Class Lab One - Joel Maddirala

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1 mf Data Frame

```
> load('/Users/joelmaddirala/Downloads/Beginning.RData')

> mf
```

	Length	Speed	Algae	NO3	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  NO3
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
```