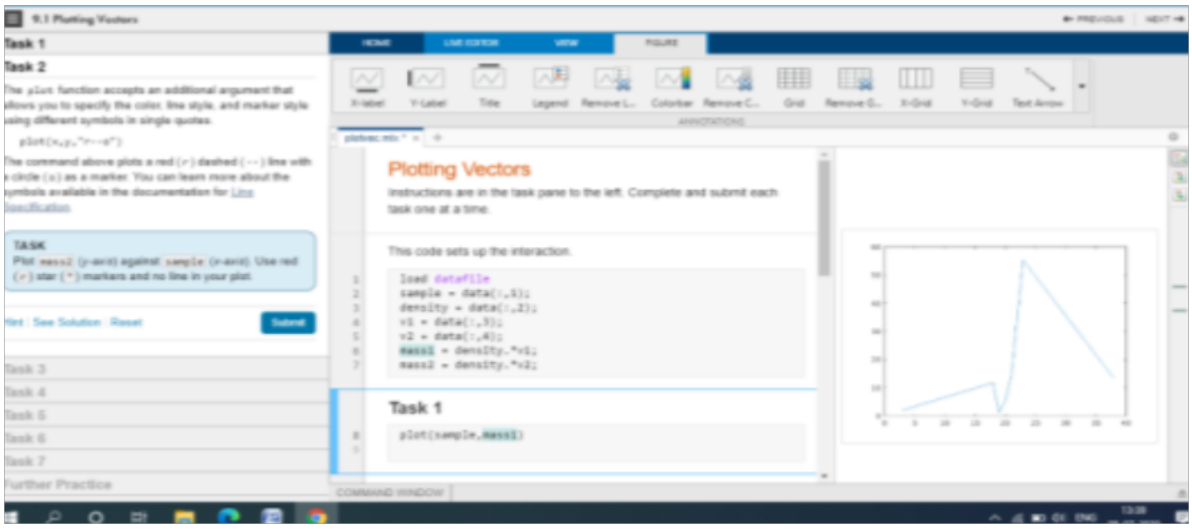
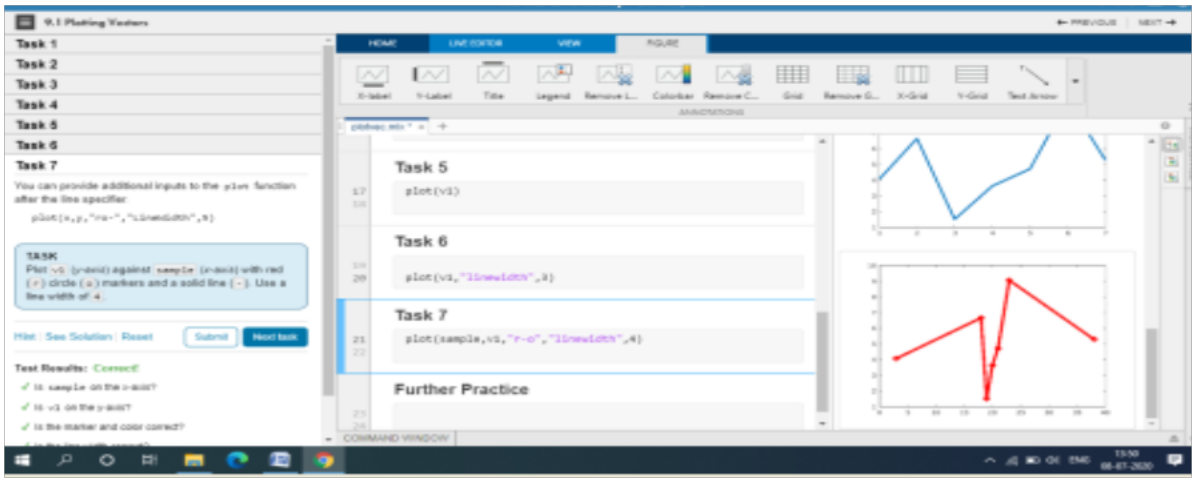
DAILY ASSESSMENT FORMAT

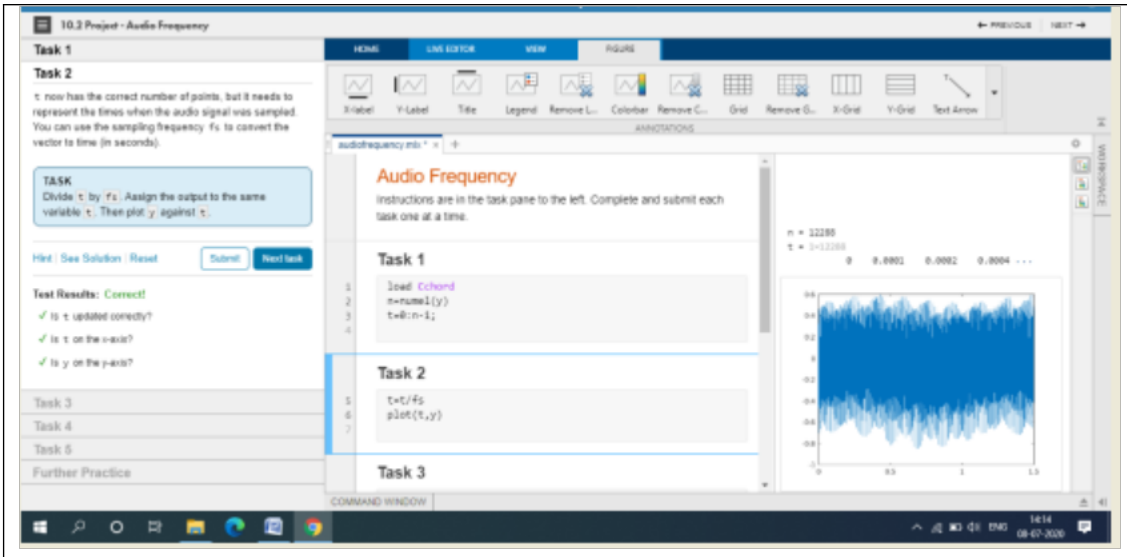
Date:	08-07-2020	Name:	Rajeshwari Gadagi
Course:	Matlab from mathworld	USN:	4AL17EC076
Topic:	Array calculations,calling function , plotting data	Semester & Section:	6th sem 'B' sec
Github Repository:	Rajeshwari-gadagi		

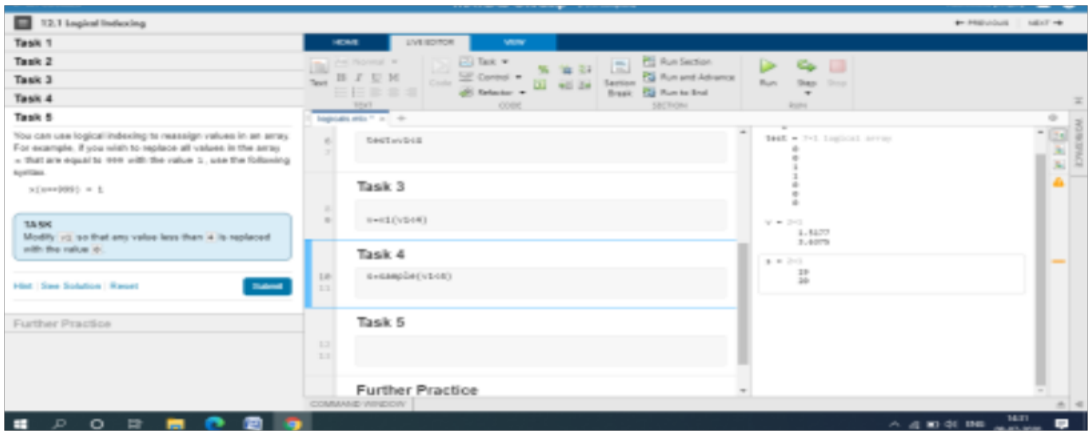
FORENOON SESSION DETAILS

Image of session






10.2 Project - Audio Frequency
Task 1
Task 2
t now has the correct number of points, but it needs to represent the times when the audio signal was sampled. You can use the sampling frequency fs to convert the vector to time (in seconds).
TASK
Divide t by fs. Assign the output to the same variable t. Then plot y against t.
Hint | See Solution | Reset
Submit
Next task
Test Results: Correct!
✓ Is t updated correctly?
✓ Is t on the x-axis?
✓ Is y on the y-axis?
Task 3
Task 4
Task 5
Further Practice
Audio Frequency
Instructions are in the task pane to the left. Complete and submit each task one at a time.
Task 1
load Cchord
n=numel(y)
t=0:n-1;
Task 2
t=t/fs
plot(t,y)
Task 3
COMMAND WINDOW


