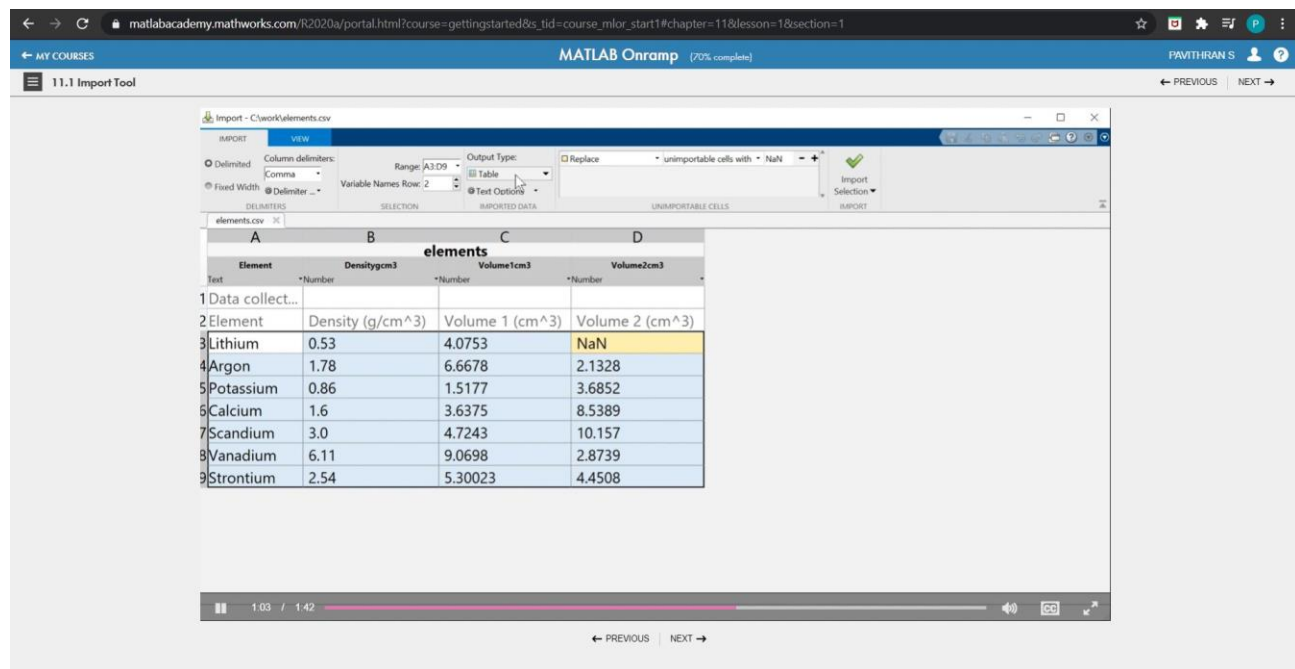


DAILY ASSESSMENT FORMAT

Date:	09 JULY 2020	Name:	PAVITHRAN S
Course:	MATLAB	USN:	4AL17EC068
Topic:	MATLAB	Semester & Section:	6 TH B
Github Repository:	Pavithran		

FORENOON SESSION DETAILS

Image of session



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

A matrix is a two-dimensional array of numbers.

In MATLAB, you create a matrix by entering elements in each row as comma or space delimited numbers and using semicolons to mark the end of each row.

For example, let us create a 4-by-5 matrix *a* –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8]
```

MATLAB will execute the above statement and return the following result –

```
a =
     1     2     3     4     5
     2     3     4     5     6
     3     4     5     6     7
```

4 5 6 7 8

Referencing the Elements of a Matrix

To reference an element in the m^{th} row and n^{th} column, of a matrix mx , we write –

`mx(m, n);`

For example, to refer to the element in the 2nd row and 5th column, of the matrix a , as created in the last section, we type –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];  
a(2,5)
```

MATLAB will execute the above statement and return the following result –

```
ans = 6
```

To reference all the elements in the m^{th} column we type `A(:,m)`.

Let us create a column vector v , from the elements of the 4th row of the matrix a –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];  
v = a(:,4)
```

MATLAB will execute the above statement and return the following result –

```
v =
```

```
4  
5  
6  
7
```

You can also select the elements in the m^{th} through n^{th} columns, for this we write –

```
a(:,m:n)
```

Let us create a smaller matrix taking the elements from the second and third columns –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];  
a(:, 2:3)
```

MATLAB will execute the above statement and return the following result –

```
ans =
```

```
2    3  
3    4  
4    5  
5    6
```

In the same way, you can create a sub-matrix taking a sub-part of a matrix.

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];  
a(:, 2:3)
```

MATLAB will execute the above statement and return the following result –

```
ans =
```

2	3
3	4
4	5
5	6

In the same way, you can create a sub-matrix taking a sub-part of a matrix.

For example, let us create a sub-matrix *sa* taking the inner subpart of *a* –

3	4	5
4	5	6

To do this, write –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];
sa = a(2:3,2:4)
```

MATLAB will execute the above statement and return the following result –

```
sa =
     3     4     5
     4     5     6
```

Deleting a Row or a Column in a Matrix

You can delete an entire row or column of a matrix by assigning an empty set of square braces [] to that row or column. Basically, [] denotes an empty array.

For example, let us delete the fourth row of *a* –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];
a( 4 , : ) = []
```

MATLAB will execute the above statement and return the following result –

```
a =
     1     2     3     4     5
     2     3     4     5     6
     3     4     5     6     7
```

Next, let us delete the fifth column of *a* –

```
a = [ 1 2 3 4 5; 2 3 4 5 6; 3 4 5 6 7; 4 5 6 7 8];
a(: , 5) = []
```

MATLAB will execute the above statement and return the following result –

```
a =
     1     2     3     4
     2     3     4     5
     3     4     5     6
     4     5     6     7
```

Example

In this example, let us create a 3-by-3 matrix *m*, then we will copy the second and third

rows of this matrix twice to create a 4-by-3 matrix.

Create a script file with the following code –

```
a = [ 1 2 3 ; 4 5 6; 7 8 9];  
new_mat = a([2,3,2,3],:)
```

When you run the file, it displays the following result –

```
new_mat =  
     4     5     6  
     7     8     9  
     4     5     6  
     7     8     9
```

CERTIFICATE OF COMPLETION:



Course Completion Certificate

PAVITHRAN S

has successfully completed 100% of the self-paced training course

MATLAB Onramp

A handwritten signature in black ink, reading "Craig Hunter".
DIRECTOR, TRAINING SERVICES

09 July 2020

Date:	09 JULY 2020	Name:	PAVITHRAN S
Course:	CISCO	USN:	4AL17EC068
Topic:	IoT	Semester & Section:	6 TH B
Github Repository:	Pavithran		

AFTERNOON SESSION DETAILS

Image of session

CERTIFICATE OF COMPLETION:



Cisco Networking Academy

Introduction to IoT

For completing the Cisco Networking Academy® Introduction to IoT course, and demonstrating the ability to perform the following:

- Explain how IoT and Digital Transformation are positively impacting businesses and governments.
- Explain the importance of software and data for digital businesses and society.
- Explain the benefits of automation and artificial intelligence for digital transformation.
- Explain the concepts of Intent Based Networking.
- Explain the need for enhanced security in the digitized world.

Laura Quintana

Laura Quintana
VP & General Manager, Cisco Networking Academy

PAVITHRAN S

Student

6 Jul 2020

Date