Maze

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Machine and Reinforcement Learning in Control Applications

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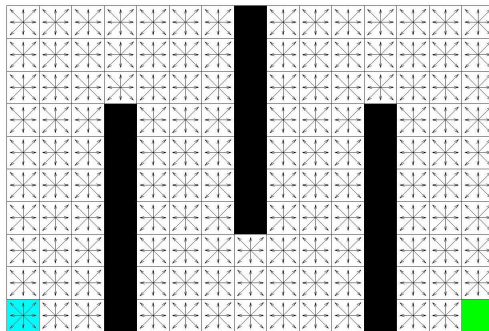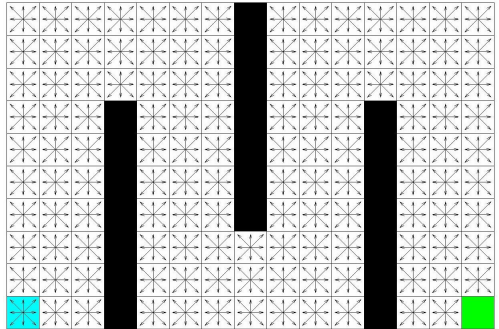
Learn to get out of a maze

Problem formulation

- Consider the grid world on the right;

- The goal is to reach the green box;

- A waterfall pushes the agent toward the bottom of the grid

Problem formulation

- 8 possible directions: **N, S, E, W, NE, NW, SE, SW**;

- Reward:
  - -1 for each step

Model

- The **state** is the position in the Gridworld
  - we have $X \cdot Y$ states.

- The **action** is the direction of the movement
  - we have 8 actions.
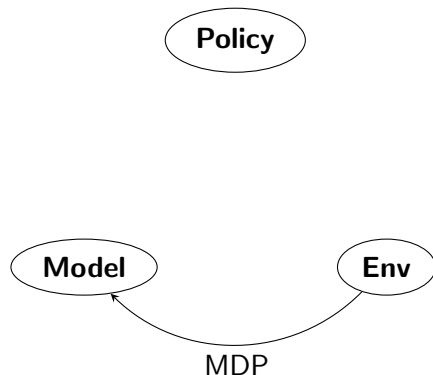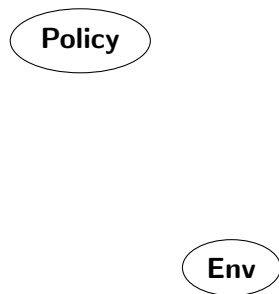
Indirect reinforcement learning

Figure: Planning

Figure: Learning
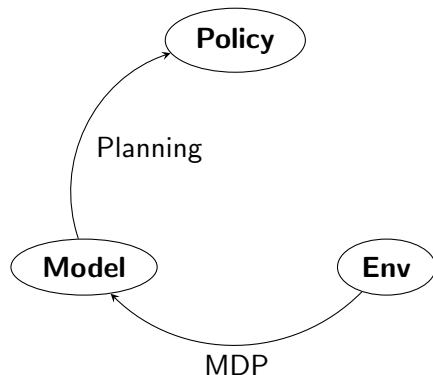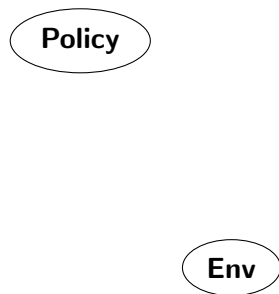
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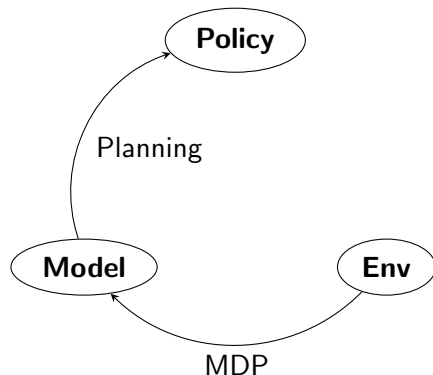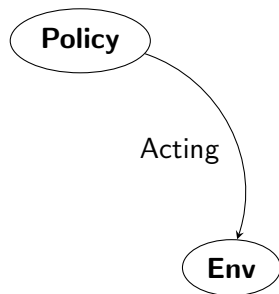Figure: Planning

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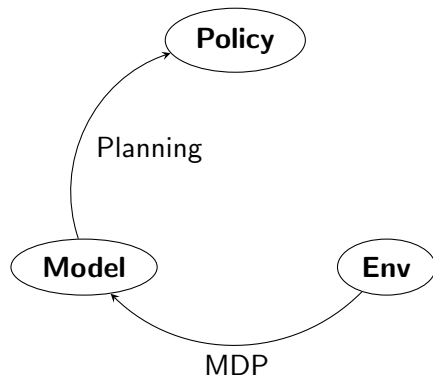
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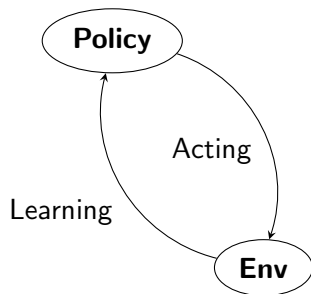
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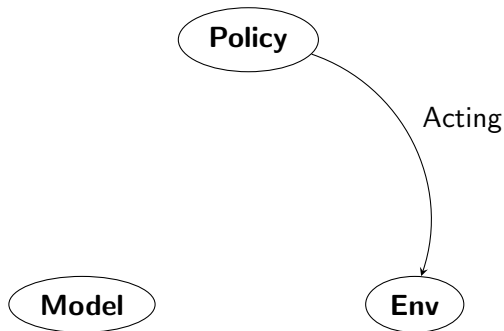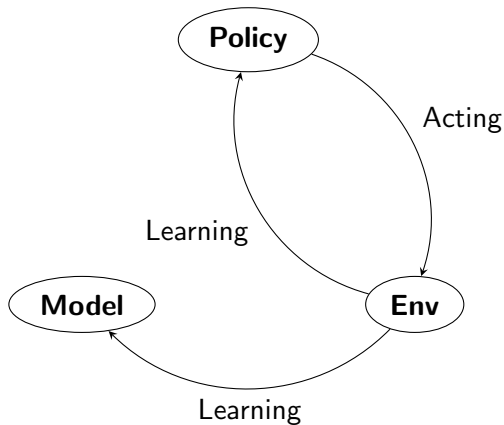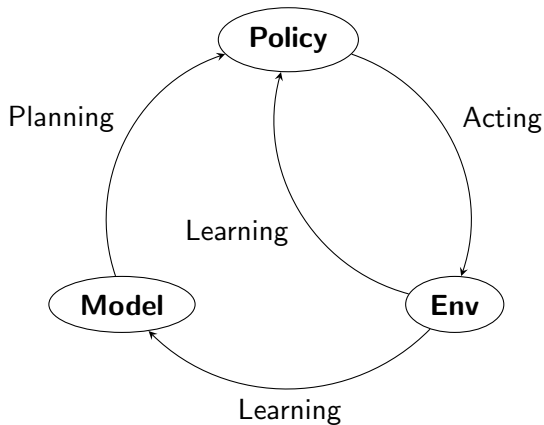# Indirect reinforcement learning

Figure: Planning-Learning

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