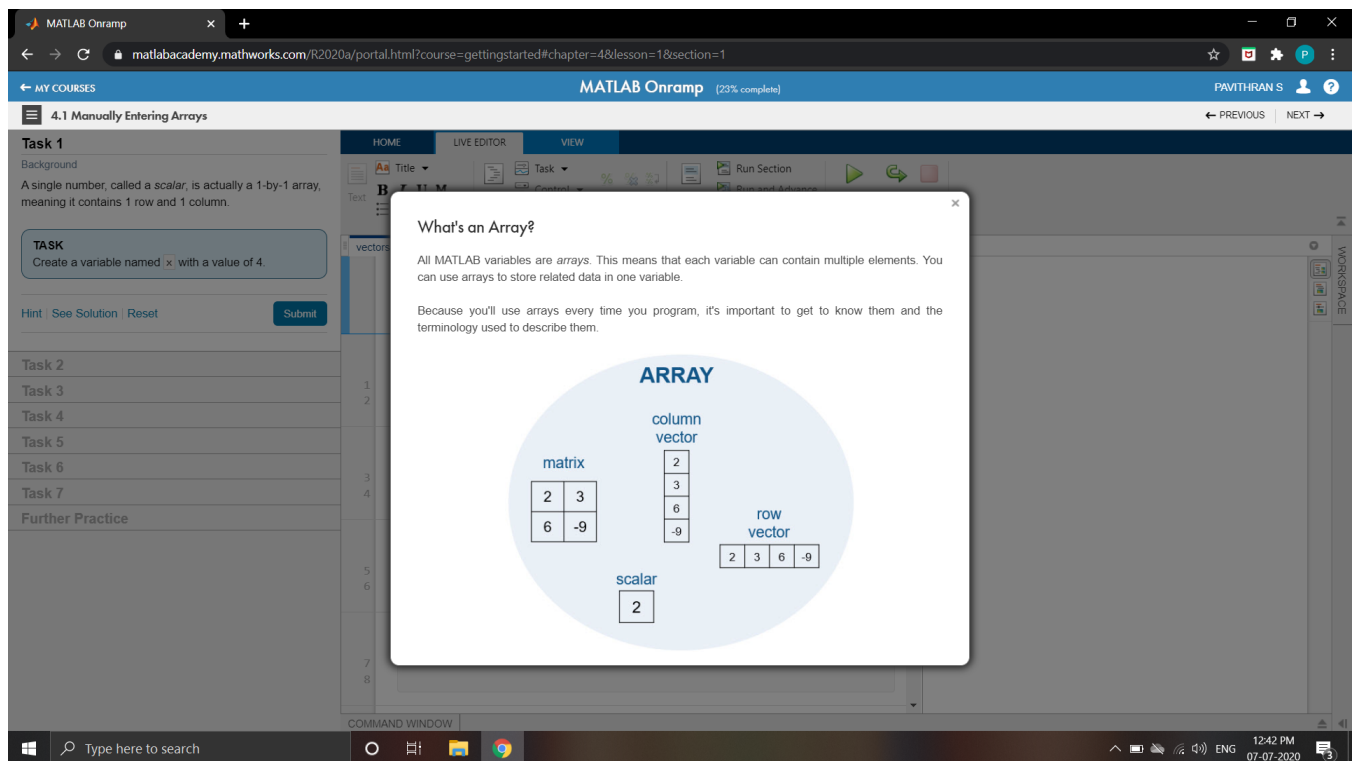


DAILY ASSESSMENT FORMAT

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Course:	MATLAB	USN:	4AL17EC068
Topic:	MATLAB	Semester & Section:	6TH B
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FORENOON SESSION DETAILS

Image of session



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

A vector is a one-dimensional array of numbers. MATLAB allows creating two types of vectors –

- Row vectors
- Column vectors

Row Vectors

Row vectors are created by enclosing the set of elements in square brackets, using space or comma to delimit the elements.

```
r = [7 8 9 10 11]
```

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

```
r =  
    7    8    9   10   11
```

Column Vectors

Column vectors are created by enclosing the set of elements in square brackets, using semicolon to delimit the elements.

```
c = [7; 8; 9; 10; 11]
```

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

```
c =  
    7  
    8  
    9  
   10  
   11
```

Referencing the Elements of a Vector

You can reference one or more of the elements of a vector in several ways. The i^{th} component of a vector v is referred as $v(i)$. For example –

```
v = [ 1; 2; 3; 4; 5; 6]; % creating a column vector of 6 elements  
v(3)
```

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

```
ans = 3
```

When you reference a vector with a colon, such as $v(:)$, all the components of the vector are listed.

```
v = [ 1; 2; 3; 4; 5; 6]; % creating a column vector of 6 elements  
v(:)
```

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

```
ans =  
    1  
    2  
    3  
    4  
    5  
    6
```

MATLAB allows you to select a range of elements from a vector.

For example, let us create a row vector *rv* of 9 elements, then we will reference the elements 3 to 7 by writing ***rv(3:7)*** and create a new vector named *sub_rv*.

```
rv = [1 2 3 4 5 6 7 8 9];  
sub_rv = rv(3:7)
```

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

```
sub_rv =  
     3     4     5     6     7
```

Vector Operations

In this section, let us discuss the following vector operations –

- [Addition and Subtraction of Vectors](#)
- [Scalar Multiplication of Vectors](#)
- [Transpose of a Vector](#)
- [Appending Vectors](#)
- [Magnitude of a Vector](#)
- [Vector Dot Product](#)
- [Vectors with Uniformly Spaced Elements](#)