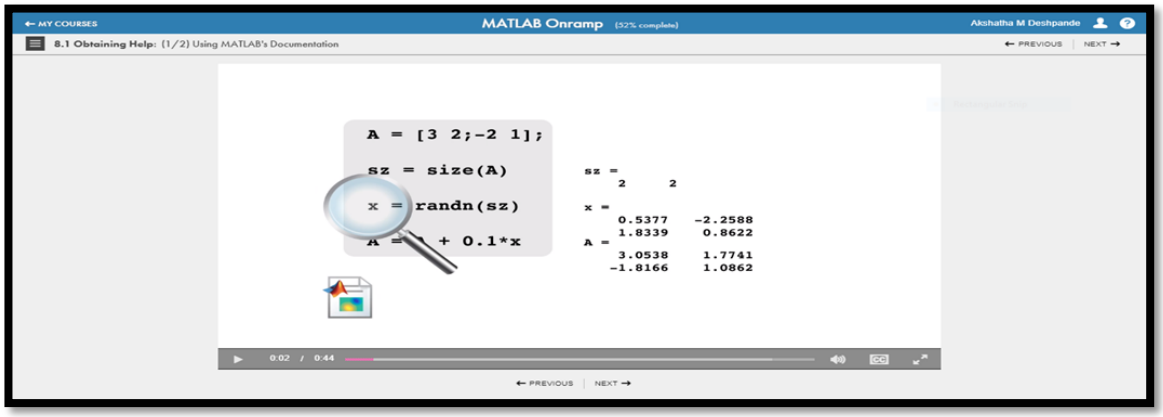
DAILY ASSESSMENT

Date:	08-July-2020	Name:	Swastik R Gowda
Course:	MATLAB	USN:	4AL17EC091
Topic:	❖ Obtaining Multiple Outputs from Function Calls ❖ Obtaining Help ❖ Plotting Data ❖ Review Problems ❖ Importing Data ❖ Logical Array ❖ Programming ❖ Final Project ❖ Conclusion	Semester & Section:	6th Sem 'B' Sec
Github Repository:	swastik-gowda		

FORENOON SESSION DETAILS

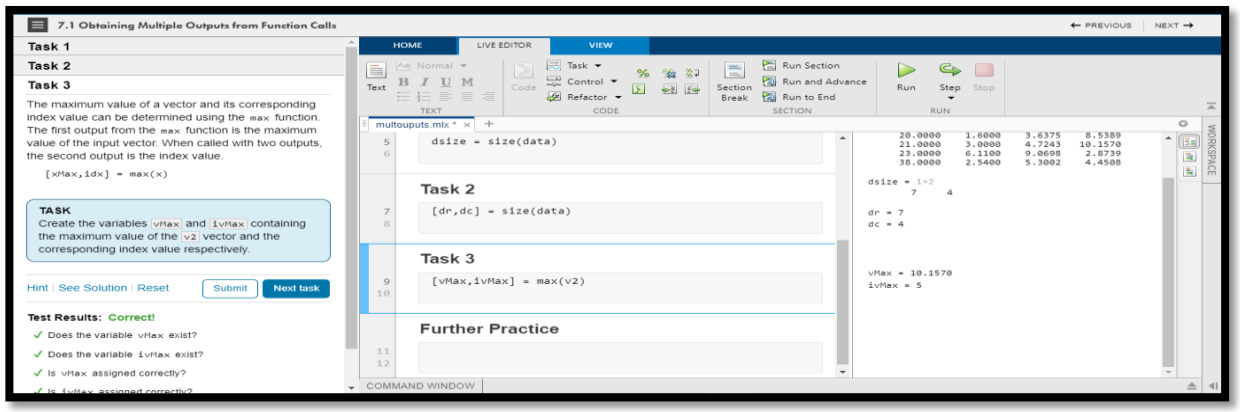
Image of session



Report – Report can be typed or hand written for up to two pages.

