

desafio 9

Sophia ra277230

2025-09-30

```
# Mostrar data e hora da execução
message("Execução iniciada em: ", Sys.time())
```

```
## Execução iniciada em: 2025-09-30 10:56:26.533144
```

1. Criar banco de dados e importar arquivos .csv

```
library(DBI)
library(RSQLite)

# Criar/Conectar no banco SQLite
con <- dbConnect(RSQLite::SQLite(), "voos.sqlite3")
```

```
library(readr)

# Ler os CSVs
airlines <- read_csv("airlines.csv")
```

```
## Rows: 14 Columns: 2
## -- Column specification -----
## Delimiter: ","
## chr (2): IATA_CODE, AIRLINE
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

```
airports <- read_csv("airports.csv")
```

```
## Rows: 322 Columns: 7
## -- Column specification -----
## Delimiter: ","
## chr (5): IATA_CODE, AIRPORT, CITY, STATE, COUNTRY
## dbl (2): LATITUDE, LONGITUDE
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

```
# Gravar nas tabelas
dbWriteTable(con, "airlines", airlines, overwrite = TRUE)
dbWriteTable(con, "airports", airports, overwrite = TRUE)
```

2. Função para ler e salvar os dados de vôos

```
lerDados <- function(input, pos) {
  # Mostrar mensagem de progresso
  message("Leitura atingiu a linha ", pos)

  # Filtrar aeroportos de interesse
  aeroportos <- c("BWI", "MIA", "SEA", "SFO", "JFK")

  # Filtra linhas onde ORIGIN_AIRPORT ou DESTINATION_AIRPORT está nos aeroportos selecionados
  dados_filtrados <- input[input$ORIGIN_AIRPORT %in% aeroportos | input$DESTINATION_AIRPORT %in% aeroportos]

  # Gravar os dados filtrados no banco, acrescentando
  dbWriteTable(con, "flights", dados_filtrados, append = TRUE)

  # A função não retorna nada
  invisible(NULL)
}
```

3. Ler o arquivo flights.csv em pedaços

```
library(readr)

# Definir as colunas que serão lidas
col_select <- c("YEAR", "MONTH", "DAY", "AIRLINE", "FLIGHT_NUMBER",
               "ORIGIN_AIRPORT", "DESTINATION_AIRPORT", "ARRIVAL_DELAY")

# Ler em chunks de 100.000 linhas
read_csv_chunked(
  file = "flights.csv.zip",
  callback = SideEffectChunkCallback$new(lerDados),
  chunk_size = 100000,
  col_types = cols_only(
    YEAR = col_integer(),
    MONTH = col_integer(),
    DAY = col_integer(),
    AIRLINE = col_character(),
    FLIGHT_NUMBER = col_integer(),
    ORIGIN_AIRPORT = col_character(),
    DESTINATION_AIRPORT = col_character(),
    ARRIVAL_DELAY = col_double()
  )
)
```

Leitura atingiu a linha 1

Leitura atingiu a linha 100001

Leitura atingiu a linha 200001

Leitura atingiu a linha 300001

Leitura atingiu a linha 400001

Leitura atingiu a linha 500001

Leitura atingiu a linha 600001

Leitura atingiu a linha 700001

Leitura atingiu a linha 800001

Leitura atingiu a linha 900001

Leitura atingiu a linha 1000001

Leitura atingiu a linha 1100001

Leitura atingiu a linha 1200001

Leitura atingiu a linha 1300001

Leitura atingiu a linha 1400001

Leitura atingiu a linha 1500001

Leitura atingiu a linha 1600001

Leitura atingiu a linha 1700001

Leitura atingiu a linha 1800001

Leitura atingiu a linha 1900001

Leitura atingiu a linha 2000001

Leitura atingiu a linha 2100001

Leitura atingiu a linha 2200001

Leitura atingiu a linha 2300001

Leitura atingiu a linha 2400001

Leitura atingiu a linha 2500001

Leitura atingiu a linha 2600001

Leitura atingiu a linha 2700001

Leitura atingiu a linha 2800001

Leitura atingiu a linha 2900001

Leitura atingiu a linha 3000001

Leitura atingiu a linha 3100001

Leitura atingiu a linha 3200001

Leitura atingiu a linha 3300001

Leitura atingiu a linha 3400001

Leitura atingiu a linha 3500001

Leitura atingiu a linha 3600001

Leitura atingiu a linha 3700001

Leitura atingiu a linha 3800001

Leitura atingiu a linha 3900001

Leitura atingiu a linha 4000001

Leitura atingiu a linha 4100001

Leitura atingiu a linha 4200001

Leitura atingiu a linha 4300001

Leitura atingiu a linha 4400001

Leitura atingiu a linha 4500001

Leitura atingiu a linha 4600001

Leitura atingiu a linha 4700001

```
## Leitura atingiu a linha 4800001
## Leitura atingiu a linha 4900001
## Leitura atingiu a linha 5000001
## Leitura atingiu a linha 5100001
## Leitura atingiu a linha 5200001
## Leitura atingiu a linha 5300001
## Leitura atingiu a linha 5400001
## Leitura atingiu a linha 5500001
## Leitura atingiu a linha 5600001
## Leitura atingiu a linha 5700001
## Leitura atingiu a linha 5800001
## NULL
```

4. Realizar consulta SQL para calcular o tempo médio de atraso por aeroporto

```
dbListFields(con, "airports")
```

```
## [1] "IATA_CODE" "AIRPORT" "CITY" "STATE" "COUNTRY" "LATITUDE"
## [7] "LONGITUDE"
```

```
dbListFields(con, "airlines")
```

```
## [1] "IATA_CODE" "AIRLINE"
```

```
query <- "
SELECT
  f.DESTINATION_AIRPORT AS airport_code,
  a.AIRPORT AS airport_name,
  al.AIRLINE AS airline_name,
  AVG(f.ARRIVAL_DELAY) AS avg_arrival_delay
FROM flights f
JOIN airports a ON f.DESTINATION_AIRPORT = a.IATA_CODE
JOIN airlines al ON f.AIRLINE = al.IATA_CODE
GROUP BY f.DESTINATION_AIRPORT, a.AIRPORT, al.AIRLINE
ORDER BY avg_arrival_delay DESC;
"

resultado <- dbGetQuery(con, query)
print(resultado)
```

##	airport_code
## 1	DTW
## 2	JAX
## 3	IAH
## 4	MSN
## 5	IAH
## 6	ATL
## 7	LGA
## 8	MTJ
## 9	ORD
## 10	MSP
## 11	BNA
## 12	MSO
## 13	ORD
## 14	JAC
## 15	ATL
## 16	DEN
## 17	DCA
## 18	OTH
## 19	IAH
## 20	BWI
## 21	ASE
## 22	IAH
## 23	LAS
## 24	RIC
## 25	MIA
## 26	LAX
## 27	KTN
## 28	EGE
## 29	JNU
## 30	MIA
## 31	HNL
## 32	TUS
## 33	SFO
## 34	STL
## 35	PDX
## 36	PHL
## 37	MYR
## 38	HNL
## 39	PHX
## 40	CLT
## 41	STL
## 42	HDN
## 43	BOS
## 44	STT
## 45	SAT
## 46	ATL
## 47	IAD
## 48	ORD
## 49	FLL
## 50	DFW
## 51	LAX
## 52	BDL
## 53	MCI

