

CSC552 ClassLab Dr.Hong-Deepak Vadlamudi

August 29, 2019

1 mf Data Frame

```
> load("/Users/DeepakVadlamudi/Downloads/Beginning.RData")
> mf
```

	Length	Speed	Algae	N03	BOD
1	20	12	40	2.25	200
2	21	14	45	2.15	180
3	22	12	45	1.75	135
4	23	16	80	1.95	120
5	21	20	75	1.95	110
6	20	21	65	2.75	120
7	19	17	65	1.85	95
8	16	14	65	1.75	168
9	15	16	35	1.95	180
10	14	21	30	2.35	195
11	21	21	65	2.35	158
12	21	26	70	2.35	145
13	21	11	85	2.05	140
14	20	9	70	1.85	145
15	19	9	35	1.75	165
16	18	11	30	1.45	187
17	17	17	50	1.35	190
18	19	15	60	2.05	157
19	21	19	70	1.25	90
20	13	21	25	1.05	235
21	16	22	35	2.55	200
22	25	9	85	2.85	55
23	24	11	80	2.95	87
24	23	16	80	2.85	97
25	22	15	75	1.75	95

```
> mf[3,3]
```

```
[1] 45
```

```
> mf[3,1:4]
```

```
      Length Speed Algae  N03  
3         22     12     45 1.75
```

```
> mf[,1]
```

```
[1] 20 21 22 23 21 20 19 16 15 14 21 21 21 20 19 18 17 19 21 13 16 25 24 23 22
```

```
> mf[c(1,3,5,7),-4]
```

```
      Length Speed Algae BOD  
1         20     12     40 200  
3         22     12     45 135  
5         21     20     75 110  
7         19     17     65  95
```

```
> mf[c(1,3,5,7), 'Algae']
```

```
[1] 40 45 75 65
```

```
> mf[3]
```

```
      Algae  
1         40  
2         45  
3         45  
4         80  
5         75  
6         65  
7         65  
8         65  
9         35  
10        30  
11        65  
12        70  
13        85  
14        70  
15        35  
16        30  
17        50  
18        60  
19        70  
20        25  
21        35  
22        85  
23        80  
24        80  
25        75
```

2 Bird Data Frame

```
> bird
```

	Garden	Hedgerow	Parkland	Pasture	Woodland
Blackbird	47	10	40	2	2
Chaffinch	19	3	5	0	2
Great Tit	50	0	10	7	0
House Sparrow	46	16	8	4	0
Robin	9	3	0	0	2
Song Thrush	4	0	6	0	0

```
> str(bird)

num [1:6, 1:5] 47 19 50 46 9 4 10 3 0 16 ...
- attr(*, "dimnames")=List of 2
..$ : chr [1:6] "Blackbird" "Chaffinch" "Great Tit" "House Sparrow" ...
..$ : chr [1:5] "Garden" "Hedgerow" "Parkland" "Pasture" ...

> class(bird)

[1] "matrix"

> bird[2,]

      Garden Hedgerow Parkland Pasture Woodland
      19         3         5         0         2

> bird[,4]

      Blackbird      Chaffinch      Great Tit House Sparrow      Robin
      2           0           7           4           0
Song Thrush
      0

> bird[c('Robin','Blackbird'),]

      Garden Hedgerow Parkland Pasture Woodland
Robin      9         3         0         0         2
Blackbird  47        10        40         2         2

> bird[3,1]

[1] 50

> bird[4]

[1] 46
```