ESWD Project

Omar Shatrat

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So far, we have all each individually connected to the SQL server which contains the database for this project. We are still having some trouble accessing the data but we can figure this out later.

To begin, we loaded out data into R.

```
setwd("C:/Users/Omar Shatrat/Documents/ESWD HW/Dillards POS")
dept_info <- read.csv('deptinfo.csv', header = FALSE)
str_info <- read.csv('strinfo.csv', header = FALSE)
dept_info <- dept_info[,1:2]
str_info <- str_info[, 1:4]
colnames(dept_info) <- c('Dept', "Dept_Desc.")
colnames(str_info) <- c("Store", "City", "State", "Zip")
```

The data frame for department info. does not appear to have any meaningful information except that it notes some of the dedicated account teams that operate within Dillards. For now, it suffices to say that the department info data frame consists of 60 rows and 2 columns.

For store info, we see much more interesting insights. The following tables show us the frequency of each city, state and zip code. Little Rock, AK has the largest number of stores with 15 and zip code 72201 has the most number of stores with 14. A bar chart also shows us that Texas is by far the most populous state in terms of store frequency.

```
head(dept_info)
```

```
##   Dept Dept_Desc.
## 1  800   CLINIQUE
## 2  801   LESLIE
## 3 1100   GARY F
## 4 1107   JACQUES
## 5 1202   CABERN
## 6 1301   BE2
```

```
dim(dept_info)
```

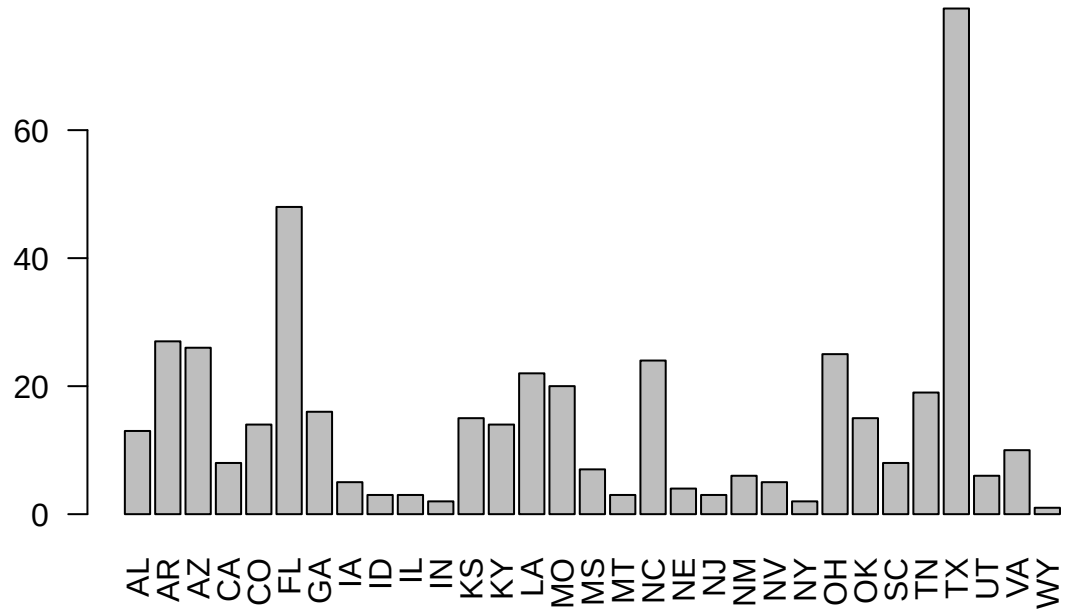
```
## [1] 60  2
```

```
head(str_info)
```

```
##   Store                 City State   Zip
## 1     2 ST. PETERSBURG          FL 33710
```

```
## 2     3 ST. LOUIS               MO 63126
## 3     4 LITTLE ROCK             AR 72201
## 4     7 FORT WORTH              TX 76137
## 5     9 TEMPE                   AZ 85281
## 6    60 ASPEN                   CO 81611
```

```
state_table <- data.frame(table(str_info$State))
barplot(table(str_info$State), las = 2, cex.names = 1)
```




```
city_table <- table(str_info$City)
city_table[order(city_table, decreasing = TRUE)]
```

```
##
## LITTLE ROCK          GILBERT            HOUSTON
##                  15                  7                   7
## OLATHE               SAN ANTONIO        BATON ROUGE
##                   7                  7                   6
## CINCINNATI           LOUISVILLE         MABELVALE
##                   6                  6                   5
## NASHVILLE            SALISBURY          TULSA
##                   5                  5                   5
## ARLINGTON            DALLAS             FORT WORTH
##                   4                  4                   4
## FT. WORTH            PHOENIX            RICHMOND
##                   4                  4                   4
```

```
## ST. LOUIS            TOLEDO              VALDOSTA
##                  4                   4                   4
## AUSTIN               CHARLOTTE           COLUMBIA
##                  3                   3                   3
## EL PASO              GARDENA             JACKSONVILLE
##                  3                   3                   3
## LAS VEGAS            LEXINGTON           MEMPHIS
##                  3                   3                   3
## OKLAHOMA CITY        TAMPA               TEMPE
##                  3                   3                   3
## TUCSON               AKRON               ALBUQUERQUE
##                  3                   2                   2
## ASHEVILLE            ATLANTA             AUGUSTA
##                  2                   2                   2
## AURORA               CHESAPEAKE          CLARKSVILLE
##                  2                   2                   2
## COLORADO SPRINGS     FRANKLIN            FT WORTH
##                  2                   2                   2
## HUNTSVILLE           INDEPENDENCE        JEFFERSONTOWN
##                  2                   2                   2
## KANSAS CITY          KNOXVILLE           LITTLETON
##                  2                   2                   2
## MESA                 METAIRIE            MIAMI
##                  2                   2                   2
## MOBILE               MONTGOMERY          NEW YORK
##                  2                   2                   2
## OMAHA                ORLANDO             PLANO
##                  2                   2                   2
## RALEIGH              SARASOTA            SHREVEPORT
##                  