M10_Exercises

Code

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Exercise 10.1

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```
#write an R script (not a function) to get the first 20 fibonacci numbers
fibonacci <- numeric(10) #created a numeric vector
fibonacci[1] <- fibonacci[2] <- 1
for (i in 3:10){
  fibonacci <- fibonacci[i-2] + fibonacci[i-1]

}

print(fibonacci)
```

Exercise 10.2

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```
get_fibonacci <- function(n = 10){
  fibonacci <- numeric(n)
  fibonnaci[1] <- fibonacci[2] <- 1
  for (i in 3:n){
    fibonacci[i] <-fibonacci[i-2] + fibonacci[i-1]
  }
  return(fibonacci)
}

fib20 <- get_fibonacci(10)

print(fib20)
```

Exercise 10.3

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```
#write a function that takes a numeric x and returns 1 if 0 <= x <= 1
#else returns 0

my_function <- function(x){
  if(x >=0 & x <= 1){
    return(1)
  }
  else{
    return(0)
  }
}


test <- my_function(10)
print(test)
```

Exercise 10.4

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```
#apply the function to five values
for(i in 1:5){
  print(my_function(i))
}
```

Exercise 10.5

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```
letters

print(letters[1:10])
print(LETTERS[-1:-10])
print(LETTERS[22:24])
```

Exercise 10.6

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```
print(1:100)

for(i in 1:100){
  if(i %% 3 == 0 & i%%5 != 0){
    print(paste(i, "Fizz"))
  }
  else if (i %% 3 != 0 & i%%5 == 0){
    print(paste(i,"Buzz"))
  }
  else if (i %% 3 == 0 & i%%5 == 0){
    print(paste(i,"FizzBuzz"))

  }
  else{
    print(i)
  }
}
```

Exercise 10.7

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```
my_str <- "I love apples and cherries"
string <- unlist(strsplit(tolower(my_str), ' '))
print(string)
print(unique(string))
A <- c(1, 2,3,4,5,5,5,6,7,7,8,8,9)
unique(A)
unique(my_str)
```