Task 1
Task 2
Task 3
Task 4
Task 5
Further Practice
Task 3
Task 4
Task 5
Further Practice

Array Operations

Array operations execute element by element operations on corresponding elements of vectors, matrices, and multidimensional arrays. If the operands have the same size, then each element in the first operand gets matched up with the element in the same location in the second operand. If the operands have compatible sizes, then each input is implicitly expanded as needed to match the size of the other. For more information, see Compatible Array Sizes for Basic Operations.

As a simple example, you can add two vectors with the same size.

```
A = [1 1 1]
A =

    1    1    1
B = [1 2 3]
B =

    1    2    3
A+B
ans =

    2    3    4
```

If one operand is a scalar and the other is not, then MATLAB implicitly expands the scalar to be the same size as the other operand. For example, you can compute the element-wise product of a scalar and a matrix.

```
A = [1 2 3; 1 2 3]
A =

    1    2    3
    1    2    3
3.*A
ans =

    3    6    9
    3    6    9
```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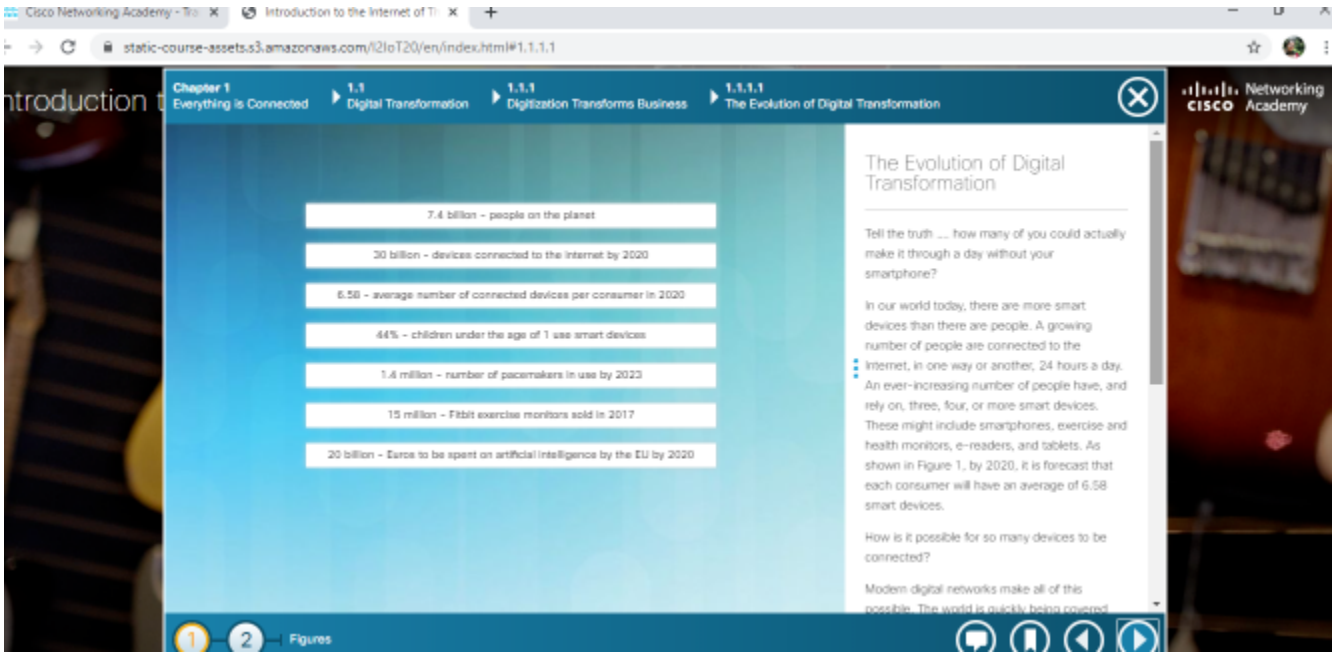
Rajeshwari Gadagi
has successfully completed 100% of the self-paced training course
MATLAB Onramp
DIRECTOR, TRAINING SERVICES
08 July 2020

