````
Intro to basics

```{r}
3 + 4
6 + 12
1 + 7
1 + 2 + 5 + 7

5 - 5
3 * 5
(5+5)/2
2^5
28%%6

```
Variables

```{r}
my_var <- 10
my_var <- 20
my_var <- "Hello world"

my_var

my_apples <- 5
my_oranges <- 6

my_apples + my_oranges
my_fruit <- my_apples + my_oranges

test <- 1

```
Basic data types in R

```{r}
my_numeric <- 42
my_float <- 5.2
my_character <- "universe"
my_logical <- FALSE

class(my_logical)
rm(my_logical)
```
Vectors

```{r}
c(1,2,3)
numeric_vector <- c(1,2,3)
class(numeric_vector)

character_vector <- c("a","b","c")
boolean_vector <- c(TRUE, FALSE, TRUE)
class(boolean_vector)

vector_range <- c(1:100) # esto es un comentario


```
Naming vector

```{r}
poker_vector <- c(140,80,20,55,60)
roulette_vector <- c(24,6,100,87,45)
````
````

```
names(poker_vector) <- c("Monday","Tuesday", "Wednesday", "Thursday", "Friday")
names(roulette_vector) <- c("Monday","Tuesday", "Wednesday", "Thursday", "Friday")

names_vector <- c("Monday","Tuesday", "Wednesday", "Thursday", "Friday")

names(poker_vector) <- names_vector
names(roulette_vector) <- names_vector

poker_vector
roulette_vector
```
Calcuting

```{r}
total_daily <- poker_vector + roulette_vector

poker_vector
roulette_vector
total_daily

poker_vector
total_poker <- sum(poker_vector)
total_roulette <- sum(roulette_vector)

total_poker
total_roulette

total_week <- total_poker + total_roulette

```
Vector selection

```{r}
poker_wednesday <- poker_vector[3]
poker_midweek <- poker_vector[c(2,3,4)]

poker_vector[c(1,3,5)]
poker_vector[c(1,3)]

# slicing
roulette_selection_vector <- roulette_vector[2:4]

poker_start <- poker_vector[c("Monday","Tuesday","Wednesday")]

poker_start
sum(poker_start)

poker_vector[3] = 40
poker_vector[c(2,3,4)] = c(85,70,10)
poker_1_5 <- poker_vector[1:5]
poker_3 <- poker_1_5[c(1:2, 4:5)]


```
Selection by comparison

```{r}
selection_vector <- poker_vector > 75
poker_winning_day <- poker_vector[selection_vector]

poker_vector[!selection_vector]

poker_vector[3] < roulette_vector[1]
poker_vector[1:3] < roulette_vector[2:4]
```

```
poker_vector[3] = 100
roulette_vector

length(poker_vector) == length(roulette_vector)
```

Matrices

```{r}
matrix(1:9, byrow = TRUE, nrow = 3)
```

```{r}
matrix(1:9, byrow = FALSE, ncol = 3)
```
```{r}
matrix(1:9, nrow = 3)
```

```{r}
matrix(1:8, nrow = 3)
```
```{r}
new_hope <- c(460.99, 314.4)
empire_strikes <- c(290.47,247.9)
return_jedi <- c(309.3, 165.8)

box_office <- c(new_hope, empire_strikes, return_jedi)

star_wars_matrix <- matrix(box_office, byrow = TRUE, nrow=3)

region <- c("US", "non-US")
titles <- c("A new hope", "The empire strikes back", "Return of jedi")

colnames(star_wars_matrix) <- region
rownames(star_wars_matrix) <- titles
star_wars_matrix
```