Obtaining Multiple Outputs from Function Calls:

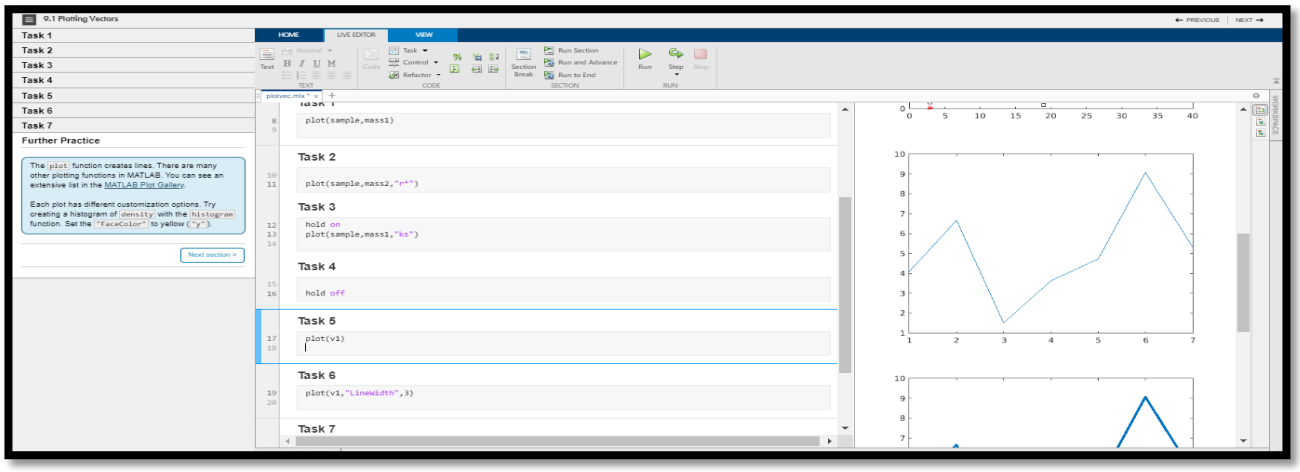
- **The size function can be applied to an array to produce a single output variable containing the array size.**



Obtaining Help:

- **The MATLAB documentation contains examples and information that can help you when working on your own problems.**
- **You can also open the documentation using the doc function. Try opening the documentation for randi with the code below: doc randi**

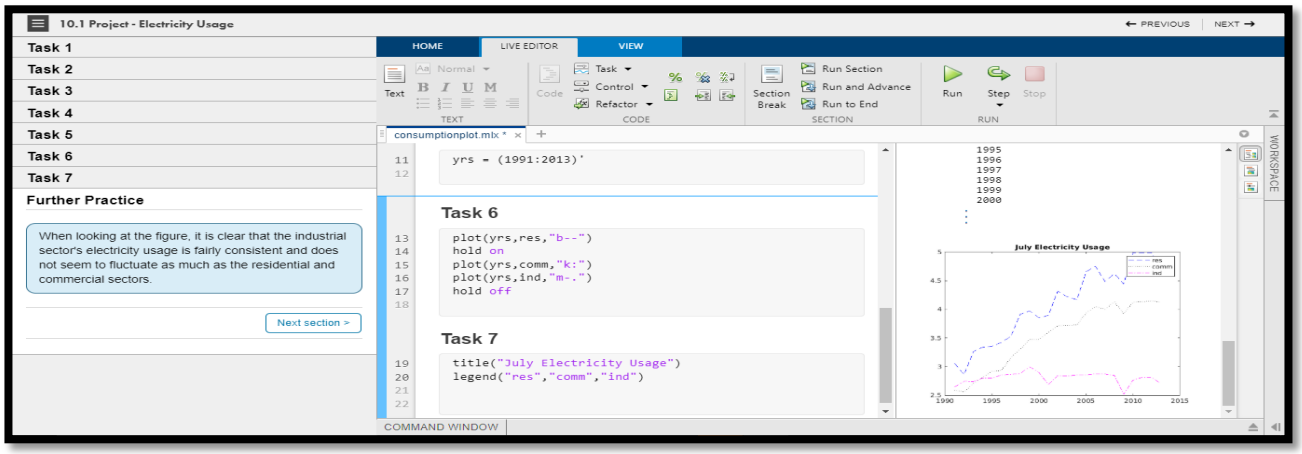
Plotting Vectors:



Project - Electricity Usage:

Electricity Usage:

- **In this project, you will plot electricity usage for various economic sectors - residential, commercial, and industrial. Which economic sector's usage do you think will be the largest?**

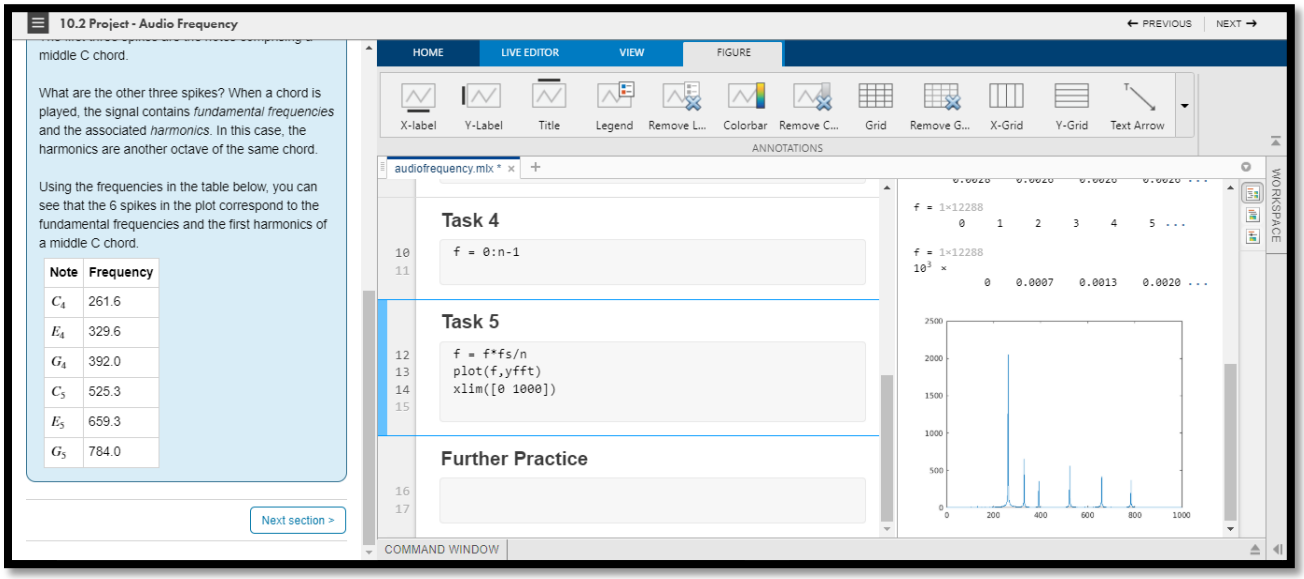


Project - Audio Frequency:

Electricity Usage:

- **Audio signals are usually comprised of many different frequencies. For example, in music, the note 'middle C' has a fundamental frequency of 261.6 Hz, and most music consists of several notes (or frequencies) being played at the same time.**
- **In this project, you will analyze the frequency content of an organ playing the C chord.**

- **The C chord consists of the C (261.6 Hz), E (329.6 Hz), and G (392.0 Hz) notes. The highlighted points in this frequency plot correspond to each note.**