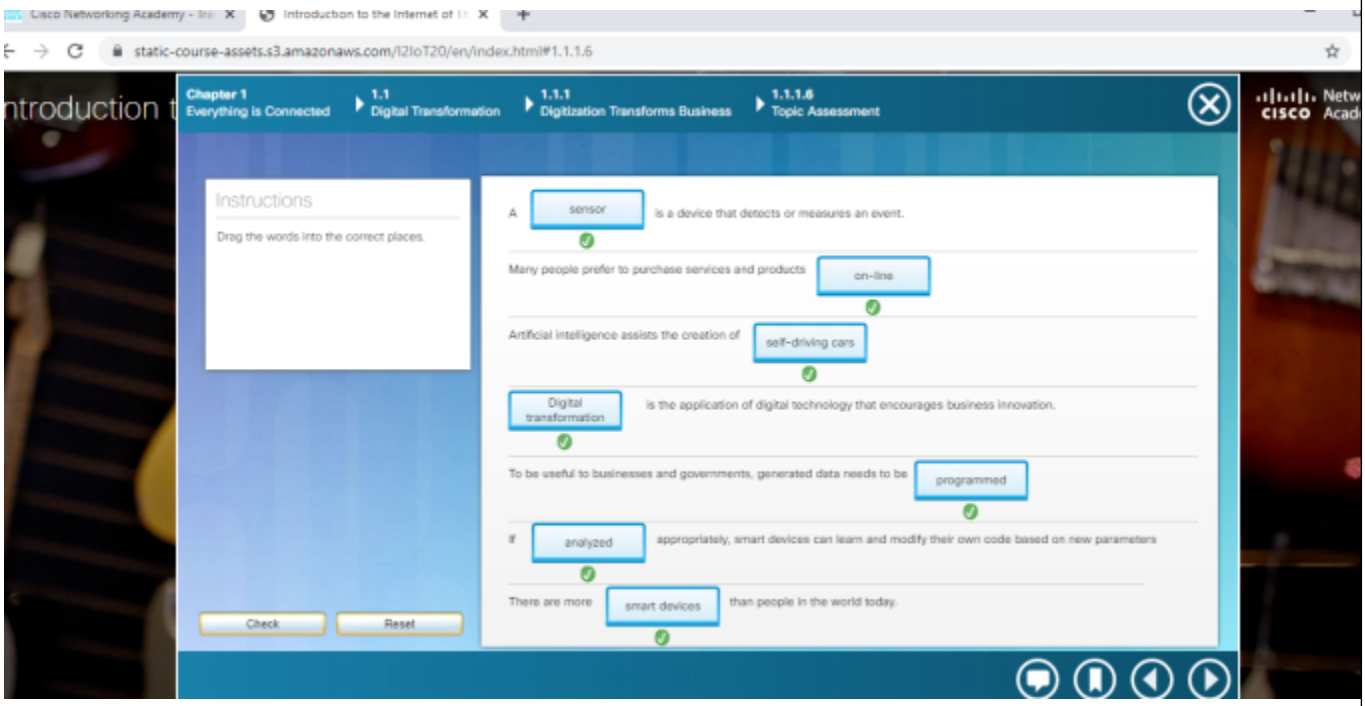
DAILY ASSESSMENT FORMAT

Date:	08-07-2020	Name:	Rajeshwari Gadagi
Course:	Cisco certification course	USN:	4AL17EC076
Topic:	Introduction to internet of things	Semester & Section:	6th sem 'B' sec
Github Repository:	Rajeshwari-gadagi		

AFTERNOON SESSION DETAILS

Image of session





Introduction to Internet of Things (IoT)