## 54	PSE
## 55	ATL
## 56	ORF
## 57	BUF
## 58	MSP
## 59	EWR
## 60	JFK
## 61	PBI
## 62	OKC
## 63	IND
## 64	ISP
## 65	JFK
## 66	ECP
## 67	ANC
## 68	TUL
## 69	ROC
## 70	DFW
## 71	MSY
## 72	BUF
## 73	SYR
## 74	RDU
## 75	ORD
## 76	STL
## 77	FLL
## 78	LAS
## 79	ANC
## 80	JAX
## 81	BOS
## 82	AUS
## 83	SJU
## 84	BDL
## 85	JAX
## 86	IAD
## 87	BQN
## 88	SUN
## 89	JFK
## 90	SFO
## 91	LIT
## 92	SMF
## 93	PBI
## 94	SEA
## 95	ALB
## 96	SJC
## 97	ACV
## 98	LAX
## 99	DAL
## 100	OGG
## 101	PIT
## 102	OGG
## 103	EWR
## 104	PVD
## 105	GRR
## 106	CHS
## 107	RDU

## 108	DEN
## 109	CHS
## 110	LGA
## 111	MHT
## 112	DCA
## 113	FLL
## 114	PNS
## 115	SFO
## 116	MCO
## 117	AUS
## 118	MIA
## 119	FAT
## 120	PDX
## 121	PWM
## 122	FNT
## 123	AUS
## 124	CLE
## 125	GNV
## 126	MMH
## 127	SAN
## 128	MCI
## 129	PHX
## 130	OAK
## 131	DCA
## 132	RNO
## 133	PSP
## 134	RNO
## 135	BNA
## 136	CMH
## 137	ABQ
## 138	COS
## 139	MSP
## 140	DAY
## 141	BTU
## 142	BWI
## 143	RSW
## 144	MCO
## 145	SNA
## 146	AUS
## 147	PSC
## 148	SLC
## 149	SJU
## 150	JFK
## 151	BUF
## 152	RDD
## 153	PDX
## 154	AUS
## 155	BOS
## 156	OGG
## 157	MFR
## 158	RSW
## 159	SEA
## 160	EUG
## 161	ROC

## 162	SJU
## 163	LGA
## 164	BOS
## 165	IND
## 166	FLL
## 167	MIA
## 168	BZN
## 169	PSP
## 170	BWI
## 171	SEA
## 172	STX
## 173	TPA
## 174	OMA
## 175	LAX
## 176	DTW
## 177	SMF
## 178	BOI
## 179	MCO
## 180	SFO
## 181	ANC
## 182	BLI
## 183	DFW
## 184	LAX
## 185	IAH
## 186	TPA
## 187	RDM
## 188	SFO
## 189	MIA
## 190	PWM
## 191	MCI
## 192	LAS
## 193	BHM
## 194	ORF
## 195	SEA
## 196	RDU
## 197	ATL
## 198	GEG
## 199	DEN
## 200	LAS
## 201	BWI
## 202	JFK
## 203	TPA
## 204	BUR
## 205	LAS
## 206	CHS
## 207	JFK
## 208	SAN
## 209	LAX
## 210	SEA
## 211	PDX
## 212	DEN
## 213	OKC
## 214	MCO
## 215	BNA

## 216	DCA
## 217	DFW
## 218	DAL
## 219	SDF
## 220	MSP
## 221	BWI
## 222	CMH
## 223	STL
## 224	GSO
## 225	AUS
## 226	BWI
## 227	SFO
## 228	PDX
## 229	MSY
## 230	IAH
## 231	ORD
## 232	PHX
## 233	GSP
## 234	BHM
## 235	SAN
## 236	HNL
## 237	HOU
## 238	CEC
## 239	MRY
## 240	SAN
## 241	GEG
## 242	JFK
## 243	IND
## 244	ORD
## 245	SAT
## 246	SEA
## 247	LIH
## 248	HOU
## 249	SLC
## 250	PDX
## 251	SJC
## 252	IAD
## 253	JAC
## 254	ABQ
## 255	SFO
## 256	SBP
## 257	MCO
## 258	PHL
## 259	JAX
## 260	SAV
## 261	KTN
## 262	SEA
## 263	CVG
## 264	SLC
## 265	MIA
## 266	SBA
## 267	CLE
## 268	ONT
## 269	KOA

## 270	DEN
## 271	AUS
## 272	EWR
## 273	PHL
## 274	SFO
## 275	LAS
## 276	EYW
## 277	PHX
## 278	SFO
## 279	OKC
## 280	PHX
## 281	ACK
## 282	JNU
## 283	BWI
## 284	PSP
## 285	DEN
## 286	LAS
## 287	ATL
## 288	SAT
## 289	MSY
## 290	DEN
## 291	MKE
## 292	SEA
## 293	HYA
## 294	CLE
## 295	BOS
## 296	MDW
## 297	JNU
## 298	LGB
## 299	FAI
## 300	SLC
## 301	SMF
## 302	RDU
## 303	FLL
## 304	PHL
## 305	SIT
## 306	ORD
## 307	BWI
## 308	SAN
## 309	ABQ
## 310	JFK
## 311	SLC
## 312	PDX
## 313	CLT
## 314	PHX
## 315	DTW
## 316	BUR
## 317	MEM
## 318	PHX
## 319	ORD
## 320	CLT
## 321	SJC
## 322	SFO
## 323	LAX

## 324	SIT
## 325	SNA
## 326	LAS
## 327	RDU
## 328	EWR
## 329	SNA
## 330	STL
## 331	BFL
## 332	OAK
## 333	TPA
## 334	LAX
## 335	MSY
## 336	SMX
## 337	LGB
## 338	DTW
## 339	SEA
## 340	TLH
## 341	RNO
## 342	SAN
## 343	DTW
## 344	DTW
## 345	SEA
## 346	IAH
## 347	MSY
## 348	FLL
## 349	CLT
## 350	SLC
## 351	PHX
## 352	PBI
## 353	OAK
## 354	DFW
## 355	SAT
## 356	MCI
## 357	LAS
## 358	ANC
## 359	ONT
## 360	SFO
## 361	DEN
## 362	IAD
## 363	MIA
## 364	ATL
## 365	PBI
## 366	SMF
## 367	IAD
## 368	ORD
## 369	BWI
## 370	PHL
## 371	MSP
## 372	MSP
## 373	PHX
## 374	LAS
## 375	FLL
## 376	MEM
## 377	BUR

## 378	SAN
## 379	ATL
## 380	SEA
## 381	SRQ
## 382	OKC
## 383	EWR
## 384	TUS
## 385	SJU
## 386	SNA
## 387	MKE
## 388	MSY
## 389	SJC
## 390	SLC
## 391	FAI
## 392	CVG
## 393	DTW
## 394	PIT
## 395	BOS
## 396	STT
## 397	MVY
## 398	CLE
## 399	MCI
## 400	CVG
## 401	PIT
## 402	ORD
## 403	XNA
## 404	HNL
## 405	OAK
## 406	HNL
## 407	CHS
## 408	LAX
## 409	PSP
## 410	RSW
## 411	DCA
## 412	DCA
## 413	BNA
## 414	BOS
## 415	KOA
## 416	AUS
## 417	TPA
## 418	BWI
## 419	MSY
## 420	SAN
## 421	OGG
## 422	DCA
## 423	GSP
## 424	KOA
## 425	MCO
## 426	OGG
## 427	SAT
## 428	SAT
## 429	TPA
## 430	BIL
## 431	IAD

## 432	SMF
## 433	JAC
## 434	LIH
## 435	BWI
## 436	IAH
## 437	BOI
## 438	RDU
## 439	ORD
## 440	RDU
## 441	JFK
## 442	SYR
## 443	OMA
## 444	ABQ
## 445	CHS
## 446	MSP
## 447	CLE
## 448	SAV