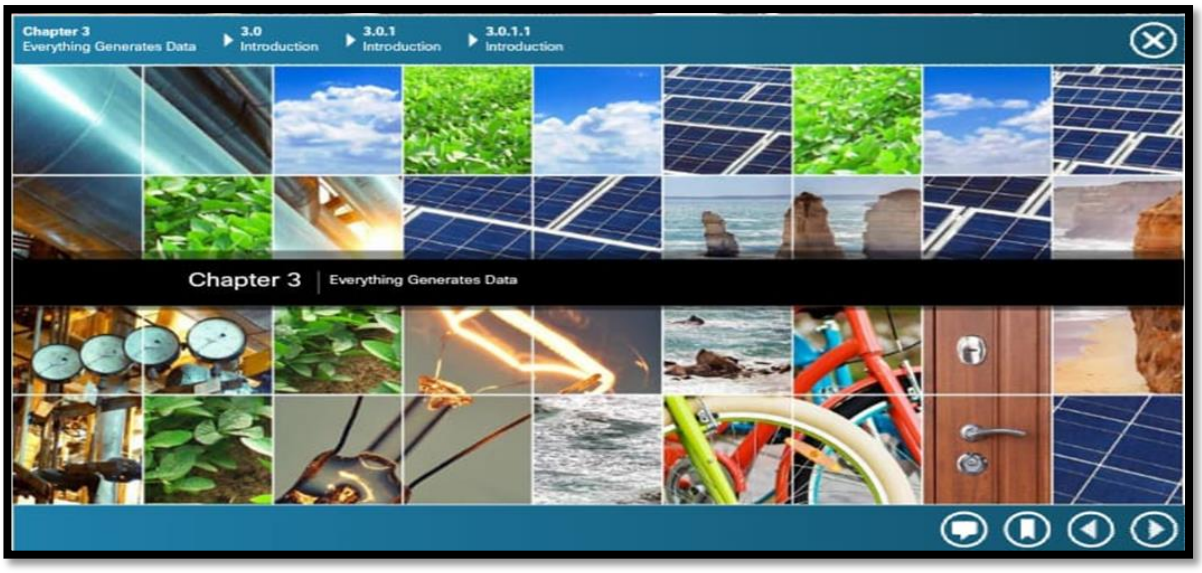


CERTIFICATE:

Date:	08-July-2020	Name:	Swastik R Gowda
Course:	CISCO	USN:	4AL17EC091
Topic:	Chapter 3	Semester & Section:	6th Sem 'B' Sec

AFTERNOON SESSION DETAILS

Image of session



Report – Report can be typed or hand written for up to two pages.

CHAPTER 3:

What is Big Data?

- Data is information that comes from a variety of sources, such as people, pictures, text, sensors, and web sites.
- Data also comes from technology devices like cell phones, computers, kiosks, tablets, and cash registers.
- Most recently, there has been a spike in the volume of data generated by sensors. Sensors are now installed in an ever growing number of locations and objects.
- These include security cameras, traffic lights, intelligent cars, thermometers, and even grape vines
- Big Data is a lot of data, but what is a lot? No one has an exact number that says when data from an organization is considered "Big Data."

Large Datasets:

- Companies do not necessarily have to generate their own Big Data. Smaller organizations might not have the sensors, the volume of customers, or the ability to generate the variety of information that could benefit their company.
- There are sources of free data sets available, ready to be used and analyzed by anyone willing to look for them.
- Many companies of various sizes believe they have to collect their own data to see benefits from big data analytics, but it is simply not true.

What Are the Challenges of Big Data?

- **IBM's Big Data estimates conclude that "each day we create 2.5 quintillion bytes of data". To put this into context, every minute of every day:**
- **We upload over 300 hours of YouTube video.**
- **We send over 3.5 million text messages.**
- **We stream over 86 thousand hours of Netflix video.**
- **We like over 4 million Facebook posts.**
- **We request over 14 million forecasts from The Weather Channel**

Summary:

- **Big Data usually has three characteristics.**
- **It is a large amount of data that increasingly requires more storage space (volume), that is growing exponentially fast (velocity), and that is generated in different formats (variety).**
- **Fog computing is an architecture that utilizes end-user clients or "edge" devices to do a substantial amount of the pre-processing and storage required by an organization.**
- **Fog computing was designed to keep the data closer to the source for pre-processing.**
- **The cloud is a collection of data centers or groups of connected servers giving anywhere, anytime access to software, storage, and services using a browser interface.**
- **Cloud services provide increased data storage as required and reduce the need for onsite IT equipment, maintenance, and management.**
- **They also reduce the cost of equipment, energy, physical plant requirements, and personnel training needs.**