2                   2                   2
## TALLAHASSEE          WICHITA             WINSTON-SALEM
##                  2                   2                   2
## ABILENE              AIKEN               ALBANY
##                  1                   1                   1
## ALEXANDRIA           ALPHARETTA          ALTAMONTE SPRINGS
##                  1                   1                   1
## AMARILLO             ANTIOCH             ASHEBORO
##                  1                   1                   1
## ASHTABULA            ASPEN               AUBURN
##                  1                   1                   1
## BARTLESVILLE         BEACHWOOD           BEAUMONT
##                  1                   1                   1
## BILLINGS             BILOXI              BOARDMAN
##                  1                   1                   1
## BOISE                BONITA SPRINGS      BOSSIER CITY
##                  1                   1                   1
## BOWLING GREEN        BOYNTON BEACH       BRADENTON
##                  1                   1                   1
## BRANDON              BROOMFIELD          BROWNSVILLE
##                  1                   1                   1
## BUFORD               CANTON              CARSON
##                  1                   1                   1
## CARY                 CEDAR PARK          CENTENNIAL
##                  1                   1                   1
```

```
## CHANDLER             CHAPEL HILL          CHARLESTON
##                   1                  1                   1
## CHATTANOOGA          CHESTERFIELD         CHEYENNE
##                   1                  1                   1
## CLEARWATER           CLEVELAND            CLOVIS
##                   1                  1                   1
## COLLEGE STATION      COLLIERVILLE         COLONIAL HEIGHTS
##                   1                  1                   1
## COLUMBUS             CORAL SPRINGS        CORALVILLE
##                   1                  1                   1
## CORPUS CHRISTI       COUNCIL BLUFFS       CRESTVIEW HILLS
##                   1                  1                   1
## DAVENPORT            DAYTON               DAYTONA BEACH
##                   1                  1                   1
## DECATUR              DENTON               DOTHAN
##                   1                  1                   1
## DOUGLASVILLE         DURHAM               EL CENTRO
##                   1                  1                   1
## ELYRIA               ENID                 EUCLID
##                   1                  1                   1
## FAIRVIEW HEIGHTS     FAIRVIEW PARK        FARMINGTON
##                   1                  1                   1
## FAYETTEVILLE         FLAGSTAFF            FLORENCE
##                   1                  1                   1
## FLORISSANT           FORT SMITH           FRIENDSWOOD
##                   1                  1                   1
## FT MYERS             FT. LAUDERDALE       GAINESVILLE
##                   1                  1                   1
## GARLAND              GASTONIA             GLEN ALLEN
##                   1                  1                   1
## GLENDALE             GOODLETTSVILLE       GRAND ISLAND
##                   1                  1                   1
## GREELEY              GREENSBORO           GREENVILLE
##                   1                  1                   1
## GRETNA               HAMMOND              HARLINGEN
##                   1                  1                   1
## HATTIESBURG          HELENA               HENDERSON
##                   1                  1                   1
## HERMITAGE            HICKORY              HIGH POINT
##                   1                  1                   1
## HOT SPRINGS          HOUMA                HUMBLE
##                   1                  1                   1
## HURST                HUTCHINSON           IDAHO FALLS
##                   1                  1                   1
## IRVING               JACKSON              JEFFERSON CITY
##                   1                  1                   1
## JENSEN BEACH         JONESBORO            KENNER
##                   1                  1                   1
## KILLEEN              LAFAYETTE            LAKE CHARLES
##                   1                  1                   1
## LAKE JACKSON         LAKE WALES           LAKELAND
##                   1                  1                   1
## LAKEWOOD             LAREDO               LAS CRUCES
##                   1                  1                   1
```