##	airport_name
## 1	Detroit Metropolitan Airport
## 2	Jacksonville International Airport
## 3	George Bush Intercontinental Airport
## 4	Dane County Regional Airport
## 5	George Bush Intercontinental Airport
## 6	Hartsfield-Jackson Atlanta International Airport
## 7	LaGuardia Airport (Marine Air Terminal)
## 8	Montrose Regional Airport
## 9	Chicago O'Hare International Airport
## 10	Minneapolis-Saint Paul International Airport
## 11	Nashville International Airport
## 12	Missoula International Airport
## 13	Chicago O'Hare International Airport
## 14	Jackson Hole Airport
## 15	Hartsfield-Jackson Atlanta International Airport
## 16	Denver International Airport
## 17	Ronald Reagan Washington National Airport
## 18	Southwest Oregon Regional Airport (North Bend Municipal)
## 19	George Bush Intercontinental Airport
## 20	Baltimore-Washington International Airport
## 21	Aspen-Pitkin County Airport
## 22	George Bush Intercontinental Airport
## 23	McCarran International Airport
## 24	Richmond International Airport
## 25	Miami International Airport
## 26	Los Angeles International Airport
## 27	Ketchikan International Airport
## 28	Eagle County Regional Airport
## 29	Juneau International Airport
## 30	Miami International Airport
## 31	Honolulu International Airport
## 32	Tucson International Airport
## 33	San Francisco International Airport
## 34	St. Louis International Airport at Lambert Field
## 35	Portland International Airport
## 36	Philadelphia International Airport

37 Myrtle Beach International Airport
 ## 38 Honolulu International Airport
 ## 39 Phoenix Sky Harbor International Airport
 ## 40 Charlotte Douglas International Airport
 ## 41 St. Louis International Airport at Lambert Field
 ## 42 Yampa Valley Airport (Yampa Valley Regional)
 ## 43 Gen. Edward Lawrence Logan International Airport
 ## 44 Cyril E. King Airport
 ## 45 San Antonio International Airport
 ## 46 Hartsfield-Jackson Atlanta International Airport
 ## 47 Washington Dulles International Airport
 ## 48 Chicago O'Hare International Airport
 ## 49 Fort Lauderdale-Hollywood International Airport
 ## 50 Dallas/Fort Worth International Airport
 ## 51 Los Angeles International Airport
 ## 52 Bradley International Airport
 ## 53 Kansas City International Airport
 ## 54 Mercedita Airport
 ## 55 Hartsfield-Jackson Atlanta International Airport
 ## 56 Norfolk International Airport
 ## 57 Buffalo Niagara International Airport
 ## 58 Minneapolis-Saint Paul International Airport
 ## 59 Newark Liberty International Airport
 ## 60 John F. Kennedy International Airport (New York International Airport)
 ## 61 Palm Beach International Airport
 ## 62 Will Rogers World Airport
 ## 63 Indianapolis International Airport
 ## 64 Long Island MacArthur Airport
 ## 65 John F. Kennedy International Airport (New York International Airport)
 ## 66 Northwest Florida Beaches International Airport
 ## 67 Ted Stevens Anchorage International Airport
 ## 68 Tulsa International Airport
 ## 69 Greater Rochester International Airport
 ## 70 Dallas/Fort Worth International Airport
 ## 71 Louis Armstrong New Orleans International Airport
 ## 72 Buffalo Niagara International Airport
 ## 73 Syracuse Hancock International Airport
 ## 74 Raleigh-Durham International Airport
 ## 75 Chicago O'Hare International Airport
 ## 76 St. Louis International Airport at Lambert Field
 ## 77 Fort Lauderdale-Hollywood International Airport
 ## 78 McCarran International Airport
 ## 79 Ted Stevens Anchorage International Airport
 ## 80 Jacksonville International Airport
 ## 81 Gen. Edward Lawrence Logan International Airport
 ## 82 Austin-Bergstrom International Airport
 ## 83 Luis Muñoz Marín International Airport
 ## 84 Bradley International Airport
 ## 85 Jacksonville International Airport
 ## 86 Washington Dulles International Airport
 ## 87 Rafael Hernández Airport
 ## 88 Friedman Memorial Airport
 ## 89 John F. Kennedy International Airport (New York International Airport)
 ## 90 San Francisco International Airport

## 91	Bill and Hillary Clinton National Airport (Adams Field)
## 92	Sacramento International Airport
## 93	Palm Beach International Airport
## 94	Seattle-Tacoma International Airport
## 95	Albany International Airport
## 96	Norman Y. Mineta San José International Airport
## 97	Arcata Airport
## 98	Los Angeles International Airport
## 99	Dallas Love Field
## 100	Kahului Airport
## 101	Pittsburgh International Airport
## 102	Kahului Airport
## 103	Newark Liberty International Airport
## 104	Theodore Francis Green State Airport
## 105	Gerald R. Ford International Airport
## 106	Charleston International Airport/Charleston AFB
## 107	Raleigh-Durham International Airport
## 108	Denver International Airport
## 109	Charleston International Airport/Charleston AFB
## 110	LaGuardia Airport (Marine Air Terminal)
## 111	Manchester-Boston Regional Airport
## 112	Ronald Reagan Washington National Airport
## 113	Fort Lauderdale-Hollywood International Airport
## 114	Pensacola International Airport (Pensacola Gulf Coast Regional Airport)
## 115	San Francisco International Airport
## 116	Orlando International Airport
## 117	Austin-Bergstrom International Airport
## 118	Miami International Airport
## 119	Fresno Yosemite International Airport
## 120	Portland International Airport
## 121	Portland International Jetport
## 122	Bishop International Airport
## 123	Austin-Bergstrom International Airport
## 124	Cleveland Hopkins International Airport
## 125	Gainesville Regional Airport
## 126	Mammoth Yosemite Airport
## 127	San Diego International Airport (Lindbergh Field)
## 128	Kansas City International Airport
## 129	Phoenix Sky Harbor International Airport
## 130	Oakland International Airport
## 131	Ronald Reagan Washington National Airport
## 132	Reno/Tahoe International Airport
## 133	Palm Springs International Airport
## 134	Reno/Tahoe International Airport
## 135	Nashville International Airport
## 136	Port Columbus International Airport
## 137	Albuquerque International Sunport
## 138	City of Colorado Springs Municipal Airport
## 139	Minneapolis-Saint Paul International Airport
## 140	James M. Cox Dayton International Airport
## 141	Burlington International Airport
## 142	Baltimore-Washington International Airport
## 143	Southwest Florida International Airport
## 144	Orlando International Airport

