

21BDS0340

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Exploratory Data Analysis Lab

Experiment – 2

Code:

```
# vectors
num_vec = c(1:5)
char_vec = c("a", "b", "c")
logi_vec = c(TRUE, FALSE, TRUE)

print(num_vec)
print(num_vec[2])
print(char_vec)
print(char_vec[3])
print(logi_vec)
```

Output:

```
> # vectors
> num_vec = c(1:5)
> char_vec = c("a", "b", "c")
> logi_vec = c(TRUE, FALSE, TRUE)
>
> print(num_vec)
[1] 1 2 3 4 5
> print(num_vec[2])
[1] 2
> print(char_vec)
[1] "a" "b" "c"
> print(char_vec[3])
[1] "c"
> print(logi_vec)
[1] TRUE FALSE TRUE
```

Code:

```
# lists
l = list(
  numbers = c(1:3),
  names = c("abhinav", "papaya"),
  is_list = TRUE
)
print(l)
print(l$names)
```

Output:

```
> # lists
> l = list(
```

```

+   numbers = c(1:3),
+   names = c("abhinav", "papaya"),
+   is_list = TRUE
+ )
> print(l)
$numbers
[1] 1 2 3

$names
[1] "abhinav" "papaya"

$is_list
[1] TRUE

> print(l$names)
[1] "abhinav" "papaya"

```

Code:

```

# matrices
m = matrix(
  c(1:6),
  nrow = 3,
  ncol = 2
)
print(m)
print(m[3,2])

```

Output:

```

> # matrices
> m = matrix(
+   c(1:6),
+   nrow = 3,
+   ncol = 2
+ )
> print(m)
      [,1] [,2]
[1,]    1    4
[2,]    2    5
[3,]    3    6
> print(m[3,2])
[1] 6

```

Code:

```

# data frame
df = data.frame(
  id = 1:3,
  fruit = c("pineapple", "papaya", "mango"),
  age = c(1, 2, 1)
)
print(df)
print(df$age)

```

```
print(df[df$age > 1, ])
```

Output:

```
> # data frame
> df = data.frame(
+   id = 1:3,
+   fruit = c("pineapple", "papaya", "mango"),
+   age = c(1, 2, 1)
+ )
> print(df)
  id   fruit age
1 1 pineapple 1
2 2   papaya 2
3 3    mango 1
> print(df$age)
[1] 1 2 1
> print(df[df$age > 1, ])
  id fruit age
2 2 papaya 2
```

Code:

```
# factors
colors = factor(c("red", "blue", "green", "blue", "red"))
print(levels(colors))
print(colors)
```

Output:

```
> # factors
> colors = factor(c("red", "blue", "green", "blue", "red"))
> print(levels(colors))
[1] "blue" "green" "red"
> print(colors)
[1] red  blue green blue red
Levels: blue green red
```

Code:

```
# arrays
arr = array(
  c(1:12),
  dim = c(3, 2, 2)
)
print(arr)
print(arr[1,1,1])
```

Output:

```
> # arrays
> arr = array(
+   c(1:12),
+   dim = c(3, 2, 2)
+ )
```

```
> print(arr)
, , 1
```

```
      [,1] [,2]
[1,]    1    4
[2,]    2    5
[3,]    3    6
```

```
, , 2
```

```
      [,1] [,2]
[1,]    7   10
[2,]    8   11
[3,]    9   12
```

```
> print(arr[1,1,1])
[1] 1
```