```
## LAWTON               LEE'S SUMMIT         LEWISVILLE
##                   1                  1                  1
## LINCOLN              LITHONIA             LOGAN
##                   1                  1                  1
## LONGMONT             LONGVIEW             LOS ANGELES
##                   1                  1                  1
## LUBBOCK              LYNDHURST            MACON
##                   1                  1                  1
## MANHATTAN            MARION               MARREOR
##                   1                  1                  1
## MARY ESTHER          MCALLEN              MELBOURNE
##                   1                  1                  1
## MENTOR               MERIDIAN             MERRITT ISLAND
##                   1                  1                  1
## MESQUITE             MIDLAND              MIDWEST CITY
##                   1                  1                  1
## MISSION              MISSOULA             MOLINE
##                   1                  1                  1
## MONMOUTH JUNCTION    MONROE               MURFREESBORO
##                   1                  1                  1
## MURRAY               MUSKOGEE             MYRTLE BEACH
##                   1                  1                  1
## NAPLES               NEW ORLEANS          NEWPORT NEWS
##                   1                  1                  1
## NILES                NORFOLK              NORMAN
##                   1                  1                  1
## NORTH CHARLESTON     NORTH LITTLE ROCK    NORTH OLMSTED
##                   1                  1                  1
## OCOEE                ODESSA               OGDEN
##                   1                  1                  1
## ORANGE PARK          OVERLAND PARK        OVIEDO
##                   1                  1                  1
## OXFORD               PADUCAH              PALMDALE
##                   1                  1                  1
## PANAMA CITY          PASADENA             PEMBROKE PINES
##                   1                  1                  1
## PENSACOLA            PINE BLUFF           PINEVILLE
##                   1                  1                  1
## PLANTATION           POCATELLO            PORT ARTHUR
##                   1                  1                  1
## PORT CHARLOTTE       PORT RICHEY          PRESCOTT
##                   1                  1                  1
## PROVO                PUEBLO               RAYTOWN
##                   1                  1                  1
## RENO                 RICHARDSON           RIDGELAND
##                   1                  1                  1
## ROGERS               SALINA               SAN ANGELO
##                   1                  1                  1
## SANDY                SANFORD              SANTA FE
##                   1                  1                  1
## SAVANNAH             SCOTTSDALE           SHAWNEE
##                   1                  1                  1
## SHERMAN              SIERRA VISTA         SLIDELL
##                   1                  1                  1
```

```
## SOUTHAVEN            SPANISH FORT         SPARTANBURG
##                   1                   1                   1
## SPRINGFIELD          ST CHARLES           ST GEORGE
##                   1                   1                   1
## ST LOUIS             ST PETERSBURG        ST. ANN
##                   1                   1                   1
## ST. JOSEPH           ST. PETERS           ST. PETERSBURG
##                   1                   1                   1
## STOCKTON             STRONGSVILLE         SUGAR LAND
##                   1                   1                   1
## TEMPLE               TEXARKANA            TEXAS CITY
##                   1                   1                   1
## THE WOODLANDS        TOPEKA               TULLAHOMA
##                   1                   1                   1
## TUSCALOOSA           TYLER                VERO BEACH
##                   1                   1                   1
## VICKSBURG            VICTORIA             VIRGINIA BEACH
##                   1                   1                   1
## WACO                 WATERLOO             WELLINGTON
##                   1                   1                   1
## WEST DES MOINES      WEST PALM BEACH      WESTMINSTER
##                   1                   1                   1
## WICHITA FALLS        WILMINGTON           WINTER PARK
##                   1                   1                   1
## XXXXXXXXXXXXXXXXXXXX YUMA
##                   1                   1
```

