Program:

```
#plotting a random walk
import numpy as np
import matplotlib.pyplot as plt
N=1000 # Number of points
x, y = 0, 0
l = 1 # radius of circle centered around (x,y)
p = [[0,0]] # Initial point
for k in range(N):
        theta = 2 * np.pi * np.random.random()
        x, y = x + l * np.cos(theta), y + l * np.sin(theta)
        p.append([x, y])
## Ploting points
plt.plot([p[i][0] for i in range(N+1)],[p[i][1] for i in range(N+1)],'g')
# arrow from starting point to the end point
plt.arrow(p[0][0],p[0][1], p[N][0],p[N][1],color='r',head_width = 0.15)
plt.show()
```

Output: