

DAILY ASSESSMENT FORMAT

Date:	8 th July2020	Name:	Soundarya NA
Course:	Matlab	USN:	4AL16EC077
Topic:	Matlab	Semester & Section:	8 th - B
Github Repository:	Soundaryana-courses		

FORENOON SESSION DETAILS

Image of session

The top screenshot shows a MATLAB Onramp session. The code editor displays the following code:

```
A = [3 2; -2 1];
sz = size(A)
x = randn(sz)
A = A + 0.1*x
```

The output window shows the results:

```
sz =
     2     2
x =
    0.5377    -2.2588
    1.8339     0.8622
A =
    3.0538    1.7741
   -1.8166    1.0862
```

The bottom screenshot shows the MATLAB documentation page for the 'randn' function. The page includes a table of contents, a search bar, and a detailed description of the function. The description states that 'randn' returns a random scalar drawn from the standard normal distribution, or an n-by-m matrix of normally distributed random numbers. It also includes examples and a note about the 'seed', 'state', and 'twister' inputs.

Report:**Calling Functions:****Eg:**

```
A = [1 3 5];
```

```
max(A)
```

```
B = [10 6 4];
```

```
max(A,B)
```

```
maxA = max(A)
```

```
[maxA,location] = max(A)
```

```
disp('hello world')
```

```
clc
```

Obtaining Help:

```
disp('Display help for the "close" function.')
```

```
disp('>> help close')
```

```
help close
```

Display help for the 'close' function.

```
>> help close
```

CLOSE Close figure.

CLOSE(H) closes the window with handle H.

CLOSE, by itself, closes the current figure window.

CLOSE('name') closes the named window.

CLOSE ALL closes all the open figure windows.

CLOSE ALL HIDDEN closes hidden windows as well.

CLOSE ALL FORCE unconditionally closes all windows by deleting them without executing the close request function.

STATUS = CLOSE(...) returns 1 if the specified windows were closed and 0 otherwise.

See also DELETE.

Other functions named close

ftp/close instrument/close serial/close

Plotting Data:

Eg1:

load count.dat

```
[n,p] = size(count)
```

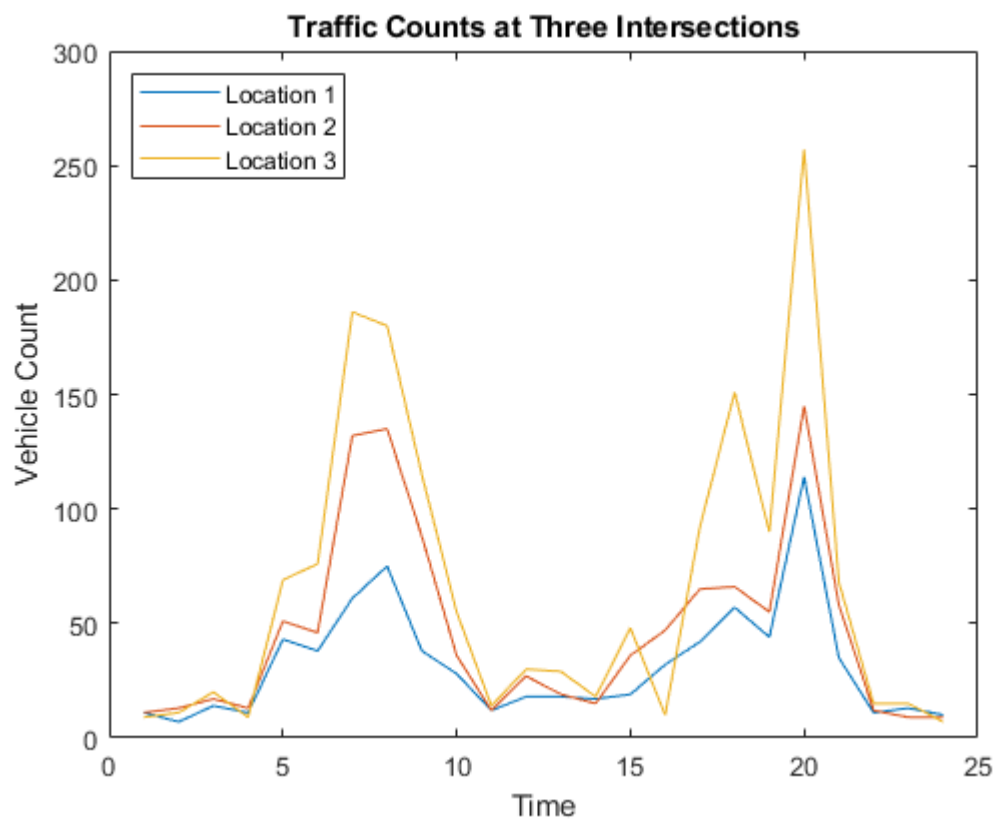
```
t = 1:n;
```

```
plot(t,count),
```

```
legend('Location 1','Location 2','Location 3','Location','NorthWest')
```

```
xlabel('Time'), ylabel('Vehicle Count')
```

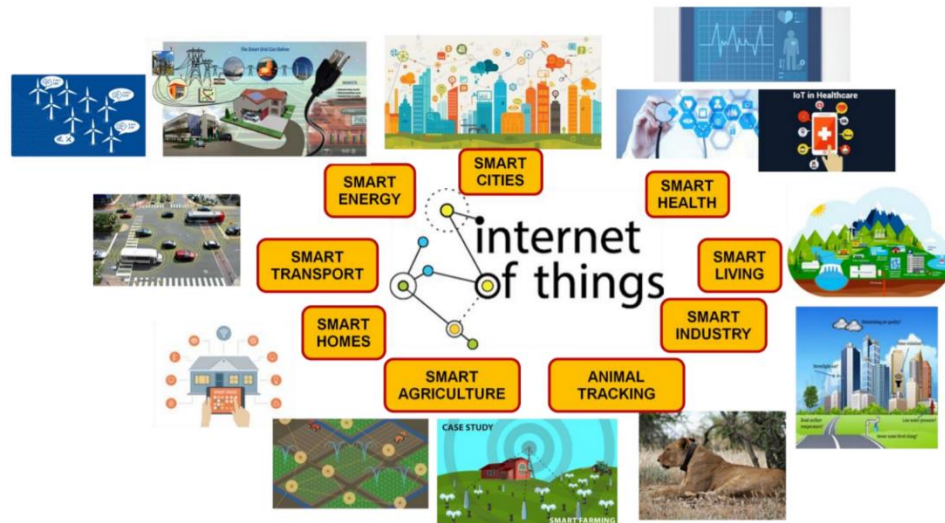
```
title('Traffic Counts at Three Intersections')
```



Date:	8 th July 2020	Name:	Soundarya NA
Course:	CISCO	USN:	4AL16EC077
Topic:	Introduction to IOT	Semester & Section:	8 th - B

AFTERNOON SESSION DETAILS

Image of session



		networks •Self-learning, self-repairing networks •IPv6- enabled scalability •Ubiquitous IPv6-based IoT deployment	•Software defined networks •Service based network •Need based network
Software and algorithms		•Goal oriented software •Distributed intelligence, problem solving •User oriented software	•Context aware software •Evolving software •Self reusable software •Autonomous things: •Self configurable •Self healing •Self management
Data and Signal Processing Technology		•Context aware data processing and data responses •Cognitive processing and optimization •IoT complex data analysis •IoT intelligent data visualization •Energy, frequency spectrum aware data processing	•Common sensor ontology •Distributed energy efficient data processing •Autonomous computing
Discovery and Search Engine Technologies		•Automatic route tagging and identification management centers •On demand service discovery/integration	•Scalable Discovery services for connecting things with services
Security & Privacy Technologies		•User-centric context aware	•Low cost, secure and high

Report:

The fundamental characteristics of the IoT are as follows:

Interconnectivity: With regard to the IoT, anything can be interconnected with the global information and communication infrastructure.

Things-related services: The IoT is capable of providing thing-related services within the constraints of things, such as privacy protection and semantic consistency between physical things and their associated virtual things. In order to provide thing-related services within the constraints of things, both the technologies in physical world and information world will change

Heterogeneity: The devices in the IoT are heterogeneous as based on different hardware platforms and networks. They can interact with other devices or service platforms through different networks.

Dynamic changes: The state of devices change dynamically, e.g., sleeping and waking up, connected and/or disconnected as well as the context of devices including location and speed. Moreover, the number of devices can change dynamically.

