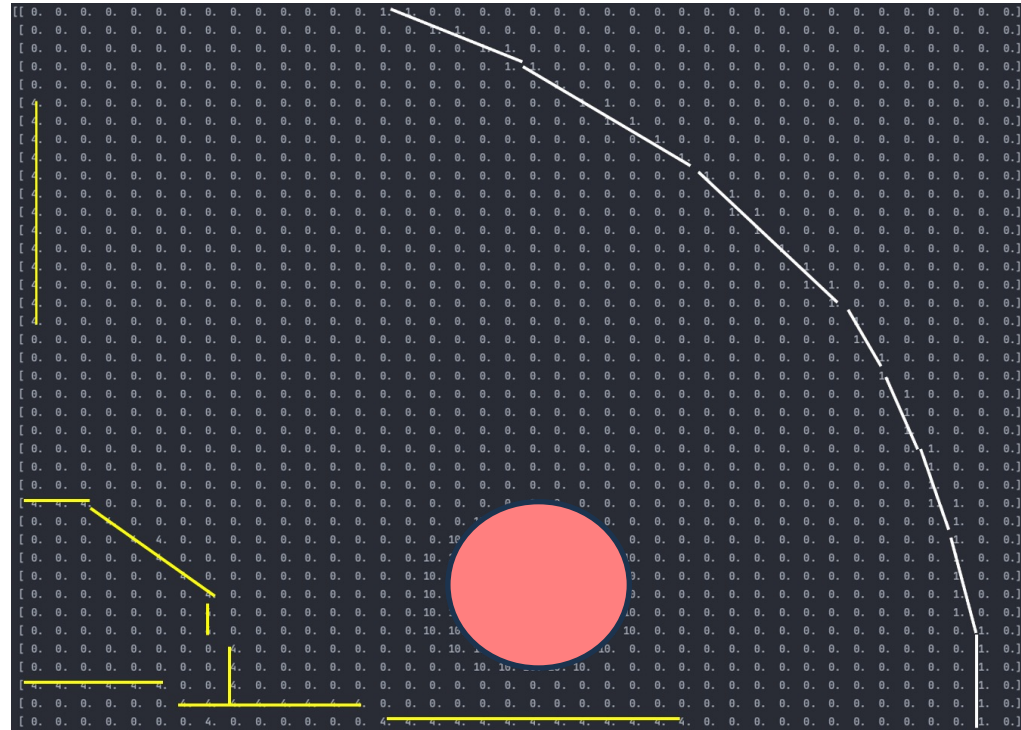
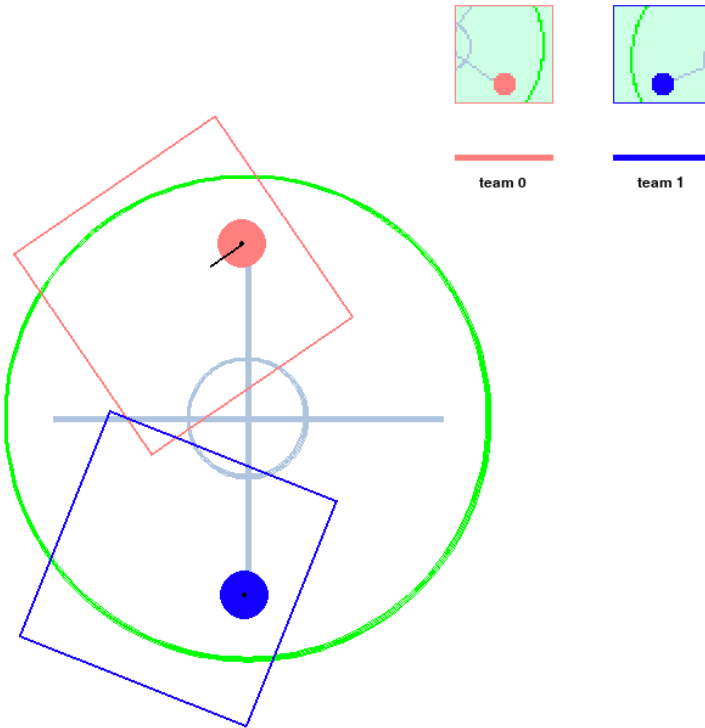
◈ Wrestling Observation

