In Gym file;

1. Build your environment following the guidance of gym as normal
2. Still need to compute the cost by a function, e.g. \_compute\_cost
3. In step(), calculate and return your reward: reward – cost (as gym env doesn’t have cost in step function and this is the standard way to penalize violations)
4. I included max\_episode\_steps, render, close, set\_seed in gym env. Not sure if this is necessary, but at least this doesn’t cause errors.
5. Define self.env\_spec\_log and choose your own specifications for logging.
6. Log the violations, penalties, etc. by simply updating self.env\_spec\_log[“certain spec”] += certain\_spec\_value when you compute it

In Safe file

1. Copy my CMDP env
2. Change \_support\_envs
3. Change self.\_env = YOUR GYM ENV
4. Make sure that in step() you can access cost by cost = self.\_env.cost and then recover reward by reward = neg\_reward\_minus\_pos\_cost + cost