Proyecto de prueba

Instalar gym

In [1]:

```
1 pip install gym
```

```
Collecting gym
  Downloading gym-0.18.0.tar.gz (1.6 MB)
Requirement already satisfied: scipy in c:\users\estangelmesiasjadanc\anacon
da3\lib\site-packages (from gym) (1.5.0)
Requirement already satisfied: numpy>=1.10.4 in c:\users\estangelmesiasjadan
c\anaconda3\lib\site-packages (from gym) (1.18.5)
Collecting pyglet<=1.5.0,>=1.4.0
  Downloading pyglet-1.5.0-py2.py3-none-any.whl (1.0 MB)
Requirement already satisfied: Pillow<=7.2.0 in c:\users\estangelmesiasjadan
c\anaconda3\lib\site-packages (from gym) (7.2.0)
Requirement already satisfied: cloudpickle<1.7.0,>=1.2.0 in c:\users\estange
lmesiasjadanc\anaconda3\lib\site-packages (from gym) (1.5.0)
Note: you may need to restart the kernel to use updated packages.Requirement
already satisfied: future in c:\users\estangelmesiasjadanc\anaconda3\lib\sit
e-packages (from pyglet<=1.5.0,>=1.4.0->gym) (0.18.2)

Building wheels for collected packages: gym
  Building wheel for gym (setup.py): started
  Building wheel for gym (setup.py): finished with status 'done'
  Created wheel for gym: filename=gym-0.18.0-py3-none-any.whl size=1656451 s
ha256=50afcef2518bba3b8644e572195fb735f6283334ca42cf34fa0acc597c30f504
  Stored in directory: c:\users\estangelmesiasjadanc\appdata\local\pip\cache
\wheels\d8\e7\68\a3f0f1b5831c9321d7523f6fd4e0d3f83f2705a1cbd5daaa79
Successfully built gym
Installing collected packages: pyglet, gym
Successfully installed gym-0.18.0 pyglet-1.5.0


####
```

In [8]:

```
import gym
env = gym.make('CartPole-v0')
for i_episode in range(20):
    observation = env.reset()
    for t in range(100):
        env.render()
        print(observation)
        action = env.action_space.sample()
        observation, reward, done, info = env.step(action)
        if done:
            print("Episode finished after {} timesteps".format(t+1))
            break
env.close()
```

```
[ 0.04635387 -0.04404987  0.04622127  0.02315673]
[ 0.04547287  0.15037979  0.04668441 -0.25459207]
[ 0.04848047  0.34480516  0.04159257 -0.53219215]
[ 0.05537657  0.53931819  0.03094872 -0.81148465]
[ 0.06616293  0.73400281  0.01471903 -1.09427427]
[ 0.08084299  0.53869009 -0.00716645 -0.79700969]
[ 0.09161679  0.3436672  -0.02310665 -0.50658979]
[ 0.09849014  0.539107   -0.03323844 -0.80646398]
[ 0.10927228  0.34445603 -0.04936772 -0.5244191 ]
[ 0.1161614   0.54023671 -0.0598561  -0.83224054]
[ 0.12696613  0.73612332 -0.07650092 -1.14313145]
[ 0.1416886   0.93215692 -0.09936354 -1.45879115]
[ 0.16033174  0.73838419 -0.12853937 -1.19873057]
[ 0.17509942  0.93491336 -0.15251398 -1.52877892]
[ 0.19379769  0.74192443 -0.18308956 -1.28732126]
[ 0.20863618  0.54954223 -0.20883598 -1.0570993 ]
Episode finished after 16 timesteps
[-0.03542691 -0.02574892  0.02648652  0.00881119]
[-0.03594189  0.16898336  0.02666274 -0.27539866]
```

In [3]:

```
import gym
env = gym.make('CartPole-v0')
print(env.action_space)
#> Discrete(2)
print(env.observation_space)
#> Box(4,)
```

```
Discrete(2)
Box(-3.4028234663852886e+38, 3.4028234663852886e+38, (4,), float32)
```

In [5]:

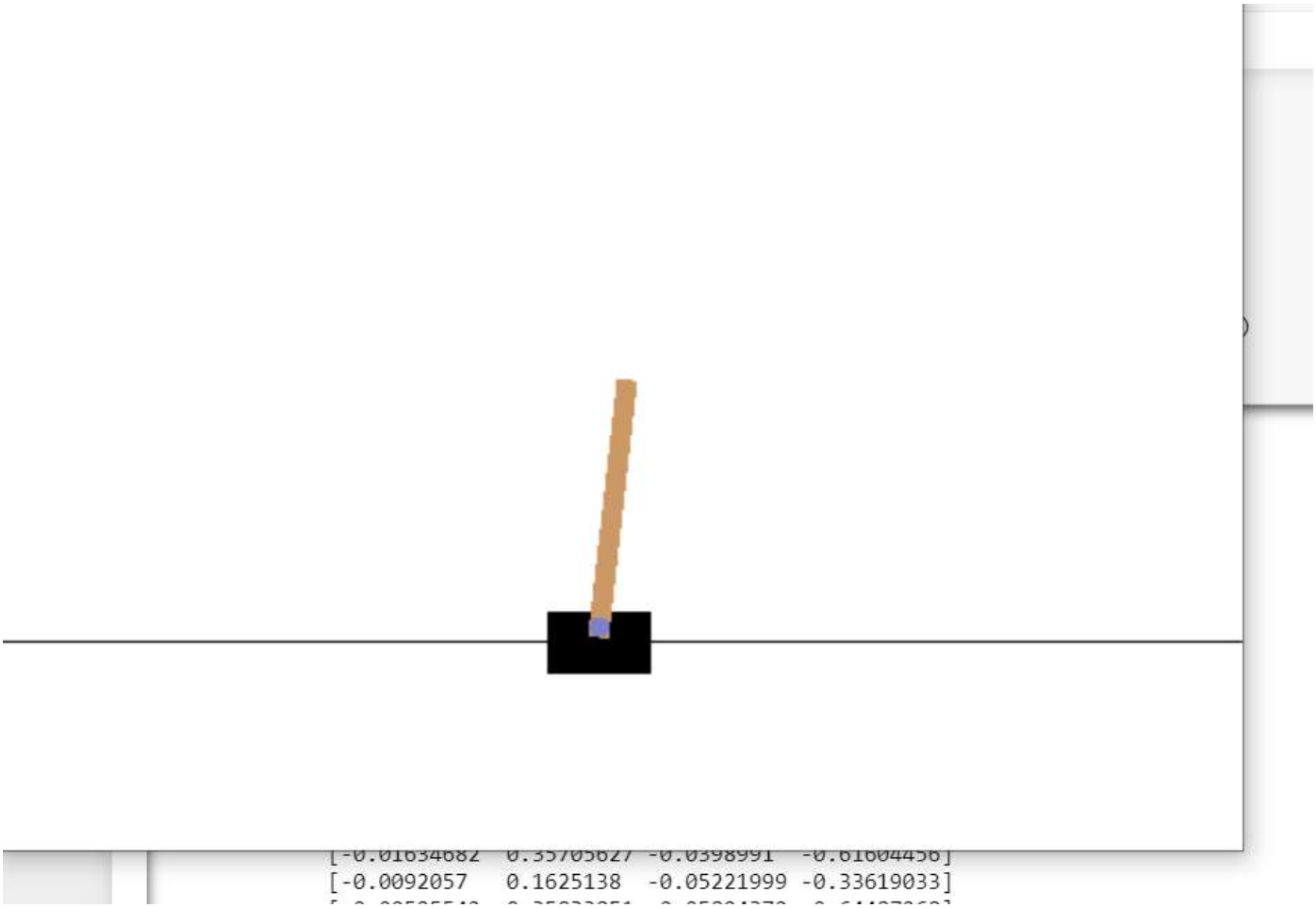
```
from gym import spaces
space = spaces.Discrete(8) # Set with 8 elements {0, 1, 2, ..., 7}
x = space.sample()
assert space.contains(x)
assert space.n == 8
```

In [6]:

```
from gym import envs
print(envs.registry.all())
```

```
dict_values([EnvSpec(Copy-v0), EnvSpec(RepeatCopy-v0), EnvSpec(ReversedAd
dition-v0), EnvSpec(ReversedAddition3-v0), EnvSpec(DuplicatedInput-v0), E
nvSpec(Reverse-v0), EnvSpec(CartPole-v0), EnvSpec(CartPole-v1), EnvSpec(M
ountainCar-v0), EnvSpec(MountainCarContinuous-v0), EnvSpec(Pendulum-v0),
EnvSpec(Acrobot-v1), EnvSpec(LunarLander-v2), EnvSpec(LunarLanderContinuo
us-v2), EnvSpec(BipedalWalker-v3), EnvSpec(BipedalWalkerHardcore-v3), Env
Spec(CarRacing-v0), EnvSpec(Blackjack-v0), EnvSpec(KellyCoinflip-v0), Env
Spec(KellyCoinflipGeneralized-v0), EnvSpec(FrozenLake-v0), EnvSpec(Frozen
Lake8x8-v0), EnvSpec(CliffWalking-v0), EnvSpec(NChain-v0), EnvSpec(Roulet
te-v0), EnvSpec(Taxi-v3), EnvSpec(GuessingGame-v0), EnvSpec(HotterColder-
v0), EnvSpec(Reacher-v2), EnvSpec(Pusher-v2), EnvSpec(Thrower-v2), EnvSpe
c(Striker-v2), EnvSpec(InvertedPendulum-v2), EnvSpec(InvertedDoublePendul
um-v2), EnvSpec(HalfCheetah-v2), EnvSpec(HalfCheetah-v3), EnvSpec(Hopper-
v2), EnvSpec(Hopper-v3), EnvSpec(Swimmer-v2), EnvSpec(Swimmer-v3), EnvSpe
c(Walker2d-v2), EnvSpec(Walker2d-v3), EnvSpec(Ant-v2), EnvSpec(Ant-v3), E
nvSpec(Humanoid-v2), EnvSpec(Humanoid-v3), EnvSpec(HumanoidStandup-v2), E
nvSpec(FetchSlide-v1), EnvSpec(FetchPickAndPlace-v1), EnvSpec(FetchReach-
v1), EnvSpec(FetchPush-v1), EnvSpec(HandReach-v0), EnvSpec(HandManipulate
BlockRotateZ-v0), EnvSpec(HandManipulateBlockRotateZTouchSensors-v0), Env
```

Juego de prueba



In [ ]:

```
1
```