[illegible]

Environment

◆ Wrestling Observation

Step: 9



Team 0: 10

Team 1: 8

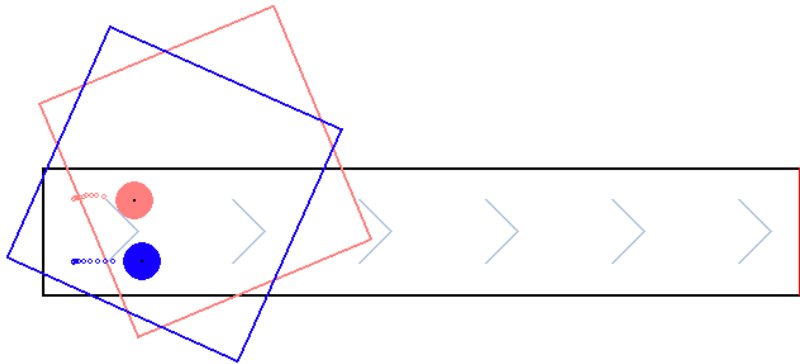
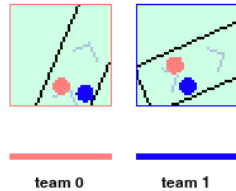
경기장: 1

중앙선: 4

Environment

◆ Running Observation

Step: 13



`state[1]['obs']['agent_obs']`

40x40 2D matrix

Team 0: 10

Team 1: 8

경기장: 6

화살표: 4

도착선: 7

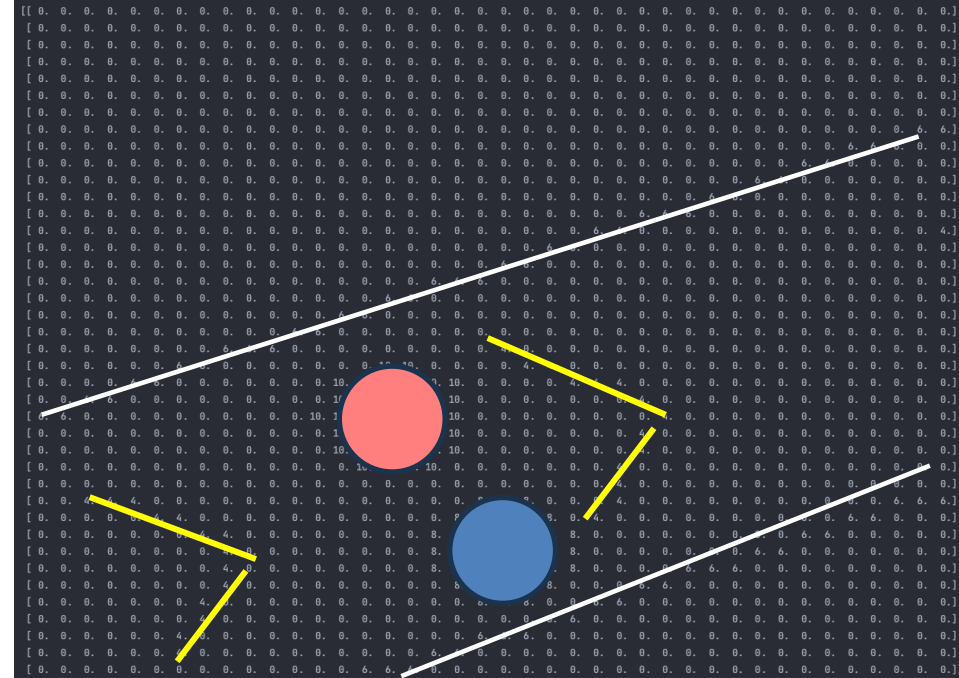
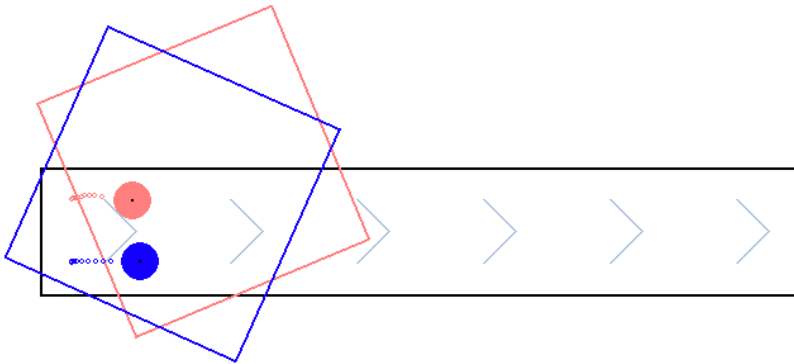
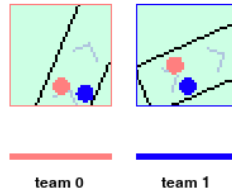
Environment