145 John Wayne Airport (Orange County Airport)
 ## 146 Austin-Bergstrom International Airport
 ## 147 Tri-Cities Airport
 ## 148 Salt Lake City International Airport
 ## 149 Luis Muñoz Marín International Airport
 ## 150 John F. Kennedy International Airport (New York International Airport)
 ## 151 Buffalo Niagara International Airport
 ## 152 Redding Municipal Airport
 ## 153 Portland International Airport
 ## 154 Austin-Bergstrom International Airport
 ## 155 Gen. Edward Lawrence Logan International Airport
 ## 156 Kahului Airport
 ## 157 Rogue Valley International Airport
 ## 158 Southwest Florida International Airport
 ## 159 Seattle-Tacoma International Airport
 ## 160 Eugene Airport (Mahlon Sweet Field)
 ## 161 Greater Rochester International Airport
 ## 162 Luis Muñoz Marín International Airport
 ## 163 LaGuardia Airport (Marine Air Terminal)
 ## 164 Gen. Edward Lawrence Logan International Airport
 ## 165 Indianapolis International Airport
 ## 166 Fort Lauderdale-Hollywood International Airport
 ## 167 Miami International Airport
 ## 168 Bozeman Yellowstone International Airport (Gallatin Field Airport)
 ## 169 Palm Springs International Airport
 ## 170 Baltimore-Washington International Airport
 ## 171 Seattle-Tacoma International Airport
 ## 172 Henry E. Rohlsen Airport
 ## 173 Tampa International Airport
 ## 174 Eppley Airfield
 ## 175 Los Angeles International Airport
 ## 176 Detroit Metropolitan Airport
 ## 177 Sacramento International Airport
 ## 178 Boise Airport (Boise Air Terminal)
 ## 179 Orlando International Airport
 ## 180 San Francisco International Airport
 ## 181 Ted Stevens Anchorage International Airport
 ## 182 Bellingham International Airport
 ## 183 Dallas/Fort Worth International Airport
 ## 184 Los Angeles International Airport
 ## 185 George Bush Intercontinental Airport
 ## 186 Tampa International Airport
 ## 187 Redmond Municipal Airport (Roberts Field)
 ## 188 San Francisco International Airport
 ## 189 Miami International Airport
 ## 190 Portland International Jetport
 ## 191 Kansas City International Airport
 ## 192 McCarran International Airport
 ## 193 Birmingham-Shuttlesworth International Airport
 ## 194 Norfolk International Airport
 ## 195 Seattle-Tacoma International Airport
 ## 196 Raleigh-Durham International Airport
 ## 197 Hartsfield-Jackson Atlanta International Airport
 ## 198 Spokane International Airport

199 Denver International Airport
 ## 200 McCarran International Airport
 ## 201 Baltimore-Washington International Airport
 ## 202 John F. Kennedy International Airport (New York International Airport)
 ## 203 Tampa International Airport
 ## 204 Bob Hope Airport (Hollywood Burbank Airport)
 ## 205 McCarran International Airport
 ## 206 Charleston International Airport/Charleston AFB
 ## 207 John F. Kennedy International Airport (New York International Airport)
 ## 208 San Diego International Airport (Lindbergh Field)
 ## 209 Los Angeles International Airport
 ## 210 Seattle-Tacoma International Airport
 ## 211 Portland International Airport
 ## 212 Denver International Airport
 ## 213 Will Rogers World Airport
 ## 214 Orlando International Airport
 ## 215 Nashville International Airport
 ## 216 Ronald Reagan Washington National Airport
 ## 217 Dallas/Fort Worth International Airport
 ## 218 Dallas Love Field
 ## 219 Louisville International Airport (Standiford Field)
 ## 220 Minneapolis-Saint Paul International Airport
 ## 221 Baltimore-Washington International Airport
 ## 222 Port Columbus International Airport
 ## 223 St. Louis International Airport at Lambert Field
 ## 224 Piedmont Triad International Airport
 ## 225 Austin-Bergstrom International Airport
 ## 226 Baltimore-Washington International Airport
 ## 227 San Francisco International Airport
 ## 228 Portland International Airport
 ## 229 Louis Armstrong New Orleans International Airport
 ## 230 George Bush Intercontinental Airport
 ## 231 Chicago O'Hare International Airport
 ## 232 Phoenix Sky Harbor International Airport
 ## 233 Greenville-Spartanburg International Airport
 ## 234 Birmingham-Shuttlesworth International Airport
 ## 235 San Diego International Airport (Lindbergh Field)
 ## 236 Honolulu International Airport
 ## 237 William P. Hobby Airport
 ## 238 Del Norte County Airport (Jack McNamara Field)
 ## 239 Monterey Regional Airport (Monterey Peninsula Airport)
 ## 240 San Diego International Airport (Lindbergh Field)
 ## 241 Spokane International Airport
 ## 242 John F. Kennedy International Airport (New York International Airport)
 ## 243 Indianapolis International Airport
 ## 244 Chicago O'Hare International Airport
 ## 245 San Antonio International Airport
 ## 246 Seattle-Tacoma International Airport
 ## 247 Lihue Airport
 ## 248 William P. Hobby Airport
 ## 249 Salt Lake City International Airport
 ## 250 Portland International Airport
 ## 251 Norman Y. Mineta San José International Airport
 ## 252 Washington Dulles International Airport

## 253	Jackson Hole Airport
## 254	Albuquerque International Sunport
## 255	San Francisco International Airport
## 256	San Luis Obispo County Regional Airport (McChesney Field)
## 257	Orlando International Airport
## 258	Philadelphia International Airport
## 259	Jacksonville International Airport
## 260	Savannah/Hilton Head International Airport
## 261	Ketchikan International Airport
## 262	Seattle-Tacoma International Airport
## 263	Cincinnati/Northern Kentucky International Airport
## 264	Salt Lake City International Airport
## 265	Miami International Airport
## 266	Santa Barbara Municipal Airport (Santa Barbara Airport)
## 267	Cleveland Hopkins International Airport
## 268	Ontario International Airport
## 269	Kona International Airport at Keahole
## 270	Denver International Airport
## 271	Austin-Bergstrom International Airport
## 272	Newark Liberty International Airport
## 273	Philadelphia International Airport
## 274	San Francisco International Airport
## 275	McCarran International Airport
## 276	Key West International Airport
## 277	Phoenix Sky Harbor International Airport
## 278	San Francisco International Airport
## 279	Will Rogers World Airport
## 280	Phoenix Sky Harbor International Airport
## 281	Nantucket Memorial Airport
## 282	Juneau International Airport
## 283	Baltimore-Washington International Airport
## 284	Palm Springs International Airport
## 285	Denver International Airport
## 286	McCarran International Airport
## 287	Hartsfield-Jackson Atlanta International Airport
## 288	San Antonio International Airport
## 289	Louis Armstrong New Orleans International Airport
## 290	Denver International Airport
## 291	General Mitchell International Airport
## 292	Seattle-Tacoma International Airport
## 293	Barnstable Municipal Airport
## 294	Cleveland Hopkins International Airport
## 295	Gen. Edward Lawrence Logan International Airport
## 296	Chicago Midway International Airport
## 297	Juneau International Airport
## 298	Long Beach Airport (Daugherty Field)
## 299	Fairbanks International Airport
## 300	Salt Lake City International Airport
## 301	Sacramento International Airport
## 302	Raleigh-Durham International Airport
## 303	Fort Lauderdale-Hollywood International Airport
## 304	Philadelphia International Airport
## 305	Sitka Rocky Gutierrez Airport
## 306	Chicago O'Hare International Airport

