

Random Number Generator

Random Number Generator

The following code generates a 13x60 matrix of random numbers. Each number is a sequence of three digits, with the first digit being 0. The code uses the `set.seed` function to ensure reproducibility. It then defines a function to generate a random sequence of three numbers beginning with 0. The function is used to fill the matrix with random sequences. The numbers are generated using the `sample` function, which selects a random number from a specified range.

```
set.seed(123) # Set a seed for reproducibility

# Function to generate a string with a sequence of three numbers beginning with 0
generate_number_sequence <- function() {
  paste0('0', sprintf('%02d', sample(0:99, 1)))
}

# Initialize the matrix
random_matrix <- matrix("", nrow = 13, ncol = 60)

# Fill the matrix with the random sequences
for (row in 1:nrow(random_matrix)) {
  for (col in 1:ncol(random_matrix)) {
    random_matrix[row, col] <- generate_number_sequence()
  }
}

# Print the matrix
print(random_matrix)
```

```
      [,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10] [,11] [,12]
[1,] "030" "078" "050" "013" "066" "041" "049" "042" "013" "024" "089" "090"
```

[2,]	"040"	"046"	"089"	"059"	"094"	"015"	"093"	"005"	"071"	"085"	"085"	"038"
[3,]	"023"	"086"	"006"	"092"	"078"	"022"	"025"	"031"	"006"	"026"	"041"	"004"
[4,]	"076"	"045"	"069"	"071"	"043"	"031"	"035"	"044"	"013"	"015"	"086"	"032"
[5,]	"084"	"006"	"059"	"025"	"040"	"083"	"005"	"093"	"030"	"092"	"016"	"063"
[6,]	"075"	"012"	"041"	"060"	"069"	"037"	"063"	"079"	"098"	"035"	"090"	"090"
[7,]	"019"	"019"	"092"	"083"	"093"	"040"	"007"	"038"	"073"	"080"	"062"	"081"
[8,]	"010"	"007"	"004"	"028"	"049"	"069"	"073"	"025"	"072"	"010"	"005"	"095"
[9,]	"029"	"060"	"073"	"054"	"060"	"033"	"056"	"037"	"083"	"062"	"045"	"077"
[10,]	"074"	"096"	"055"	"050"	"049"	"047"	"002"	"032"	"093"	"033"	"065"	"063"
[11,]	"009"	"040"	"007"	"000"	"079"	"065"	"077"	"011"	"089"	"071"	"040"	"007"
[12,]	"008"	"032"	"045"	"063"	"018"	"097"	"000"	"091"	"051"	"093"	"067"	"089"
[13,]	"031"	"088"	"010"	"073"	"078"	"059"	"030"	"073"	"044"	"058"	"023"	"034"
	[,13]	[,14]	[,15]	[,16]	[,17]	[,18]	[,19]	[,20]	[,21]	[,22]	[,23]	[,24]
[1,]	"068"	"090"	"056"	"091"	"008"	"092"	"098"	"071"	"025"	"006"	"041"	"008"
[2,]	"030"	"080"	"049"	"033"	"003"	"012"	"068"	"024"	"051"	"021"	"088"	"031"
[3,]	"069"	"015"	"023"	"031"	"020"	"054"	"074"	"035"	"082"	"088"	"038"	"053"
[4,]	"039"	"039"	"009"	"088"	"071"	"081"	"008"	"006"	"006"	"057"	"060"	"073"
[5,]	"036"	"056"	"019"	"034"	"088"	"032"	"065"	"003"	"073"	"096"	"004"	"024"
[6,]	"034"	"086"	"066"	"094"	"047"	"065"	"022"	"066"	"008"	"060"	"038"	"093"
[7,]	"010"	"001"	"018"	"076"	"012"	"030"	"029"	"021"	"093"	"073"	"015"	"068"
[8,]	"075"	"082"	"090"	"055"	"095"	"026"	"093"	"067"	"087"	"027"	"066"	"039"
[9,]	"069"	"017"	"001"	"071"	"074"	"020"	"056"	"070"	"086"	"071"	"058"	"073"
[10,]	"039"	"057"	"019"	"077"	"024"	"070"	"039"	"060"	"098"	"094"	"021"	"079"
[11,]	"056"	"072"	"051"	"096"	"066"	"039"	"001"	"064"	"072"	"006"	"076"	"028"
[12,]	"074"	"004"	"099"	"018"	"034"	"032"	"068"	"060"	"022"	"040"	"088"	"062"
[13,]	"009"	"063"	"071"	"043"	"041"	"031"	"038"	"006"	"037"	"016"	"083"	"032"
	[,25]	[,26]	[,27]	[,28]	[,29]	[,30]	[,31]	[,32]	[,33]	[,34]	[,35]	[,36]
[1,]	"082"	"035"	"077"	"080"	"042"	"075"	"014"	"031"	"006"	"008"	"040"	"073"
[2,]	"024"	"086"	"034"	"039"	"029"	"011"	"030"	"029"	"063"	"098"	"013"	"092"
[3,]	"089"	"008"	"070"	"097"	"047"	"076"	"082"	"055"	"038"	"067"	"000"	"039"
[4,]	"023"	"062"	"053"	"022"	"025"	"032"	"056"	"028"	"009"	"052"	"053"	"076"
[5,]	"007"	"054"	"088"	"084"	"044"	"017"	"041"	"030"	"005"	"070"	"060"	"047"
[6,]	"030"	"093"	"072"	"035"	"097"	"021"	"043"	"040"	"091"	"092"	"042"	"038"
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[8,]	"005"	"035"	"054"	"093"	"047"	"009"	"024"	"037"	"099"	"024"	"003"	"078"
[9,]	"036"	"080"	"054"	"005"	"039"	"005"	"027"	"031"	"048"	"098"	"091"	"083"
[10,]	"085"	"092"	"055"	"032"	"063"	"052"	"030"	"045"	"071"	"023"	"059"	"029"
[11,]	"019"	"077"	"079"	"006"	"099"	"044"	"075"	"024"	"090"	"012"	"083"	"009"
[12,]	"048"	"084"	"068"	"063"	"075"	"001"	"017"	"003"	"086"	"071"	"064"	"074"
[13,]	"073"	"073"	"001"	"078"	"086"	"098"	"065"	"069"	"058"	"046"	"008"	"022"
	[,37]	[,38]	[,39]	[,40]	[,41]	[,42]	[,43]	[,44]	[,45]	[,46]	[,47]	[,48]
[1,]	"022"	"026"	"059"	"052"	"006"	"052"	"026"	"095"	"037"	"088"	"033"	"092"
[2,]	"095"	"070"	"066"	"022"	"078"	"084"	"036"	"007"	"050"	"073"	"049"	"097"

