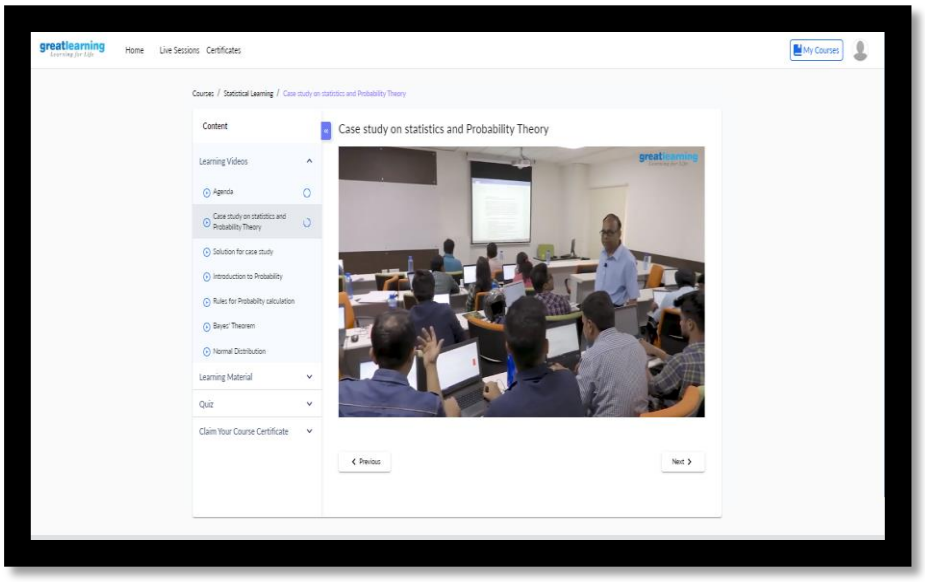
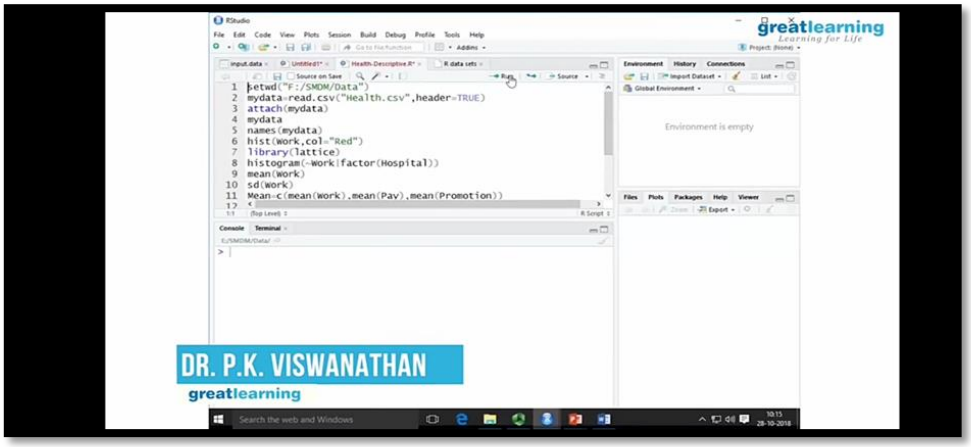
DAILY ASSESSMENT

Date:	16-June-2020	Name:	Swastik R Gowda
Course:	Statistical Learning	USN:	4AL17EC091
Topic:	❖ Case Study on statistics & probability theory. ❖ Solution for case study	Semester & Section:	6th Sem 'B' Sec
Github Repository:	swastik-gowda		

FORENOON SESSION DETAILS
Image of session





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AGENDA:

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

Steps:

- Identify and define the research questions
- Select the cases
- Collect data
- Evaluate and analyze the data
- Result presentation

Questions:

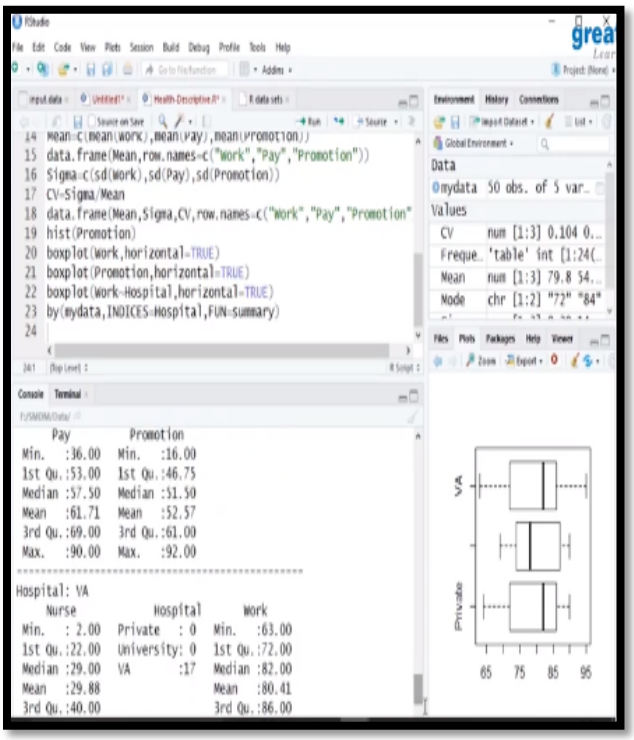
National Health Care Association
(Adapted from Anderson, Sweeney, and Williams for Classroom Discussion)