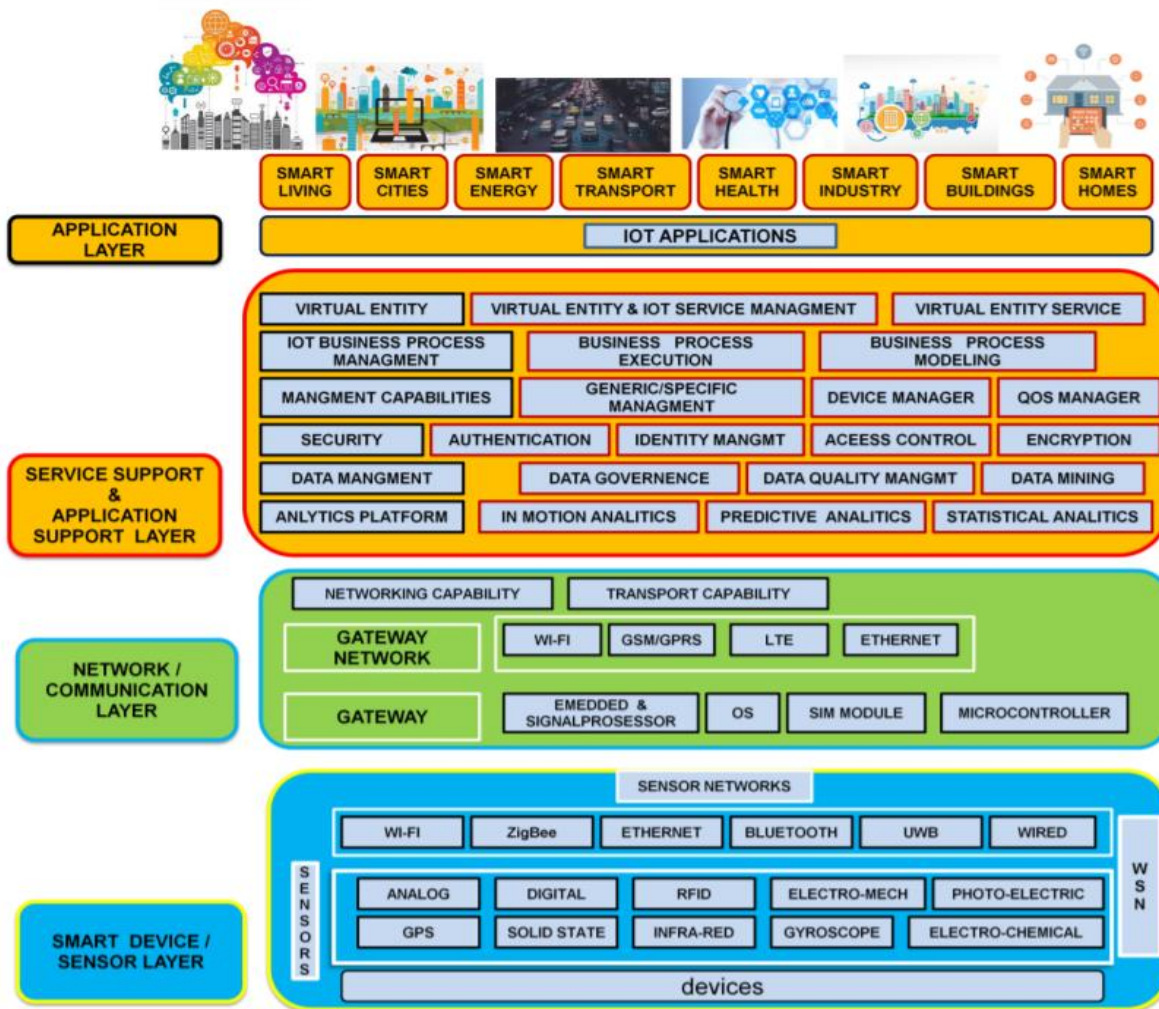
Enormous scale: The number of devices that need to be managed and that communicate with each other will be at least an order of magnitude larger than the devices connected to the current Internet. Even more critical will be the management of the data generated and their interpretation for application purposes. This relate

Safety: As we gain benefits from the IoT, we must not forget about safety. As both the creators and recipients of the IoT, we must design for safety. This includes the safety of our personal data and the safety of our physical well-being. Securing the endpoints, the networks, and the data moving across all of it means creating a security paradigm that will scale.

Connectivity: Connectivity enables network accessibility and compatibility. Accessibility is getting on a network while compatibility provides the common ability to consume and produce data



One of the important features of the management service layer is the business and process rule engines. IOT brings connection and interaction of objects and systems together providing information in the form of events or contextual data such as temperature of goods, current location and traffic data. Some of these events require filtering or routing to postprocessing systems such as capturing of periodic sensory data, while others require response to the immediate situations such as reacting to emergencies on patient's health conditions. The rule engines support the formulation of decision logics and trigger interactive and automated processes to enable a more responsive IOT system.



Structural Health: Monitoring of vibrations and material conditions in buildings, bridges and historical monuments, **Lightning:** intelligent and weather adaptive lighting in street lights, **Safety:** Digital video monitoring, fire control management, public announcement systems, **Transportation:** Smart Roads and Intelligent High-ways with warning messages and diversions according to climate conditions and unexpected events like accidents or traffic jams, **Smart Parking:** Real-time monitoring of parking spaces availability in the city making residents able to identify and reserve the closest available spaces, **Waste Management:** Detection of rubbish levels in containers to optimize the trash collection routes. Garbage cans and recycle bins with RFID tags allow the sanitation staff to see when garbage has been put out.

Internet of Things is a new revolution of the Internet & it is a key research topic for researcher in embedded, computer science & information technology area due to its very diverse area of application & heterogeneous mixture of various communications and embedded technology in its architecture.