

Data types:

integer

- 0D:

```
a=1
```

```
a = 1
```

- 1D:

```
a=[1 2 3]
```

```
a = 1×3
     1     2     3
```

- 2D:

```
a=[1 2 3;4 5 6;7 8 9]
```

```
a = 3×3
     1     2     3
     4     5     6
     7     8     9
```

- 3D:

```
b(:,:,2)=[3 4 2;5 4 7;2 7 0]
```

```
b =
b(:,:,1) =

     0     0     0
     0     0     0
     0     0     0
```

```
b(:,:,2) =

     3     4     2
     5     4     7
     2     7     0
```

```
b(:,:,1)=[4 3 2;5 8 4;2 3 5]
```

```
b =
b(:,:,1) =

     4     3     2
     5     8     4
     2     3     5
```

```
b(:,:,2) =

     3     4     2
```

| | | |
|---|---|---|
| 5 | 4 | 7 |
| 2 | 7 | 0 |

• 4D:

```
c=[2 3 2;3 3 3;4 4 4]
```

```
c = 3x3
     2     3     2
     3     3     3
     4     4     4
```

```
d=[5 5 5;3 8 3;0 0 1]
```

```
d = 3x3
     5     5     5
     3     8     3
     0     0     1
```

```
f=[2 3 2;0 5 0;1 2 3]
```

```
f = 3x3
     2     3     2
     0     5     0
     1     2     3
```

```
u(:,:,1)=c
```

```
u = 3x3
     2     3     2
     3     3     3
     4     4     4
```

```
u(:,:,2)=d
```

```
u =
u(:,:,1) =
     2     3     2
     3     3     3
     4     4     4
```

```
u(:,:,2) =
     5     5     5
     3     8     3
     0     0     1
```

```
u(:,:,3)=f
```

```
u =
u(:,:,1) =
     2     3     2
     3     3     3
     4     4     4
```

```
u(:,:,2) =
```

| | | |
|---|---|---|
| 5 | 5 | 5 |
| 3 | 8 | 3 |
| 0 | 0 | 1 |

u(:, :, 3) =

| | | |
|---|---|---|
| 2 | 3 | 2 |
| 0 | 5 | 0 |
| 1 | 2 | 3 |

floating point

- 0D:

m=2.33

m = 2.3300

- 1D:

n=[2.3 2.5 3.4 5.7 8.5]

n = 1×5
2.3000 2.5000 3.4000 5.7000 8.5000

- 2D:

l=[3.4 2.3 6.7 9.8;4.3 5.4 3.2 0.4]

l = 2×4
3.4000 2.3000 6.7000 9.8000
4.3000 5.4000 3.2000 0.4000

- 3D:

o(:, :, 1)=[3.4 2.3 6.7 9.8;4.3 5.4 3.2 0.4]

o = 2×4
3.4000 2.3000 6.7000 9.8000
4.3000 5.4000 3.2000 0.4000

o(:, :, 2)=[4.33 2.03 4.5 2.43;0.03 0.02 0.01 0.04]

o =
o(:, :, 1) =

| | | | |
|--------|--------|--------|--------|
| 3.4000 | 2.3000 | 6.7000 | 9.8000 |
| 4.3000 | 5.4000 | 3.2000 | 0.4000 |

o(:, :, 2) =

| | | | |
|--------|--------|--------|--------|
| 4.3300 | 2.0300 | 4.5000 | 2.4300 |
| 0.0300 | 0.0200 | 0.0100 | 0.0400 |

• 4D:

```
r=[2.34 5.43 4.54 7.65 8.76;2.32 0.04 0.56 8.02 4.65]
```

```
r = 2x5
    2.3400    5.4300    4.5400    7.6500    8.7600
    2.3200    0.0400    0.5600    8.0200    4.6500
```

```
g=[2.31 1.23 1.11 1.44 1.66;4.44 5.55 6.66 7.77 8.88]
```

```
g = 2x5
    2.3100    1.2300    1.1100    1.4400    1.6600
    4.4400    5.5500    6.6600    7.7700    8.8800
```

```
v(:, :, 1)=r
```

```
v = 2x5
    2.3400    5.4300    4.5400    7.6500    8.7600
    2.3200    0.0400    0.5600    8.0200    4.6500
```

```
v(:, :, 2)=g
```

```
v =
v(:, :, 1) =
    2.3400    5.4300    4.5400    7.6500    8.7600
    2.3200    0.0400    0.5600    8.0200    4.6500
```

```
v(:, :, 2) =
    2.3100    1.2300    1.1100    1.4400    1.6600
    4.4400    5.5500    6.6600    7.7700    8.8800
```

complex:

0D:

```
a1=5i
```

```
a1 = 0.0000 + 5.0000i
```

1D:

```
a2=[3i 5i 4i]
```

```
a2 = 1x3 complex
    0.0000 + 3.0000i    0.0000 + 5.0000i    0.0000 + 4.0000i
```

2D:

```
a3=[3i 2+3i 4+6i;4+3i 4i 2i;2+3i 4i 3+8i]
```

```
a3 = 3x3 complex
    0.0000 + 3.0000i    2.0000 + 3.0000i    4.0000 + 6.0000i
    4.0000 + 3.0000i    0.0000 + 4.0000i    0.0000 + 2.0000i
    2.0000 + 3.0000i    0.0000 + 4.0000i    3.0000 + 8.0000i
```

3D:

```
a4(:,:,2)=a3
```

```
a4 =
```

```
a4(:,:,1) =
```

| | | |
|------------------|------------------|------------------|
| 0.0000 + 0.0000i | 0.0000 + 0.0000i | 0.0000 + 0.0000i |
| 0.0000 + 0.0000i | 0.0000 + 0.0000i | 0.0000 + 0.0000i |
| 0.0000 + 0.0000i | 0.0000 + 0.0000i | 0.0000 + 0.0000i |

```
a4(:,:,2) =
```

| | | |
|------------------|------------------|------------------|
| 0.0000 + 3.0000i | 2.0000 + 3.0000i | 4.0000 + 6.0000i |
| 4.0000 + 3.0000i | 0.0000 + 4.0000i | 0.0000 + 2.0000i |
| 2.0000 + 3.0000i | 0.0000 + 4.0000i | 3.0000 + 8.0000i |

```
a4(:,:,1)=[8i 4i 5i;3i 2i 4i;6i 4i 5i]
```

```
a4 =
```

```
a4(:,:,1) =
```

| | | |
|------------------|------------------|------------------|
| 0.0000 + 8.0000i | 0.0000 + 4.0000i | 0.0000 + 5.0000i |
| 0.0000 + 3.0000i | 0.0000 + 2.0000i | 0.0000 + 4.0000i |
| 0.0000 + 6.0000i | 0.0000 + 4.0000i | 0.0000 + 5.0000i |

```
a4(:,:,2) =
```

| | | |
|------------------|------------------|------------------|
| 0.0000 + 3.0000i | 2.0000 + 3.0000i | 4.0000 + 6.0000i |
| 4.0000 + 3.0000i | 0.0000 + 4.0000i | 0.0000 + 2.0000i |
| 2.0000 + 3.0000i | 0.0000 + 4.0000i | 3.0000 + 8.0000i |

Boolean data:

```
t=true
```

```
t = logical  
1
```

```
F=false
```

```
F = logical  
0
```

char:

0D:

```
c='a'
```

```
c =  
'a'
```

```
d='b'
```

```
d =  
'b'
```

```
k='g'
```

```
k =  
'g'
```

1D:

```
l=['a' 'e' 'p']
```

```
l =  
'aep'
```

2D:

```
j1=['q' 'w' 'e'; 'r' 't' 'y']
```

```
j1 = 2×3 char array  
'qwe'  
'rty'
```

3D:

```
e1(:,:,1)=j1
```

```
e1 = 2×3 char array  
'qwe'  
'rty'
```

```
e1(:,:,2)=['a' 's' 'd'; 'f' 'g' 'h' ]
```

```
e1 = 2×3×2 char array  
e1(:,:,1) =
```

```
'qwe'  
'rty'
```

```
e1(:,:,2) =
```

```
'asd'  
'fgh'
```

string:

0D:

```
name= "Rayhan Ismail Aman Rahee"
```

```
name =  
"Rayhan Ismail Aman Rahee"
```

1D:

```
x=["Rahee" "ESE" "2113015"]
```

```
x = 1×3 string  
"Rahee"      "ESE"      "2113015"
```

2D:

```
names=["Taazim" "NIbir" "Shuvo"; "Tasin" "Sakib" "Rahee"]
```

```
names = 2x3 string
"Taazim"    "NIbir"    "Shuvo"
"Tasin"     "Sakib"    "Rahee"
```

3D:

```
v1(:, :, 1)=names
```

```
v1 = 2x3 string
"Taazim"    "NIbir"    "Shuvo"
"Tasin"     "Sakib"    "Rahee"
```

```
v1(:, :, 2)=["Magura" "Sherpur" "Shatkhir" ; "Cumilla" "Narayonganj" "Habiganj"]
```

```
v1 = 2x3x2 string array
v1(:, :, 1) =
```

```
    "Taazim"    "NIbir"    "Shuvo"
    "Tasin"     "Sakib"    "Rahee"
```

```
v1(:, :, 2) =
```

```
    "Magura"    "Sherpur"    "Shatkhir"
    "Cumilla"    "Narayonganj"    "Habiganj"
```