307 Baltimore-Washington International Airport
 ## 308 San Diego International Airport (Lindbergh Field)
 ## 309 Albuquerque International Sunport
 ## 310 John F. Kennedy International Airport (New York International Airport)
 ## 311 Salt Lake City International Airport
 ## 312 Portland International Airport
 ## 313 Charlotte Douglas International Airport
 ## 314 Phoenix Sky Harbor International Airport
 ## 315 Detroit Metropolitan Airport
 ## 316 Bob Hope Airport (Hollywood Burbank Airport)
 ## 317 Memphis International Airport
 ## 318 Phoenix Sky Harbor International Airport
 ## 319 Chicago O'Hare International Airport
 ## 320 Charlotte Douglas International Airport
 ## 321 Norman Y. Mineta San José International Airport
 ## 322 San Francisco International Airport
 ## 323 Los Angeles International Airport
 ## 324 Sitka Rocky Gutierrez Airport
 ## 325 John Wayne Airport (Orange County Airport)
 ## 326 McCarran International Airport
 ## 327 Raleigh-Durham International Airport
 ## 328 Newark Liberty International Airport
 ## 329 John Wayne Airport (Orange County Airport)
 ## 330 St. Louis International Airport at Lambert Field
 ## 331 Meadows Field
 ## 332 Oakland International Airport
 ## 333 Tampa International Airport
 ## 334 Los Angeles International Airport
 ## 335 Louis Armstrong New Orleans International Airport
 ## 336 Santa Maria Public Airport (Capt G. Allan Hancock Field)
 ## 337 Long Beach Airport (Daugherty Field)
 ## 338 Detroit Metropolitan Airport
 ## 339 Seattle-Tacoma International Airport
 ## 340 Tallahassee International Airport
 ## 341 Reno/Tahoe International Airport
 ## 342 San Diego International Airport (Lindbergh Field)
 ## 343 Detroit Metropolitan Airport
 ## 344 Detroit Metropolitan Airport
 ## 345 Seattle-Tacoma International Airport
 ## 346 George Bush Intercontinental Airport
 ## 347 Louis Armstrong New Orleans International Airport
 ## 348 Fort Lauderdale-Hollywood International Airport
 ## 349 Charlotte Douglas International Airport
 ## 350 Salt Lake City International Airport
 ## 351 Phoenix Sky Harbor International Airport
 ## 352 Palm Beach International Airport
 ## 353 Oakland International Airport
 ## 354 Dallas/Fort Worth International Airport
 ## 355 San Antonio International Airport
 ## 356 Kansas City International Airport
 ## 357 McCarran International Airport
 ## 358 Ted Stevens Anchorage International Airport
 ## 359 Ontario International Airport
 ## 360 San Francisco International Airport

## 361	Denver International Airport
## 362	Washington Dulles International Airport
## 363	Miami International Airport
## 364	Hartsfield-Jackson Atlanta International Airport
## 365	Palm Beach International Airport
## 366	Sacramento International Airport
## 367	Washington Dulles International Airport
## 368	Chicago O'Hare International Airport
## 369	Baltimore-Washington International Airport
## 370	Philadelphia International Airport
## 371	Minneapolis-Saint Paul International Airport
## 372	Minneapolis-Saint Paul International Airport
## 373	Phoenix Sky Harbor International Airport
## 374	McCarran International Airport
## 375	Fort Lauderdale-Hollywood International Airport
## 376	Memphis International Airport
## 377	Bob Hope Airport (Hollywood Burbank Airport)
## 378	San Diego International Airport (Lindbergh Field)
## 379	Hartsfield-Jackson Atlanta International Airport
## 380	Seattle-Tacoma International Airport
## 381	Sarasota-Bradenton International Airport
## 382	Will Rogers World Airport
## 383	Newark Liberty International Airport
## 384	Tucson International Airport
## 385	Luis Muñoz Marín International Airport
## 386	John Wayne Airport (Orange County Airport)
## 387	General Mitchell International Airport
## 388	Louis Armstrong New Orleans International Airport
## 389	Norman Y. Mineta San José International Airport
## 390	Salt Lake City International Airport
## 391	Fairbanks International Airport
## 392	Cincinnati/Northern Kentucky International Airport
## 393	Detroit Metropolitan Airport
## 394	Pittsburgh International Airport
## 395	Gen. Edward Lawrence Logan International Airport
## 396	Cyril E. King Airport
## 397	Martha's Vineyard Airport
## 398	Cleveland Hopkins International Airport
## 399	Kansas City International Airport
## 400	Cincinnati/Northern Kentucky International Airport
## 401	Pittsburgh International Airport
## 402	Chicago O'Hare International Airport
## 403	Northwest Arkansas Regional Airport
## 404	Honolulu International Airport
## 405	Oakland International Airport
## 406	Honolulu International Airport
## 407	Charleston International Airport/Charleston AFB
## 408	Los Angeles International Airport
## 409	Palm Springs International Airport
## 410	Southwest Florida International Airport
## 411	Ronald Reagan Washington National Airport
## 412	Ronald Reagan Washington National Airport
## 413	Nashville International Airport
## 414	Gen. Edward Lawrence Logan International Airport

## 415	Kona International Airport at Keahole
## 416	Austin-Bergstrom International Airport
## 417	Tampa International Airport
## 418	Baltimore-Washington International Airport
## 419	Louis Armstrong New Orleans International Airport
## 420	San Diego International Airport (Lindbergh Field)
## 421	Kahului Airport
## 422	Ronald Reagan Washington National Airport
## 423	Greenville-Spartanburg International Airport
## 424	Kona International Airport at Keahole
## 425	Orlando International Airport
## 426	Kahului Airport
## 427	San Antonio International Airport
## 428	San Antonio International Airport
## 429	Tampa International Airport
## 430	Billings Logan International Airport
## 431	Washington Dulles International Airport
## 432	Sacramento International Airport
## 433	Jackson Hole Airport
## 434	Lihue Airport
## 435	Baltimore-Washington International Airport
## 436	George Bush Intercontinental Airport
## 437	Boise Airport (Boise Air Terminal)
## 438	Raleigh-Durham International Airport
## 439	Chicago O'Hare International Airport
## 440	Raleigh-Durham International Airport
## 441	John F. Kennedy International Airport (New York International Airport)
## 442	Syracuse Hancock International Airport
## 443	Eppley Airfield
## 444	Albuquerque International Sunport
## 445	Charleston International Airport/Charleston AFB
## 446	Minneapolis-Saint Paul International Airport
## 447	Cleveland Hopkins International Airport
## 448	Savannah/Hilton Head International Airport
##	airline_name avg_arrival_delay
## 1	Skywest Airlines Inc. 143.00000000
## 2	Delta Air Lines Inc. 41.00000000
## 3	US Airways Inc. 36.20000000
## 4	United Air Lines Inc. 34.50000000
## 5	Skywest Airlines Inc. 27.78169014
## 6	Spirit Air Lines 25.79268293
## 7	Frontier Airlines Inc. 24.05691057
## 8	Skywest Airlines Inc. 22.82432432
## 9	Spirit Air Lines 22.38620435
## 10	Spirit Air Lines 22.17613636
## 11	American Airlines Inc. 22.00000000
## 12	Skywest Airlines Inc. 20.62068966
## 13	Frontier Airlines Inc. 19.59162688
## 14	Skywest Airlines Inc. 19.15658747
## 15	Frontier Airlines Inc. 19.11235955
## 16	Frontier Airlines Inc. 18.66488499
## 17	Delta Air Lines Inc. 18.08219178
## 18	Skywest Airlines Inc. 18.05564784
## 19	Frontier Airlines Inc. 17.44899170