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) Find out the coefficient of variation for work, pay, and promotion
4) In the histogram for Promotion, which class has the highest concentration?
5) Is the shape of box plot for Work is skewed? If so, which direction?
6) How many points are outliers in Promotion Box Plot?
7) If All the Box plots for Work are drawn for all the hospitals, which hospital type has the best median value?
8) If box plots for Work, Pay, Promotion are drawn in the same space, how many outliers are there for promotion, and Pay?

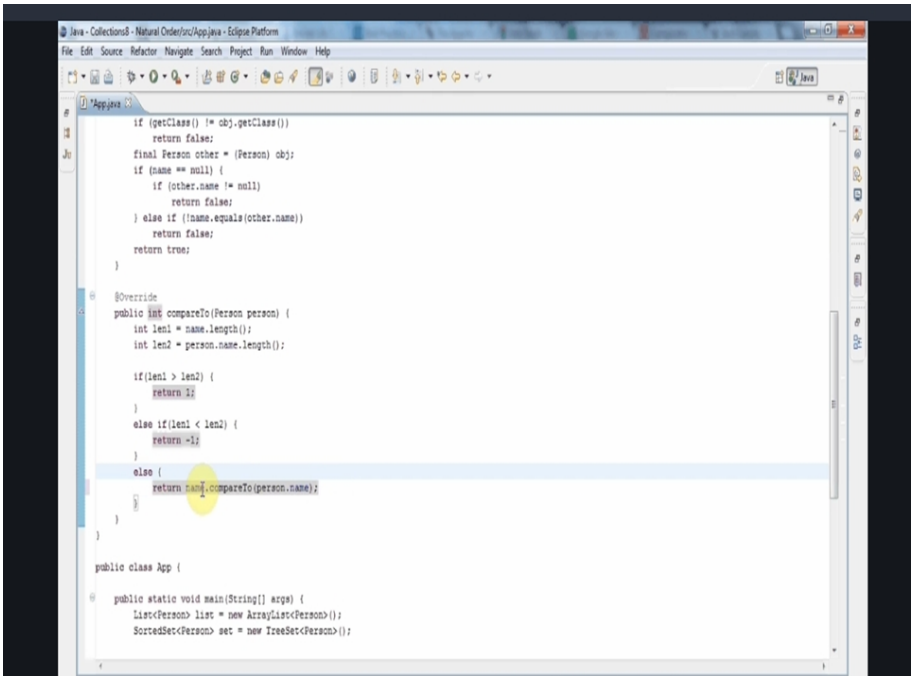
Solutions of case study:

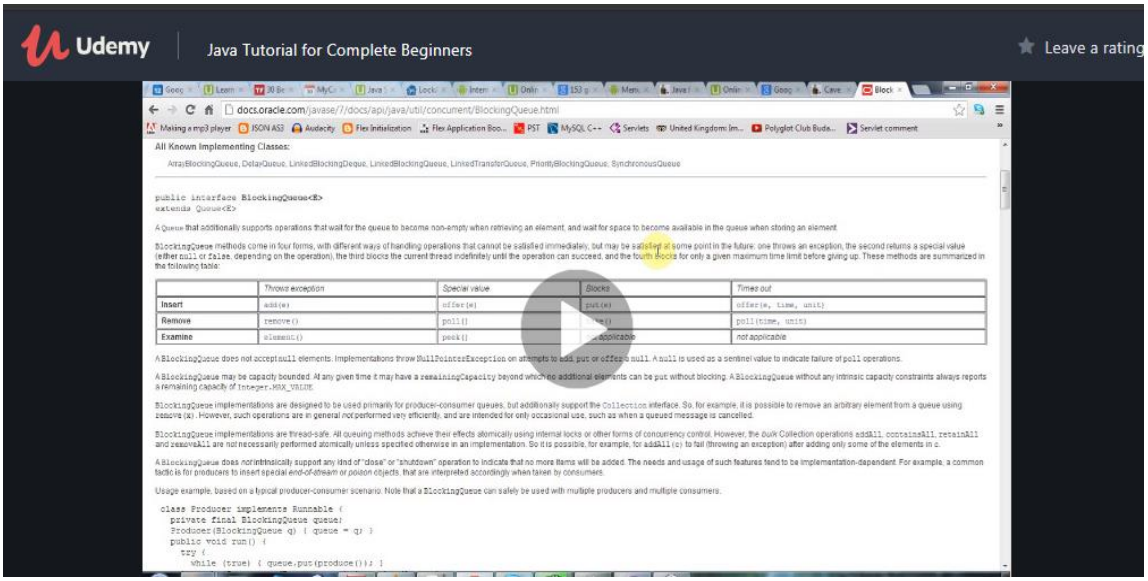


Date:	16-June-2020	Name:	Swastik R Gowda
Course:	Java	USN:	4AL17EC091
Topic:	Programming	Semester & Section:	6th Sem 'B' Sec

