

# Multi-Agent Environment Standard

Assumption:

Each agent works synchronously.

Member Variable

```
self.env_type = 'periodic'/'episodic'
```

Member Functions

```
reset()
```

```
reward_list = step(action_list)
```

```
obs_list = get_obs()
```

[reward\\_list](#) records the single step reward for each agent

[action\\_list](#) records the single step action instruction for each agent

[obs\\_list](#) records the single step observation for each agent

Typical Monte Carlo Procedures

```
# reset environment by calling reset()
```

```
# get initial observation get_obs()
```

```
for i in range(max_MC_iter):
```

```
    # get action_list from controller
```

```
    # apply action by step()
```

```
    # record returned reward list
```

```
    # record new observation by get_obs()
```