## 20	Spirit Air Lines	17.14434545
## 21	Skywest Airlines Inc.	17.13679745
## 22	Spirit Air Lines	17.09623431
## 23	Spirit Air Lines	16.96888091
## 24	American Eagle Airlines Inc.	16.64150943
## 25	Skywest Airlines Inc.	16.44754464
## 26	Spirit Air Lines	16.35460993
## 27	Skywest Airlines Inc.	16.35398230
## 28	American Airlines Inc.	16.20102215
## 29	Skywest Airlines Inc.	15.84313725
## 30	Frontier Airlines Inc.	15.49081803
## 31	Hawaiian Airlines Inc.	15.41885785
## 32	Skywest Airlines Inc.	15.24641078
## 33	Frontier Airlines Inc.	15.15390114
## 34	United Air Lines Inc.	15.09501188
## 35	JetBlue Airways	14.93128132
## 36	Frontier Airlines Inc.	14.88459100
## 37	Spirit Air Lines	14.85572139
## 38	United Air Lines Inc.	14.77935896
## 39	Frontier Airlines Inc.	14.60820896
## 40	Southwest Airlines Co.	14.52836005
## 41	American Airlines Inc.	14.44547257
## 42	Skywest Airlines Inc.	14.36990596
## 43	Southwest Airlines Co.	14.16185605
## 44	American Airlines Inc.	13.75576271
## 45	Skywest Airlines Inc.	13.74370370
## 46	American Airlines Inc.	13.58698225
## 47	American Airlines Inc.	13.50144648
## 48	American Eagle Airlines Inc.	13.45046021
## 49	Spirit Air Lines	13.38550548
## 50	Skywest Airlines Inc.	13.23950484
## 51	Skywest Airlines Inc.	13.18695040
## 52	Southwest Airlines Co.	12.98213294
## 53	American Airlines Inc.	12.91133005
## 54	JetBlue Airways	12.74741327
## 55	American Eagle Airlines Inc.	12.68750000
## 56	Southwest Airlines Co.	12.65231963
## 57	Delta Air Lines Inc.	12.60509554
## 58	American Airlines Inc.	12.44027986
## 59	American Airlines Inc.	12.42008854
## 60	American Eagle Airlines Inc.	12.39380584
## 61	Southwest Airlines Co.	12.35818443
## 62	Southwest Airlines Co.	12.20084951
## 63	Southwest Airlines Co.	12.10514894
## 64	Southwest Airlines Co.	11.99720187
## 65	US Airways Inc.	11.93633496
## 66	Southwest Airlines Co.	11.85497630
## 67	JetBlue Airways	11.72777778
## 68	American Airlines Inc.	11.67811159
## 69	Southwest Airlines Co.	11.54571106
## 70	Spirit Air Lines	11.45362059
## 71	American Airlines Inc.	11.42953886
## 72	Southwest Airlines Co.	11.42809177
## 73	JetBlue Airways	11.21120516

## 74	Southwest Airlines Co.	11.10937500
## 75	JetBlue Airways	11.07307201
## 76	Skywest Airlines Inc.	11.03597497
## 77	JetBlue Airways	11.03121696
## 78	Frontier Airlines Inc.	10.76033058
## 79	United Air Lines Inc.	10.71728395
## 80	Southwest Airlines Co.	10.67084696
## 81	American Airlines Inc.	10.58521971
## 82	JetBlue Airways	10.54502087
## 83	American Airlines Inc.	10.50136116
## 84	American Airlines Inc.	10.34192163
## 85	JetBlue Airways	10.32764433
## 86	JetBlue Airways	10.20958993
## 87	JetBlue Airways	10.19034853
## 88	Skywest Airlines Inc.	10.18369987
## 89	Hawaiian Airlines Inc.	10.15846258
## 90	Southwest Airlines Co.	10.04737750
## 91	Southwest Airlines Co.	9.99615631
## 92	Southwest Airlines Co.	9.92915437
## 93	JetBlue Airways	9.89346078
## 94	Frontier Airlines Inc.	9.89097274
## 95	Southwest Airlines Co.	9.81428061
## 96	Southwest Airlines Co.	9.76932057
## 97	Skywest Airlines Inc.	9.71764157
## 98	Southwest Airlines Co.	9.69944502
## 99	Virgin America	9.69420989
## 100	Hawaiian Airlines Inc.	9.66587112
## 101	Southwest Airlines Co.	9.65608687
## 102	Delta Air Lines Inc.	9.63967862
## 103	Atlantic Southeast Airlines	9.63791631
## 104	Southwest Airlines Co.	9.61321979
## 105	Southwest Airlines Co.	9.52033792
## 106	American Eagle Airlines Inc.	9.51742835
## 107	American Eagle Airlines Inc.	9.44824962
## 108	Skywest Airlines Inc.	9.44351852
## 109	Southwest Airlines Co.	9.31232714
## 110	Delta Air Lines Inc.	9.28390315
## 111	Southwest Airlines Co.	9.23119905
## 112	American Eagle Airlines Inc.	9.17034456
## 113	United Air Lines Inc.	9.14762516
## 114	American Eagle Airlines Inc.	9.08773355
## 115	Skywest Airlines Inc.	9.04256735
## 116	American Airlines Inc.	8.99087325
## 117	Alaska Airlines Inc.	8.92319128
## 118	United Air Lines Inc.	8.86314662
## 119	Skywest Airlines Inc.	8.82718025
## 120	Southwest Airlines Co.	8.82258065
## 121	Southwest Airlines Co.	8.79040455
## 122	Southwest Airlines Co.	8.77384093
## 123	American Airlines Inc.	8.77180451
## 124	Southwest Airlines Co.	8.74156545
## 125	American Eagle Airlines Inc.	8.67441860
## 126	Skywest Airlines Inc.	8.50218978
## 127	Skywest Airlines Inc.	8.49271403

## 128	Skywest Airlines Inc.	8.48564250
## 129	JetBlue Airways	8.28104575
## 130	Southwest Airlines Co.	8.24515495
## 131	American Airlines Inc.	8.24204212
## 132	Skywest Airlines Inc.	8.21444261
## 133	Skywest Airlines Inc.	8.19352851
## 134	United Air Lines Inc.	8.17647059
## 135	Southwest Airlines Co.	8.11621074
## 136	Southwest Airlines Co.	8.10371429
## 137	Skywest Airlines Inc.	8.09892729
## 138	Skywest Airlines Inc.	8.09305065
## 139	United Air Lines Inc.	8.05230769
## 140	Southwest Airlines Co.	8.04788321
## 141	JetBlue Airways	8.04748714
## 142	United Air Lines Inc.	8.02463351
## 143	JetBlue Airways	7.94762808
## 144	Southwest Airlines Co.	7.94435644
## 145	Skywest Airlines Inc.	7.92677719
## 146	Virgin America	7.90897477
## 147	Skywest Airlines Inc.	7.85395384
## 148	Skywest Airlines Inc.	7.80662752
## 149	Southwest Airlines Co.	7.80644133
## 150	JetBlue Airways	7.73207753
## 151	JetBlue Airways	7.65182115
## 152	Skywest Airlines Inc.	7.59076923
## 153	Delta Air Lines Inc.	7.57128447
## 154	Skywest Airlines Inc.	7.45936982
## 155	JetBlue Airways	7.45490334
## 156	United Air Lines Inc.	7.43039161
## 157	Skywest Airlines Inc.	7.37515625
## 158	Southwest Airlines Co.	7.35657012
## 159	United Air Lines Inc.	7.31771460
## 160	Skywest Airlines Inc.	7.31082553
## 161	JetBlue Airways	7.29286770
## 162	JetBlue Airways	7.23444846
## 163	American Airlines Inc.	7.20693266
## 164	Delta Air Lines Inc.	7.14560616
## 165	American Eagle Airlines Inc.	7.13043478
## 166	Southwest Airlines Co.	7.11353275
## 167	American Eagle Airlines Inc.	7.08102580
## 168	Skywest Airlines Inc.	7.01478495
## 169	Virgin America	6.92917055
## 170	American Airlines Inc.	6.91782764
## 171	JetBlue Airways	6.89653223
## 172	American Airlines Inc.	6.89356984
## 173	American Airlines Inc.	6.89275682
## 174	Skywest Airlines Inc.	6.88823182
## 175	United Air Lines Inc.	6.86907124
## 176	Southwest Airlines Co.	6.85253259
## 177	Skywest Airlines Inc.	6.75807994
## 178	Skywest Airlines Inc.	6.75598802
## 179	United Air Lines Inc.	6.73812516
## 180	JetBlue Airways	6.73210266
## 181	Delta Air Lines Inc.	6.71991037

