Solver Documentation

# Attributes

* riddle\_solvers: a dictionary contains four keys, each representing a type of riddle: cipher, captcha, pcap, and server. The corresponding values are the solver functions for each riddle type: cipher\_solver, captcha\_solver, pcap\_solver, and server\_solver. For example, *riddle\_solvers[‘cipher’](question)* will call the cipher solver function.
* agent\_id: the id provided to you via email.
* manager: initializes a MazeManger class.
* env: returns the maze environment corresponding to your agent ID.

# General Methods

These are used for both testing locally and submitting to the Hacktrick server.

* select\_action(state): receives the state and selects an action based on your solution.

The following functions can be found in the riddle\_solvers.py file, imported by the solver file(s):

* cipher\_solver(question): receives the **cipher** riddle question, implements the solver and returns the solution.
* captcha\_solver(question): receives the **captcha** riddle question, implements the solver and returns the solution.
* pcap\_solver(question): receives the **pcap** riddle question, implements the solver and returns the solution.
* server\_solver(question): receives the **server** riddle question, implements the solver and returns the solution.

These functions are place holders and you will need to implement your solution

# Local testing methods

These are the methods used only when testing locally.

* local\_inference(): tries to solve the maze and riddles **locally** for testing purposes.

# Server submission methods

These are the methods used only when submitting to the Hacktrick server.

* move(agent\_id, action): takes an agent ID and a selected action as inputs, and sends them to the server to move the agent.
* solve(agent\_id, riddle\_type, solution): takes an agent ID, a riddle type, and a riddle solution as inputs, and sends them to the server to solve the riddle.
* get\_obv\_from\_response(response): receives the server response and parses it for an observation “obv” that includes directions, distances and position.
* submission\_inference(): tries to solve the maze and riddles on the **Hacktrick server**, which will be counted as an attempt.