|  |  |
| --- | --- |
| Code : | Output: |
| **Making matrix:**  A=[1,2,3] # making row vector (use coma between) | 1 2 3 |
| B=[1;2;3] # columun vector(using ; ) | 1  2  3 |
| **Auto variable create:**  3+5 | ans=8 # ‘ans’ auto variable , now a variable ‘ans’ is created and the ans is saved here. |
| ans\*2 | ans=16 |
| **Change fixed value:**  Pi # already defined | 3.1416 |
| pi=4 | pi=4 |
| clear pi  pi | Ans=3.1416 |
| clear all # clears all variable |  |
| **Diagonal Matrix**  a=[1,2,3]  diag(a) | Diagonal Matrix  1 0 0  0 2 0  0 0 3 |
| **Trask:**  **allMarks=[24,44,36;52,57,68;**  **66,53,69;**  **85,40,86;**  **15,47,25;**  79 , 72, 82 **]**  **#in single line**  **Append vertically: [36,76,73,72,28,92] (1x3 matrix)**  **Here said to append with 6x3 so we need to transpose ( ‘ ) it**   |  |  | | --- | --- | | **either** | **or** | | **Mechanical= [36;76;73;72;28;92]**  **allMarks=[allMarks, Mechanical ]** | **Mechanical= [36,76,73,72,28,92]**  **allMarks=[allMarks, Mechanical ’ ]** |   **Scale down to 20:**  **allMarks =allMarks\*(20/100) #scale down**  **#scale down all the marks in 20**  **Scale down to 50:**  **allMarks =allMarks\*(50/100) #scale down**  **#scale down all the marks in 50** | allMarks =  24 44 36  52 57 68  66 53 69  85 40 86  15 47 25  79 72 82  allMarks =  24 44 36 36  52 57 68 76  66 53 69 73  85 40 86 72  15 47 25 28  79 72 82 91  allMarks =  4.8000 8.8000 7.2000 7.2000  10.4000 11.4000 13.6000 15.2000  13.2000 10.6000 13.8000 14.6000  17.0000 8.0000 17.2000 14.4000  3.0000 9.4000 5.0000 5.6000  15.8000 14.4000 16.4000 18.2000  allMarks =  12.0000 22.0000 18.0000 18.0000  26.0000 28.5000 34.0000 38.0000  33.0000 26.5000 34.5000 36.5000  42.5000 20.0000 43.0000 36.0000  7.5000 23.5000 12.5000 14.0000 |
| **allMarks=[24,44,36,36;52,57,68,76;**  **66,53,69,73;**  **85,40,86,72;**  **15,47,25,28;**  **79 , 72, 82 , 91 ]**     |  |  | | --- | --- | | **Show column 4 marks** | **rules** | | **allMarks ([1: 6], 4)** | **allMarks ([row1:row2 ], column)** |   **Now show the : row 3,4 ‘s all column**  **allMarks ([3: 4], :)**  **Now show 4th column’s all vertical elements**  **allMarks( : , 4)**  **Now, scale down to 50 only at 4th column**  **In the main matrix**  **allMarks( : , 4) = allMarks( : , 4)\* 0.5** | allMarks =  24 44 36 36  52 57 68 76  66 53 69 73  85 40 86 72  15 47 25 28  79 72 82 91  ans =  36  76  73  72  28  91  ans =  66 53 69 73  85 40 86 72  ans =  36  76  73  72  28  91  allMarks =  24.000 44.000 36.000 18.000  52.000 57.000 68.000 38.000  66.000 53.000 69.000 36.500  85.000 40.000 86.000 36.000  15.000 47.000 25.000 14.000  79.000 72.000 82.000 45.500 |
| Show of first 3 columuns of 4th and 6th row:  allMarks  allMarks([4,6],1:3) | allMarks =  24 44 36 36  52 57 68 76  66 53 69 73  85 40 86 72  15 47 25 28  79 72 82 91  ans =  85 40 86  79 72 82 |