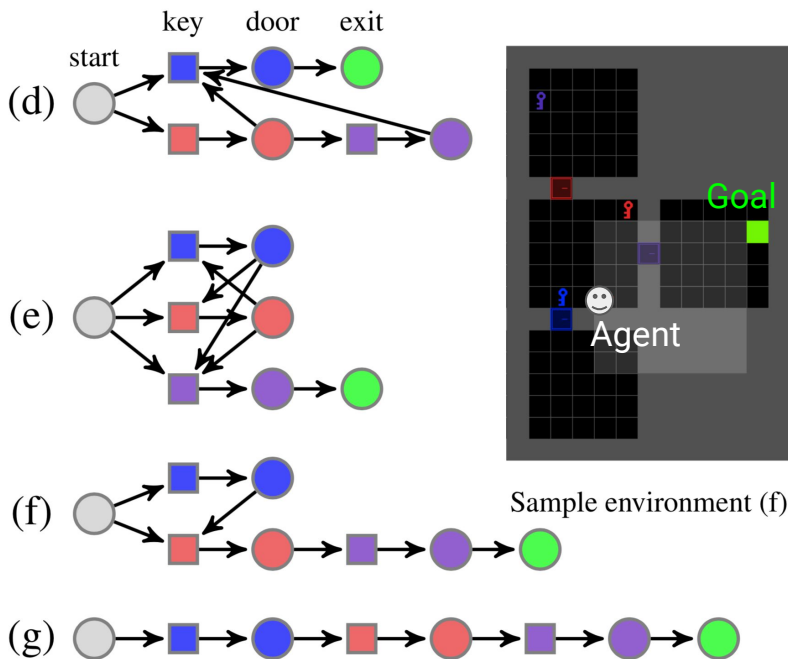# On the Complexity of Exploration in Goal-Driven Navigation

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Goal-Dependency Graphs for `EscapeRoom`

Sample environment (f)

Hitting Time as an Exploration Complexity Measure

1. Define goal graph:

$$D_{ii} := \sum_{j=1}^{n} W_{ij}, \quad D_{ij} := 0, \forall i \neq j$$

2. Compute expected hitting time by solving:

$$Lx = b \quad \text{s.t. } x_t = 0$$

$$b_s = 1, \ b_t = -1, \ b_k = 0 \ \forall k \notin \{s, t\}$$

Performance vs. Hitting Time