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 [4,] "010" "024" "051" "025" "006" "024" "086" "089" "031" "083" "023" "056"
 [5,] "016" "044" "091" "062" "052" "052" "062" "070" "083" "081" "092" "016"
 [6,] "036" "032" "082" "011" "097" "020" "080" "075" "093" "034" "029" "088"
 [7,] "046" "050" "005" "079" "014" "018" "058" "002" "096" "032" "047" "074"
 [8,] "051" "021" "023" "038" "046" "059" "062" "036" "045" "053" "046" "078"
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 [11,] "093" "040" "011" "007" "070" "014" "082" "048" "038" "086" "034" "005"
 [12,] "010" "078" "078" "056" "055" "014" "078" "051" "060" "088" "035" "002"
 [13,] "024" "014" "085" "071" "092" "020" "047" "072" "097" "042" "055" "074"
 [1,] "068" "071" "075" "062" "012" "081" "096" "090" "024" "037" "020" "078"
 [2,] "073" "085" "075" "083" "045" "016" "061" "045" "053" "034" "093" "078"
 [3,] "051" "021" "048" "041" "058" "083" "010" "054" "007" "045" "084" "065"
 [4,] "072" "022" "013" "005" "090" "000" "089" "057" "080" "028" "025" "026"
 [5,] "096" "001" "048" "001" "012" "023" "048" "066" "081" "001" "036" "062"
 [6,] "049" "046" "066" "081" "095" "080" "041" "039" "041" "095" "025" "012"
 [7,] "099" "044" "009" "041" "023" "091" "017" "080" "083" "058" "008" "052"
 [8,] "015" "018" "071" "030" "036" "047" "059" "061" "079" "008" "010" "042"
 [9,] "006" "060" "037" "035" "022" "033" "087" "003" "053" "028" "057" "086"
 [10,] "078" "035" "066" "038" "032" "037" "089" "027" "089" "080" "086" "052"
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