## 182	Alaska Airlines Inc.	6.68316042
## 183	United Air Lines Inc.	6.63816605
## 184	Delta Air Lines Inc.	6.52736789
## 185	United Air Lines Inc.	6.47849399
## 186	Southwest Airlines Co.	6.45583888
## 187	Skywest Airlines Inc.	6.42566740
## 188	Virgin America	6.41767410
## 189	American Airlines Inc.	6.39835879
## 190	JetBlue Airways	6.38386648
## 191	Southwest Airlines Co.	6.31274487
## 192	Virgin America	6.29789177
## 193	American Eagle Airlines Inc.	6.25441826
## 194	American Eagle Airlines Inc.	6.23603915
## 195	Southwest Airlines Co.	6.22927377
## 196	American Airlines Inc.	6.19716925
## 197	Southwest Airlines Co.	6.19503662
## 198	Alaska Airlines Inc.	6.18235903
## 199	United Air Lines Inc.	6.16692920
## 200	Skywest Airlines Inc.	6.06193626
## 201	Atlantic Southeast Airlines	6.04256560
## 202	American Airlines Inc.	6.03337314
## 203	JetBlue Airways	6.03157153
## 204	Skywest Airlines Inc.	5.96680338
## 205	Southwest Airlines Co.	5.95215793
## 206	JetBlue Airways	5.94919291
## 207	Delta Air Lines Inc.	5.93191779
## 208	Southwest Airlines Co.	5.87676707
## 209	Virgin America	5.87342756
## 210	Hawaiian Airlines Inc.	5.86452763
## 211	Skywest Airlines Inc.	5.84419316
## 212	JetBlue Airways	5.81217949
## 213	Skywest Airlines Inc.	5.79843040
## 214	JetBlue Airways	5.79585855
## 215	American Eagle Airlines Inc.	5.76713881
## 216	United Air Lines Inc.	5.65018315
## 217	American Airlines Inc.	5.64624043
## 218	Southwest Airlines Co.	5.63321168
## 219	Southwest Airlines Co.	5.56961118
## 220	Skywest Airlines Inc.	5.55177929
## 221	US Airways Inc.	5.49769971
## 222	American Eagle Airlines Inc.	5.49734043
## 223	Southwest Airlines Co.	5.46018462
## 224	American Eagle Airlines Inc.	5.43716578
## 225	United Air Lines Inc.	5.41697179
## 226	American Eagle Airlines Inc.	5.41570093
## 227	United Air Lines Inc.	5.40172582
## 228	United Air Lines Inc.	5.29729032
## 229	United Air Lines Inc.	5.29128015
## 230	American Airlines Inc.	5.26432308
## 231	United Air Lines Inc.	5.22171533
## 232	Southwest Airlines Co.	5.16113717
## 233	Southwest Airlines Co.	5.15524625
## 234	Southwest Airlines Co.	5.14022518
## 235	American Airlines Inc.	5.09409190

## 236	Delta Air Lines Inc.	5.08357349
## 237	JetBlue Airways	5.00294118
## 238	Skywest Airlines Inc.	4.95044053
## 239	Skywest Airlines Inc.	4.89905611
## 240	Virgin America	4.89233242
## 241	Skywest Airlines Inc.	4.86513840
## 242	Virgin America	4.85142732
## 243	United Air Lines Inc.	4.82817435
## 244	Virgin America	4.81600000
## 245	Southwest Airlines Co.	4.81204334
## 246	Skywest Airlines Inc.	4.81128815
## 247	United Air Lines Inc.	4.76616231
## 248	Southwest Airlines Co.	4.75890915
## 249	Southwest Airlines Co.	4.73254620
## 250	Alaska Airlines Inc.	4.72408950
## 251	Skywest Airlines Inc.	4.71260350
## 252	Frontier Airlines Inc.	4.69491525
## 253	Delta Air Lines Inc.	4.57692308
## 254	JetBlue Airways	4.56664239
## 255	American Airlines Inc.	4.53670154
## 256	Skywest Airlines Inc.	4.44403634
## 257	Delta Air Lines Inc.	4.41561713
## 258	US Airways Inc.	4.41522400
## 259	American Eagle Airlines Inc.	4.40797546
## 260	JetBlue Airways	4.39620368
## 261	Alaska Airlines Inc.	4.38544430
## 262	Virgin America	4.36502468
## 263	American Eagle Airlines Inc.	4.33486943
## 264	United Air Lines Inc.	4.31791908
## 265	US Airways Inc.	4.31156329
## 266	Skywest Airlines Inc.	4.30798630
## 267	American Eagle Airlines Inc.	4.24878957
## 268	Skywest Airlines Inc.	4.23952952
## 269	United Air Lines Inc.	4.22199885
## 270	Southwest Airlines Co.	4.21598147
## 271	Southwest Airlines Co.	4.17559697
## 272	United Air Lines Inc.	4.08964446
## 273	American Airlines Inc.	4.07321904
## 274	Alaska Airlines Inc.	4.06633925
## 275	United Air Lines Inc.	4.05340454
## 276	American Eagle Airlines Inc.	4.04105149
## 277	Skywest Airlines Inc.	4.03823604
## 278	US Airways Inc.	4.01120618
## 279	American Airlines Inc.	4.00000000
## 280	United Air Lines Inc.	3.97371007
## 281	JetBlue Airways	3.97272727
## 282	Delta Air Lines Inc.	3.86330935
## 283	JetBlue Airways	3.85016623
## 284	Alaska Airlines Inc.	3.83030214
## 285	American Airlines Inc.	3.80532359
## 286	JetBlue Airways	3.80393854
## 287	United Air Lines Inc.	3.73496659
## 288	American Airlines Inc.	3.71980676
## 289	JetBlue Airways	3.68612027

## 290	Delta Air Lines Inc.	3.60807032
## 291	Southwest Airlines Co.	3.59038224
## 292	American Airlines Inc.	3.57115144
## 293	JetBlue Airways	3.55555556
## 294	United Air Lines Inc.	3.54893238
## 295	United Air Lines Inc.	3.54850995
## 296	Southwest Airlines Co.	3.52710565
## 297	Alaska Airlines Inc.	3.42694430
## 298	JetBlue Airways	3.40166135
## 299	Delta Air Lines Inc.	3.37037037
## 300	JetBlue Airways	3.32590361
## 301	Alaska Airlines Inc.	3.31614350
## 302	United Air Lines Inc.	3.25945946
## 303	Delta Air Lines Inc.	3.22816530
## 304	United Air Lines Inc.	3.19113486
## 305	Skywest Airlines Inc.	3.14285714
## 306	American Airlines Inc.	3.14182639
## 307	Southwest Airlines Co.	3.08520990
## 308	United Air Lines Inc.	3.06004941
## 309	Southwest Airlines Co.	2.99589603
## 310	United Air Lines Inc.	2.99121362
## 311	Delta Air Lines Inc.	2.85351140
## 312	Virgin America	2.78067130
## 313	JetBlue Airways	2.76985112
## 314	US Airways Inc.	2.75822172
## 315	Atlantic Southeast Airlines	2.71739130
## 316	Alaska Airlines Inc.	2.58861502
## 317	Southwest Airlines Co.	2.55043973
## 318	Alaska Airlines Inc.	2.40901790
## 319	Alaska Airlines Inc.	2.33256228
## 320	US Airways Inc.	2.23261362
## 321	Alaska Airlines Inc.	2.20712127
## 322	Delta Air Lines Inc.	2.14619559
## 323	Alaska Airlines Inc.	2.14572204
## 324	Alaska Airlines Inc.	2.09489051
## 325	Southwest Airlines Co.	2.03641384
## 326	Alaska Airlines Inc.	2.02778569
## 327	JetBlue Airways	1.98916366
## 328	Virgin America	1.91275611
## 329	United Air Lines Inc.	1.89621357
## 330	Alaska Airlines Inc.	1.83258818
## 331	Skywest Airlines Inc.	1.80575980
## 332	Alaska Airlines Inc.	1.69542903
## 333	Delta Air Lines Inc.	1.68932564
## 334	American Airlines Inc.	1.67957604
## 335	US Airways Inc.	1.60000000
## 336	Skywest Airlines Inc.	1.59359606
## 337	Skywest Airlines Inc.	1.50000000
## 338	Delta Air Lines Inc.	1.42895412
## 339	Delta Air Lines Inc.	1.41675347
## 340	American Eagle Airlines Inc.	1.35085293
## 341	JetBlue Airways	1.30357143
## 342	Alaska Airlines Inc.	1.20723239
## 343	US Airways Inc.	1.20000000