The Internet of things (IoT) is a system of interrelated computing devices, mechanical and digital machines provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. The Internet of things (IoT) is a system of interrelated computing devices, mechanical and digital machines provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

The definition of the Internet of things has evolved due to the convergence of multiple technologies, real-time analytics, machine learning, commodity sensors, and embedded systems. Traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), and others all contribute to enabling the Internet of things. In the consumer market, IoT technology is most synonymous with products pertaining to the concept of the "smart home", covering devices and appliances (such as lighting fixtures, thermostats, home security systems and cameras, and other home appliances) that support one or more common ecosystems, and can be controlled via devices associated with that ecosystem, such as smartphones and smart speakers.

There are a number of serious concerns about dangers in the growth of IoT, especially in the areas of privacy and security, and consequently industry and governmental moves to address these concerns have begun.

he main concept of a network of smart devices was discussed as early as 1982, with a modified Coca-Cola vending machine at Carnegie Mellon University becoming the first Internet-connected appliance, able to report its inventory and whether newly loaded drinks were cold or not. Mark Weiser's 1991 paper on ubiquitous computing, "The Computer of the 21st Century", as well as academic venues such as UbiComp and PerCom produced the contemporary vision of the IoT. In 1994, Reza Raji described the concept in IEEE Spectrum as "[moving] small packets of data to a large set of nodes, so as to integrate and automate everything from home appliances to entire factories". Between 1993 and 1997, several companies proposed solutions like Microsoft's at Work or Novell's NEST. The field gained momentum when Bill Joy envisioned device-to-device communication as a part of his "Six Webs" framework, presented at the World Economic Forum at Davos in 1999.

The term "Internet of things" was likely coined by Kevin Ashton of Procter & Gamble, later MIT's Auto-ID Center, in 1999, though he prefers the phrase "Internet for things". At that point, he viewed radio-frequency identification (RFID) as essential to the Internet of things, which would allow computers to manage all individual things.

Defining the Internet of things as "simply the point in time when more 'things or objects' were connected to the Internet than people", Cisco Systems estimated that the IoT was "born" between 2008 and 2009, with the things/people ratio growing from 0.08 in 2003 to 1.84 in 2010.

The key driving force behind the Internet of things is the MOSFET (metal-oxide-semiconductor field-effect transistor, or MOS transistor), which was originally invented by Mohamed M. Atalla and Dawon Kahng at Bell Labs in 1959. The MOSFET is the basic building block of most modern electronics, including computers, smartphones, tablets and Internet services. MOSFET scaling miniaturization at a pace predicted by Dennard scaling and Moore's law has been the driving force behind technological advances in the electronics industry since the late 20th century. MOSFET scaling has been extended into the early 21st century with advances such as reducing power consumption, silicon-on-insulator (SOI) semiconductor device fabrication, and multi-core processor technology, leading up to the Internet of things, which is being driven

by MOSFETs scaling down to nanoelectronic levels with reducing energy consumption.

Consumer applications[edit]

A growing portion of IoT devices are created for consumer use, including connected vehicles, home automation, wearable technology, connected health, and appliances with remote monitoring capabilities.

Smart home[edit]

IoT devices are a part of the larger concept of home automation, which can include lighting, heating and air conditioning, media and security systems. Long-term benefits could include energy savings by automatically ensuring lights and electronics are turned off.

A smart home or automated home could be based on a platform or hubs that control smart devices and appliances. For instance, using Apple's HomeKit, manufacturers can have their home products and accessories controlled by an application in iOS devices such as the iPhone and the Apple Watch. This could be a dedicated app or iOS native applications such as Siri. This can be demonstrated in the case of Lenovo's Smart Home Essentials, which is a line of smart home devices that are controlled through Apple's Home app or Siri without the need for a Wi-Fi bridge. There are also dedicated smart home hubs that are offered as standalone platforms to connect different smart home products and these include the Amazon Echo, Google Home, Apple's HomePod, and Samsung's SmartThings Hub. In addition to the commercial systems, there are many non-proprietary, open source ecosystems; including Home Assistant, OpenHAB and Domoticz.