

FETCH REACH ROBOT

GOAL

Goal: Move the gripper to reach a point (ball's position)

METHODS (ENV.)

```
env.get_gripper_position  
env.get_ball_position  
env.step(action)
```

DIRECTION

```
direction = np.array(variable for gripper position) - np.array(  
variable for ball position)
```

STEPS

1. Set distance threshold.
2. Set step size.
3. Retrieve the balls position & store it in a variable.
4. Retrieve the grippers position & store it in a variable.
5. Calculate the direction vector by subtracting the gripper position from the ball position, wrapping each variable in `np.array()` to subtract the 3D vectors without errors.
6. Cast the direction to its magnitude using `np.linalg.norm()` to be able to compare the vector to a scalar properly in the next step.
7. Move the gripper using a while loop as long as the direction from the gripper to the ball is greater than the distance threshold. Direction is a vector and distance threshold is a scalar.