In [3]:

```
def pi_estimator(samples):
    points_inside_circle= 0
    total_num_points = 0
    X,Y = generate_rand(size=2*samples).reshape(2,-1)

    for x,y in zip(X,Y):
        distance = x**2 + y**2
        if distance <= 1:
            points_inside_circle +=1
        total_num_points += 1
    return 4* points_inside_circle/total_num_points


# calling the function
pi_estimator(10**7)
```

Out[3]:

```
3.1418544
```

In [ ]:

In [ ]: