DELHI TECHNOLOGICAL UNIVERSITY



STOCHASTIC PROCESSES

(MC-303)

PRACTICAL FILE

SUBMITTED TO:

PROF. H C TANEJA

MR. VINEET KUMAR

SUBMITTED BY:

NITYA MITTAL

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EXPERIMENT 3

# AIM

Demonstrating Bernoulli process. Specifically, WAP to find the probability that in case a Bernoulli process:

(a) out of n trials k are successes, (b) kth success occurs at the nth trial.

For example: The reliability assurance given by a company for its fuses is as per Bernoulli distribution with the probability of a specific fuse being defective as 0.05, independent of others. Fuses are being sold in a packing of 20 each with the money back guarantee that no more than 3 fuses were defective in a packet of 20.

(a) Find the expected number of packets for which money is to be return out of 1000 such packets sold.

(b) In case packets are sold to customers in a specific order, find the probability that 20th customer will be the 2nd one for which the money will be refunded.

(c) In case fuse in packets are placed in a specific order, find the probability that 12th fuse will be the 2nd defective fuse.

## SOURCE CODE and output



