

Random Walk Practical Solutions

Random Walk

- Explain briefly what is meant by a "random walk"
 - A "random walk" occurs when a moving physical object changes direction at random

Character on screen

- Explain briefly how a character in a game appears to move on the screen
 - The character is at a position with coordinates x and y
 - To get to the new position, the character needs to move vx pixels horizontally and vy pixels vertically
 - We calculate the coordinates $(x + vx, y + vy)$ and clear the screen
 - We then re-draw the screen, using the new coordinates for the character

Character Moving at Random

- Explain briefly how a character on the screen can perform a random walk
 - To make the character perform a random walk, change the direction of v_x and v_y at random
 - We can use a random number engine with a Bernoulli distribution
- Write a simple program which shows a random walk
 - Using text mode, in one dimension only
 - (Optional) Using a graphics library to show a two-dimensional walk