## 344	American Airlines Inc.	1.19598155
## 345	US Airways Inc.	1.10341816
## 346	Alaska Airlines Inc.	0.98747390
## 347	Southwest Airlines Co.	0.97527872
## 348	Virgin America	0.88800999
## 349	American Airlines Inc.	0.86732456
## 350	American Airlines Inc.	0.83750000
## 351	Delta Air Lines Inc.	0.80027298
## 352	Delta Air Lines Inc.	0.68835616
## 353	Skywest Airlines Inc.	0.61000000
## 354	Alaska Airlines Inc.	0.55795678
## 355	Alaska Airlines Inc.	0.52428910
## 356	Alaska Airlines Inc.	0.48216976
## 357	American Airlines Inc.	0.46961936
## 358	Alaska Airlines Inc.	0.45745320
## 359	Alaska Airlines Inc.	0.22642938
## 360	Hawaiian Airlines Inc.	0.22568093
## 361	Alaska Airlines Inc.	0.19150000
## 362	Virgin America	0.16922708
## 363	Delta Air Lines Inc.	0.14673836
## 364	Delta Air Lines Inc.	0.12476825
## 365	Skywest Airlines Inc.	0.00000000
## 366	JetBlue Airways	-0.07943262
## 367	United Air Lines Inc.	-0.08882570
## 368	Atlantic Southeast Airlines	-0.14249364
## 369	Delta Air Lines Inc.	-0.18833354
## 370	Alaska Airlines Inc.	-0.33194527
## 371	Delta Air Lines Inc.	-0.44917899
## 372	Alaska Airlines Inc.	-0.46925676
## 373	American Airlines Inc.	-0.49353302
## 374	Delta Air Lines Inc.	-0.57169656
## 375	Alaska Airlines Inc.	-0.59667853
## 376	American Eagle Airlines Inc.	-0.63588391
## 377	JetBlue Airways	-0.71016236
## 378	Delta Air Lines Inc.	-0.81707000
## 379	Alaska Airlines Inc.	-0.89150508
## 380	Alaska Airlines Inc.	-0.92531360
## 381	JetBlue Airways	-0.99099640
## 382	United Air Lines Inc.	-1.00000000
## 383	Alaska Airlines Inc.	-1.09245226
## 384	Alaska Airlines Inc.	-1.12620807
## 385	Delta Air Lines Inc.	-1.28083728
## 386	Alaska Airlines Inc.	-1.73409626
## 387	Skywest Airlines Inc.	-1.76973684
## 388	Delta Air Lines Inc.	-1.91312741
## 389	JetBlue Airways	-1.92682927
## 390	Alaska Airlines Inc.	-2.04634337
## 391	Alaska Airlines Inc.	-2.08330589
## 392	Delta Air Lines Inc.	-2.15815486
## 393	Alaska Airlines Inc.	-2.27498522
## 394	Delta Air Lines Inc.	-2.53164557
## 395	Virgin America	-2.59118087
## 396	Delta Air Lines Inc.	-2.81694696
## 397	JetBlue Airways	-2.83471074

## 398	Frontier Airlines Inc.	-2.84666667
## 399	United Air Lines Inc.	-2.89473684
## 400	Atlantic Southeast Airlines	-3.00000000
## 401	United Air Lines Inc.	-3.05501859
## 402	Skywest Airlines Inc.	-3.10638298
## 403	Skywest Airlines Inc.	-3.27450980
## 404	Alaska Airlines Inc.	-3.30708849
## 405	JetBlue Airways	-3.44136461
## 406	Virgin America	-3.55000000
## 407	Delta Air Lines Inc.	-3.56643357
## 408	JetBlue Airways	-3.62169736
## 409	United Air Lines Inc.	-3.89696970
## 410	Delta Air Lines Inc.	-3.91616039
## 411	Virgin America	-3.93991672
## 412	Alaska Airlines Inc.	-3.99157641
## 413	Alaska Airlines Inc.	-4.01449275
## 414	Alaska Airlines Inc.	-4.05171042
## 415	Alaska Airlines Inc.	-4.10661128
## 416	Delta Air Lines Inc.	-4.29561918
## 417	US Airways Inc.	-4.50000000
## 418	Skywest Airlines Inc.	-5.00000000
## 419	Alaska Airlines Inc.	-5.10410470
## 420	JetBlue Airways	-5.16871762
## 421	Alaska Airlines Inc.	-5.28016360
## 422	US Airways Inc.	-5.40000000
## 423	American Eagle Airlines Inc.	-6.00000000
## 424	Delta Air Lines Inc.	-6.76923077
## 425	Alaska Airlines Inc.	-6.84230229
## 426	Virgin America	-7.03448276
## 427	Delta Air Lines Inc.	-7.91762014
## 428	United Air Lines Inc.	-8.01075269
## 429	Alaska Airlines Inc.	-8.32465996
## 430	Skywest Airlines Inc.	-8.53846154
## 431	Alaska Airlines Inc.	-8.87169811
## 432	Delta Air Lines Inc.	-9.00000000
## 433	United Air Lines Inc.	-10.00000000
## 434	Alaska Airlines Inc.	-10.55278174
## 435	Alaska Airlines Inc.	-10.77140124
## 436	Atlantic Southeast Airlines	-12.50000000
## 437	United Air Lines Inc.	-13.00000000
## 438	US Airways Inc.	-13.60000000
## 439	Delta Air Lines Inc.	-14.60000000
## 440	Alaska Airlines Inc.	-14.86885246
## 441	Alaska Airlines Inc.	-15.75000000
## 442	Delta Air Lines Inc.	-16.00000000
## 443	United Air Lines Inc.	-17.00000000
## 444	Alaska Airlines Inc.	-17.35777646
## 445	Alaska Airlines Inc.	-18.69230769
## 446	Atlantic Southeast Airlines	-19.00000000
## 447	Delta Air Lines Inc.	-32.00000000
## 448	Delta Air Lines Inc.	-35.00000000

```
# Mostrar data e hora da finalização
message("Execução finalizada em: ", Sys.time())
```

```
## Execução finalizada em: 2025-09-30 10:56:59.750079
```

5. Fechar a conexão com o banco de dados

```
dbDisconnect(con)
```