DELHI TECHNOLOGICAL UNIVERSITY



STOCHASTIC PROCESSES

(MC-303)

PRACTICAL FILE

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EXPERIMENT 1

# AIM

Demonstrating a Stochastic Process with Discrete Index Set with

(a) Discrete State Space

(b) Continuous State Space

## SOURCE CODE

#discrete index set with discrete and continuous state space

#tabulating data

userID<- 1:22

name<- c("Hailie", "Lily", "Kathy", "Laylah", "Riya", "Elianna", "Carleigh", "Shayna", "Kianna", "Rory", "Amaris", "Dania", "Naima", "Emmy", "Azaria", "Marin", "Gretchen", "Nyasia", "Denisse", "Anabel", "Joyce", "June")

height\_continuous<- c(159.1,157.6,154.9,158.4,153.9,158.3,161.7,165.3,167.3,166.0,171.4,164.7,175.9,167.6,162.9,152.1,178.9,158.3,172.9,169.9,173.2,172.9)

no\_of\_games\_won\_discrete <-c(2,3,1,2,4,3,2,4,1,1,1,0,0,0,2,2,3,1,2,3,3,1)

class.df<- data.frame(userID, name, height\_continuous, no\_of\_games\_won\_discrete)

class.df

#plotting continuous state space using line graph

plot(userID, height\_continuous, type = "l", col = "red", main = "Continuous State Space", xlab = "UserID of Players", ylab = "Heights")

#plotting discrete state space using line graph

barplot(no\_of\_games\_won\_discrete, names.arg = userID, col = "blue", main = "Discrete State Space", xlab = "UserID of Players", ylab = "Heights")

## OUTPUT