Running Observation

Environment

◆ Running Observation

Step: 13



Team 0: 10

Team 1: 8

경기장: 6

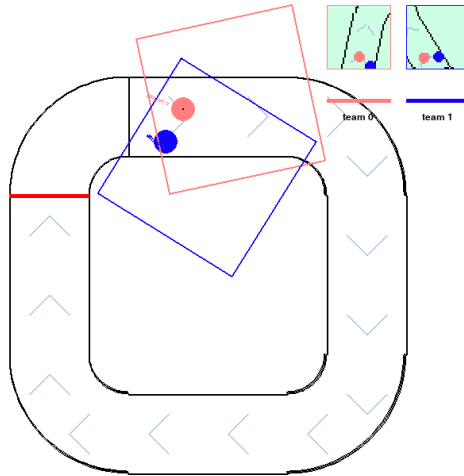
화살표: 4

도착선: 7

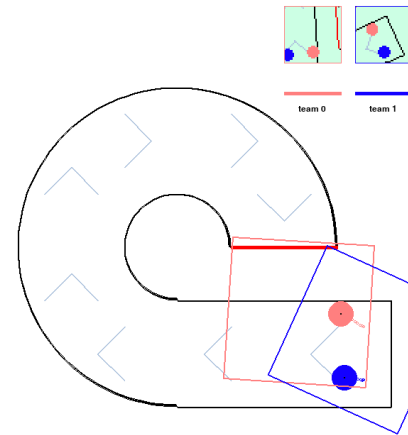
Environment

◆ Running Map

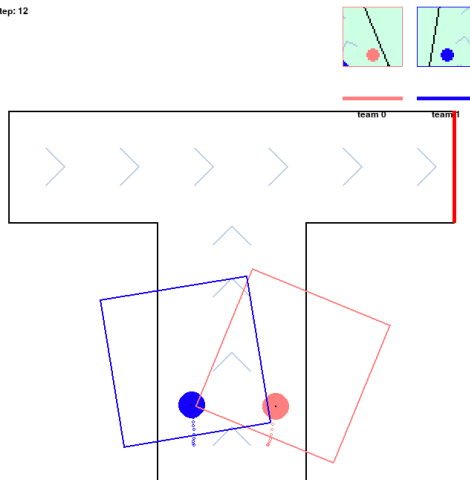
Step: 12



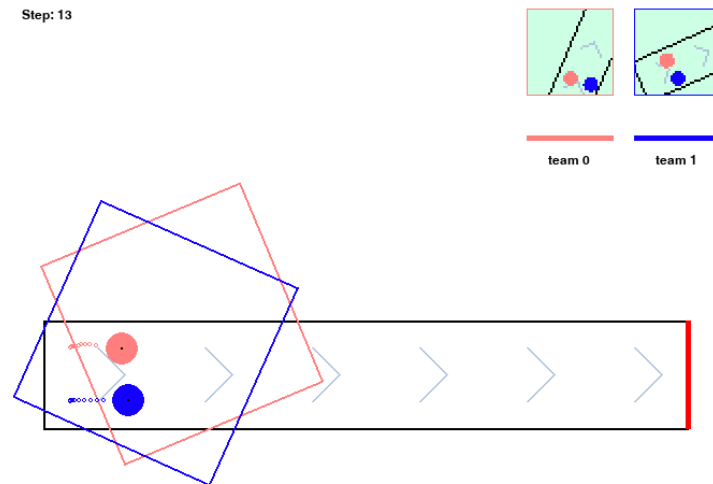
Step: 11



Step: 12



Step: 13



◆ 조교 연락처

– koir5660@koreatech.ac.kr