AFTERNOON SESSION DETAILS

Image of session





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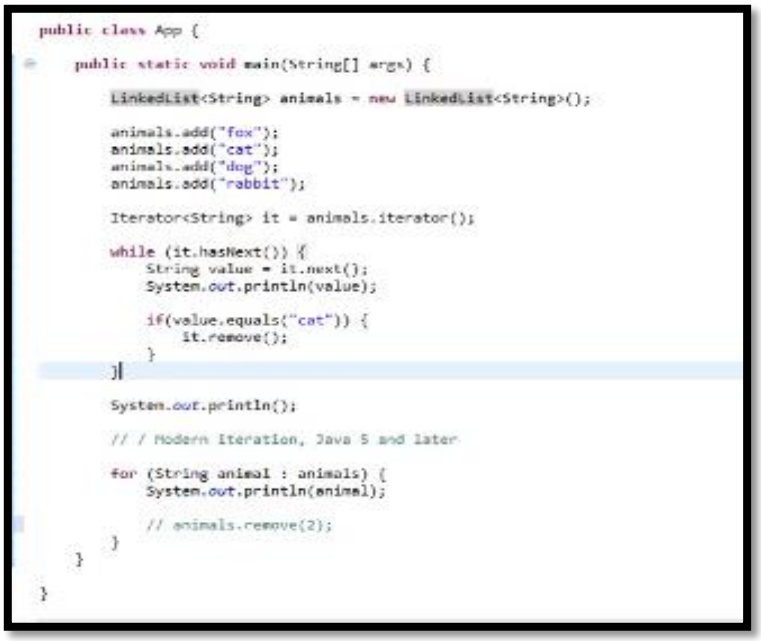
The Java collections Frame work:

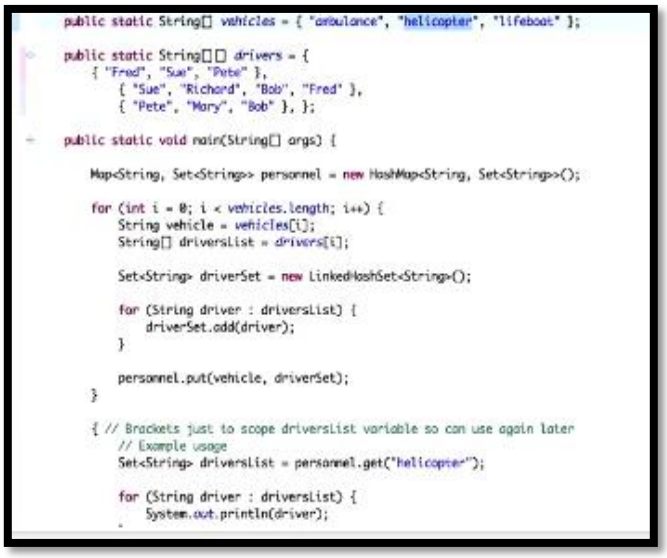
- Natural Ordering
- Queues
- Using Iterators
- Implementing iteration
- Deciding Which Collection to Use
- Complex Data Structures

Using Iterators:



```
public class App {

    public static void main(String[] args) {

        LinkedList<String> animals = new LinkedList<String>();

        animals.add("fox");
        animals.add("cat");
        animals.add("dog");
        animals.add("rabbit");

        Iterator<String> it = animals.iterator();

        while (it.hasNext()) {
            String value = it.next();
            System.out.println(value);

            if(value.equals("cat")) {
                it.remove();
            }
        }

        System.out.println();

        // / Modern Iteration, Java 5 and later

        for (String animal : animals) {
            System.out.println(animal);

            // animals.remove(2);
        }
    }

}
```

Complex data structures:



```
public static String[] vehicles = { "ambulance", "helicopter", "lifeboat" };

public static String[][] drivers = {
    { "Fred", "Sue", "Pete" },
        { "Sue", "Richard", "Bob", "Fred" },
        { "Pete", "Mary", "Bob" }, };

public static void main(String[] args) {

    Map<String, Set<String>> personnel = new HashMap<String, Set<String>>();

    for (int i = 0; i < vehicles.length; i++) {
        String vehicle = vehicles[i];
        String[] driversList = drivers[i];

        Set<String> driverSet = new LinkedHashSet<String>();

        for (String driver : driversList) {
            driverSet.add(driver);
        }

        personnel.put(vehicle, driverSet);
    }

    { // Brackets just to scope driverslist variable so can use again later
        // Example usage
        Set<String> driverslist = personnel.get("helicopter");

        for (String driver : driverslist) {
            System.out.println(driver);
```

Date:	**16-June-2020**	**Name:**	**Swastik R Gowda**
Course:	**Webinar on "Future Ahead For Electronic Engineers"**	**USN:**	**4AL17EC091**
Topic:	**An Overview of Avionics in Electronics Industry**	**Semester & Section:**	**6th Sem 'B' Sec**

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