

Repeat loops

INTERMEDIATE R FOR FINANCE



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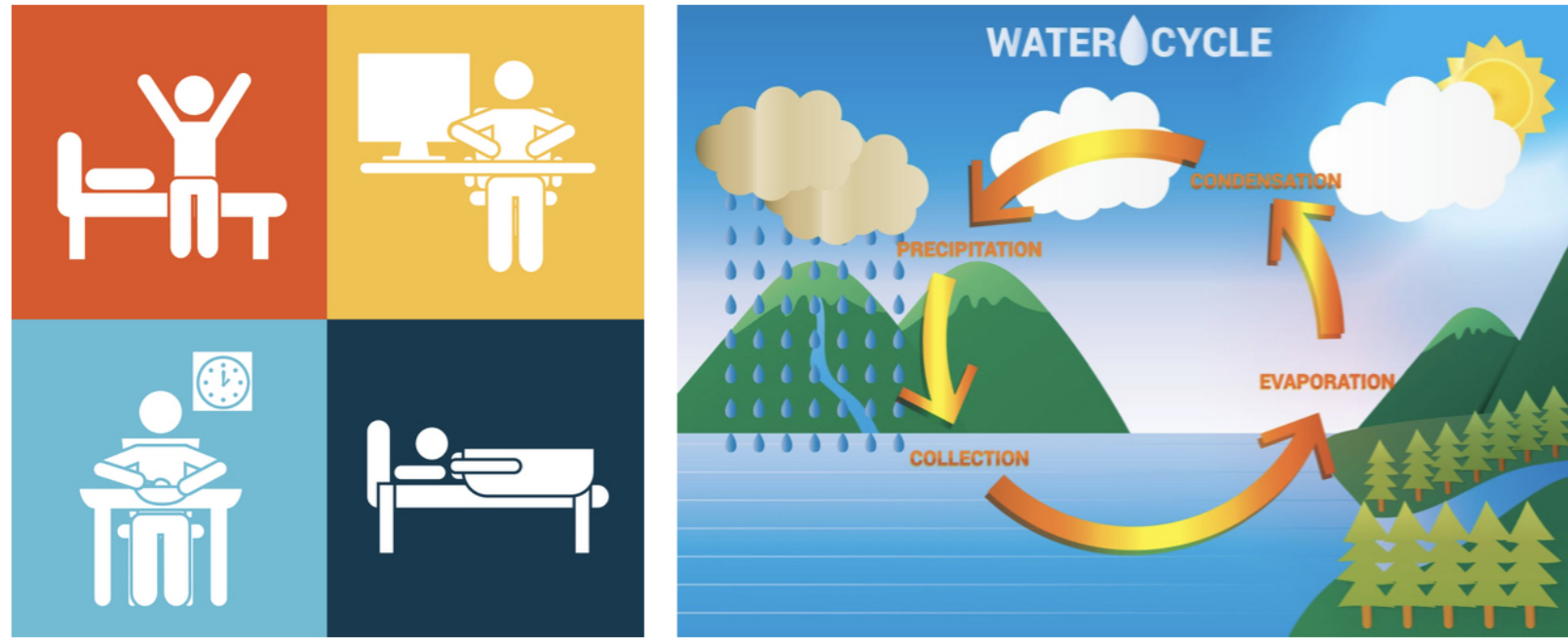
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Loops



¹ tdfitness, My Daily Routine

Loops



¹ tdfitness, My Daily Routine ² John Rochelle, Water Cycle

Repeat loop

```
i <- 0

repeat {
  i <- i + 1
  print(i)
}
```

```
1
2
3
4
.
.
.
# Infinite loop!
```

Repeat loop

```
i <- 0

repeat {
  i <- i + 1
  print(i)

  if(i == 3) {
    break
  }
}
```

```
1
2
3
```

Repeatedly check a stock price

```
stock_price <- 52.1
repeat {
  stock_price <- stock_price * runif(1, .99, 1.01)
  print(stock_price)
  if(stock_price > 52.5) {
    print("Stock price is above 52.5! Sell!")
    break
  }
}
```

```
52.0491
52.42412
51.92386
51.82161
52.19669
52.43577
52.71329
"Stock price is above 52.5! Sell!"
```

Let's practice!

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While loops

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While loop

```
i <- 0
while(i < 3) {
  print(i)
  i <- i + 1
}
```

```
0
1
2
```

Check while true

```
stock_price <- 52.1
while(stock_price <= 52.5) {
  stock_price <- stock_price * runif(1, .99, 1.01)
  print(stock_price)
}
print("Stock price is above 52.5! Sell!")
```

```
52.01159
52.46679
52.00211
52.48659
52.99241
"Stock price is above 52.5! Sell!"
```

Let's practice!

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For loops

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For loop

```
one_to_five <- 1:5  
one_to_five
```

```
1 2 3 4 5
```

```
for(number in one_to_five) {  
  print(number)  
}
```

```
1  
2  
3  
4  
5
```

Loop over a list

```
stock_list <- list(stock_name = "Apple", ticker = "AAPL",  
                  price = 126.5, good_deal = TRUE)  
for(i in stock_list) {  
  print(class(i))  
}
```

```
"character"  
"character"  
"numeric"  
"logical"
```

Let's practice!

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