```
zip_table <- table(str_info$Zip)
zip_table[order(zip_table, decreasing = TRUE)]
```

```
##
## 72201 66062 76137 85233 28146 72103 31601 40299 76011 85281 90248 99999 23235
##    14     7     7     7     5     5     4     3     3     3     3     3     2
## 30909 33710 36117 63126 70802 74135 78216 79925 80021  7071  8810  8852 10019
##     2     2     2     2     2     2     2     2     2     1     1     1     1
## 10036 23060 23233 23320 23321 23452 23510 23602 23834 27103 27105 27203 27262
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 27407 27511 27514 27615 27616 27707 28054 28134 28211 28212 28216 28403 28602
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 28805 28806 29212 29223 29301 29406 29407 29577 29607 29803 30022 30038 30135
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 30346 30363 30519 31206 31419 31707 31909 32073 32114 32225 32246 32256 32301
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 32303 32405 32504 32569 32605 32701 32765 32771 32789 32803 32809 32904 32952
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 32966 33026 33071 33172 33189 33304 33388 33401 33414 33426 33511 33607 33612
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 33625 33761 33809 33859 33901 33948 34102 34135 34205 34238 34239 34668 34761
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 34957 35405 35601 35630 35801 35806 36203 36303 36527 36606 36830 37013 37040
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 37067 37072 37076 37129 37207 37211 37215 37221 37388 37421 37919 37924 38017
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 38115 38117 38133 38671 39157 39180 39209 39301 39402 39531 40202 40207 40216
```

```
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 40218 40219 40502 40503 40504 41017 42001 42104 43606 43612 43614 43623 44004
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 44035 44060 44070 44113 44122 44126 44132 44136 44322 44333 44446 44512 44718
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 45005 45211 45236 45245 45246 45249 45251 47129 47374 50266 50702 51503 52011
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 52241 52806 59102 59601 59801 61265 62208 62959 63017 63034 63074 63101 63117
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 63129 63301 63376 64055 64057 64063 64114 64133 64155 64506 65109 65203 65804
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 66205 66214 66502 66604 67207 67209 67401 67501 68114 68144 68505 68803 70002
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 70006 70053 70065 70072 70127 70364 70403 70460 70503 70601 70801 70806 70815
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 70836 71104 71111 71118 71203 71301 71601 71913 72116 72205 72401 72703 72756
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 72903 73072 73110 73118 73134 73149 73501 73703 74006 74110 74133 74134 74401
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 74804 75040 75062 75067 75075 75081 75090 75093 75150 75207 75225 75237 75240
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 75503 75605 75703 76015 76053 76111 76116 76132 76205 76308 76502 76543 76710
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 76904 77024 77036 77055 77056 77060 77070 77082 77338 77380 77479 77506 77546
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 77566 77591 77642 77706 77840 77904 78041 78205 78218 78238 78247 78256 78411
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 78501 78526 78552 78613 78746 78752 79121 79414 79606 79705 79762 79912 80012
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 80030 80122 80123 80124 80226 80501 80631 80909 80920 81008 81611 82009 83202
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 83404 83704 84070 84107 84341 84405 84601 84790 85015 85032 85033 85051 85202
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 85206 85226 85251 85308 85365 85635 85705 85711 85716 86004 86303 87110 87114
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 87402 87505 88011 88101 89014 89107 89109 89119 89511 90079 90746 92243 93551
##     1     1     1     1     1     1     1     1     1     1     1     1     1
## 95207
##     1
```