

```

> pets <- data.frame(
+   Name = c("Flipper", "Bromley", "Nox", "Orion", "Dagger", "Zizi", "Carrie"),
+   Months_old = c(53, 19, 34, 41, 84, 140, 109),
+   Size = c("medium", "small", "medium", "large", "small", "extra small", "large"),
+   Weight = c(21, 8, 4, 6, 7, 2, 36),
+   Breed = c("dog", "dog", "cat", "cat", "dog", "cat", "dog"),
+   stringsAsFactors = TRUE # By default factors
+ )
>
> print("Original Data Frame:")
[1] "Original Data Frame:"
> print(pets)
  Name Months_old      Size Weight Breed
1 Flipper      53    medium     21   dog
2 Bromley     19     small      8   dog
3 Nox         34    medium      4   cat
4 Orion       41     large      6   cat
5 Dagger      84     small      7   dog
6 Zizi       140 extra small      2   cat
7 Carrie     109     large     36   dog

> str(pets)
'data.frame':   7 obs. of  5 variables:
 $ Name       : Factor w/ 7 levels "Bromley","Carrie",...: 4 1 5 6 3 7 2
 $ Months_old: num  53 19 34 41 84 140 109
 $ Size       : Factor w/ 4 levels "extra small",...: 3 4 3 2 4 1 2
 $ Weight     : num  21 8 4 6 7 2 36
 $ Breed      : Factor w/ 2 levels "cat","dog": 2 2 1 1 2 1 2
> table(pets$Breed)

cat dog
 3   4

> levels(pets$Breed)
[1] "cat" "dog"
> levels(pets$Breed) <- rev(levels(pets$Breed))
> table(pets$Breed)

dog cat
 3   4

> pets$Breed
[1] cat cat dog dog cat dog cat
Levels: dog cat
> print(pets)
  Name Months_old      Size Weight Breed
1 Flipper      53    medium     21   cat
2 Bromley     19     small      8   cat
3 Nox         34    medium      4   dog
4 Orion       41     large      6   dog
5 Dagger      84     small      7   cat
6 Zizi       140 extra small      2   dog
7 Carrie     109     large     36   cat

> # Method 1: Using $ operator
> print("Accessing Breed column:")
[1] "Accessing Breed column:"
> print(pets$Breed)
[1] cat cat dog dog cat dog cat
Levels: dog cat
>
> # Method 2: Using matrix-style indexing
> print("Accessing Weight column:")
[1] "Accessing Weight column:"
> print(pets[, "Weight"])
[1] 21 8 4 6 7 2 36
>
> # Method 3: Access by column number
> print("Accessing Size column:")
[1] "Accessing Size column:"
> print(pets[, 3])
[1] medium      small      medium      large      small      extra small large
Levels: extra small large medium small

```