

DAILY ASSESSMENT FORMAT

Date:	16 JUNE 2020	Name:	HARSHITHA H
Course:	Statistical methods	USN:	4AL18EC020
Topic:	Case study on statistics and probability theory	Semester & Section:	IV SEM & A SECTION
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Image of session

The screenshot shows a web browser window with the URL https://olympus.greatlearning.in/courses/12436/pages/solution-for-case-study/module_item_id=527617. The page features a sidebar on the left with navigation links: 'Learning Videos', 'Agenda', 'Case study on statistics and Probability Theory', 'Solution for case study', 'Introduction to Probability', 'Rules for Probability calculation', 'Bayes' Theorem', 'Normal Distribution', 'Learning Material', 'Quiz', and 'Claim Your Course Certificate'. The main content area displays R code for data analysis, including reading a CSV file, creating a data frame, and calculating statistics like mean, mode, and histogram. The code is as follows:

```
1 setwd("~/Downloads")
2 mydata<-read.csv("health.csv",header=TRUE)
3 attach(mydata)
4 mydata
5 names(mydata)
6 Frequency<-table(work)
7 Mode<-name
8 hist(work,col="red")
9 library(lattice)
10 histogram<-work~factor(hospital)
11 mean(work)
12
```

The console output shows the following data:

work	frequency
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50

The screenshot shows a web browser window with the URL https://olympus.greatlearning.in/courses/12436/pages/case-study-on-statistics-and-probability-theory/module_item_id=527616. The page features a sidebar on the left with navigation links: 'Learning Videos', 'Agenda', 'Case study on statistics and Probability Theory', 'Solution for case study', 'Introduction to Probability', 'Rules for Probability calculation', 'Bayes' Theorem', 'Normal Distribution', 'Learning Material', 'Quiz', and 'Claim Your Course Certificate'. The main content area displays a text-based case study about the National Health Care Association and its concerns about the shortage of nurses. It includes a table of data and a question asking for insights from the data set.

National Health Care Association
(Adapted from Anderson, Sweeney, and Williams for Classroom Discussion)

The National Health Care Association is concerned about the shortage of nurses the health care profession is projecting for the future. To learn the current degree of job satisfaction among nurses, the association has sponsored a study of hospital nurses throughout the country. As part of this study, a sample of 50 nurses was asked to indicate their degree of satisfaction in their work, their pay and their opportunities for promotion. Each of the three aspects of satisfaction was measured on a scale from 0 to 100, with larger values indicating higher degrees of satisfaction. The data collected also showed the type of hospital employing the nurses. The types of hospitals were private (P), Veterans Administration (VA) and University (U). The complete data set is on the file named "Health.csv".

How do you make insights or wisdom out of this data set? What are the insights?

- 1) What is the mode for work?
- 2) Which of the three attributes has the highest mean satisfactory score? lowest mean satisfaction score?
- 3) |

How would you rate this video ★★★★★

Report –

STATISTICAL METHODS

➤ **Agenda:**

- Case study for statistics
- Probability and its types
- Bayes theorem
- Normal distribution
- Bell curve

➤ **Probability theory**

➤ **Solution for case study**

