Random walk formulation

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INITIALIZE

```
clear
close all
clc
```

DASHBOARD

```
nsteps = 10;   %% Number of steps

x = zeros(nsteps,1);
y = zeros(nsteps,1);
x(1) = 0;
y(1) = 0;

for iter = 1:nsteps

    dx =randn(); %% random numbers in the x-direction
    dy =rand();  %% random numbers in the y-direction

    x(iter+1) = dx; %% xvalues
    y(iter+1) = dy; %% yvalues

end
```

Plotting of figures

```
scatter(x, y, 'o', 'LineWidth', 2);
hold on
plot(x, y, 'b-', 'LineWidth', 2);
xlabel('x (a.u)');
ylabel('y (a.u)', 'Rotation', 0, ...
        'HorizontalAlignment', 'right');
title('Random motion', 'Interpreter', 'Latex');
```

Random motion