DELHI TECHNOLOGICAL UNIVERSITY



STOCHASTIC PROCESSES

(MC-303)

PRACTICAL FILE

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(2K19/MC/089)

EXPERIMENT 6

# AIM

WAP to find the probability that in case of an unrestricted simple random walk, at the nth instant particle lies between two specified limits. Find this probability by taking suitable values of the parameters p, q, n, j and k.

# THEORY

In mathematics, a random walk is a mathematical object, known as a stochastic or random process, that describes a path that consists of a succession of random steps on some mathematical space such as the integers.

An elementary example of a random walk is the random walk on the integer number line, which starts at 0 and at each step moves +1 or −1 with equal probability. Other examples include the path traced by a molecule as it travels in a liquid or a gas (see Brownian motion), the search path of a foraging animal, the price of a fluctuating stock and the financial status of a gambler: all can be approximated by random walk models, even though they may not be truly random in reality.

## SOURCE CODE AND OUTPUT

