Module 3 Challenge: A High-Stakes Investigation

Step 1: Investigation preparation.

1. Create a single directory titled - Lucky_Duck_Investigation

```
mkdir Lucky_Duck_Investigation
```

2. Inside this, create a directory for investigation - Roulette_Loss_Investigation

```
cd Lucky_Duck_Investigation
mkdir Roulette_Loss_Investigation
```

3. Inside this, create three directories - Player_Analysis, Dealer_Analysis, Player_Dealer_Correlation

```
mkdir Player_Analysis Dealer_Analysis Player_Dealer_Correlation
```

4. Create empty files called Notes_Player_Analysis.txt, Notes_Dealer_Analysis.txt, and Notes_Player_Dealer_Correlation.txt in each subdirectory.

```
cd Player_Analysis
touch Notes_Player_Analysis.txt

cd ../
cd Dealer_Analysis
touch Notes_Dealer_Analysis.txt

cd ../
cd Player_Dealer_Correlation
touch Player_Dealer_Correlation.txt
```

Completed as instructed:

Step 2: Gathering Evidence

1. From Home directory, the following command is run:

```
wget "https://drive.google.com/uc?id=1ZLY_fuFu3wz7tOlxf-GUrnvp3htuGKSa" -O 3-HW-setup-evidence && chmod +x ./3-HW-setup-evidence && ./3-HW-setup-evidence
```

2. This command adds two more directories in current directory.

- Dealer_Schedules_0310, &
- Roulette_Player_WinLoss_0310

Completed as instructed:

3. Since the losses occurred on March 10, 12 and 15, move the schedules for those days into the directory Dealer_Analysis

From Home directory:

```
 mv ./Dealer_Schedules_0310/0310_Dealer_schedule.txt
./Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis/
 mv ./Dealer_Schedules_0310/0312_Dealer_schedule.txt
./Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis/
 mv ./Dealer_Schedules_0310/0315_Dealer_schedule.txt
./Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis/
```

4. Move the WinLoss Player Data files for those days into the directory Player_Analysis.

From Home directory:

```
 mv ./Roulette_Player_WinLoss_0310/0310_win_loss_player_data.txt
./Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis/
 mv ./Roulette_Player_WinLoss_0310/0312_win_loss_player_data.txt
./Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis/
 mv ./Roulette_Player_WinLoss_0310/0315_win_loss_player_data.txt
./Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis/
```

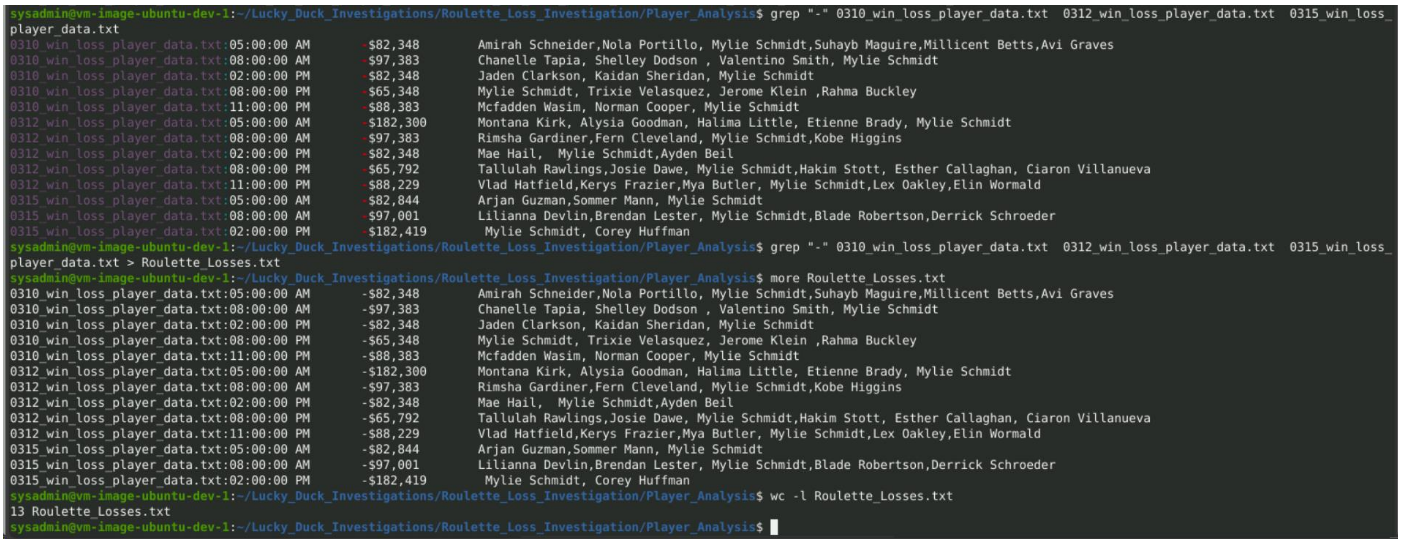
Step 3: Correlating the Evidence : Correlate the large losses from the Roulette tables with the dealer schedules.

1. Complete the player analysis:
a. Use grep to isolate all of the losses that occurred on March 10,12 and 15.

```
grep "-" *
```

b. Place those results in a file called Roulette_Losses.txt

```
grep "-" * > Roulette_Losses.txt
```



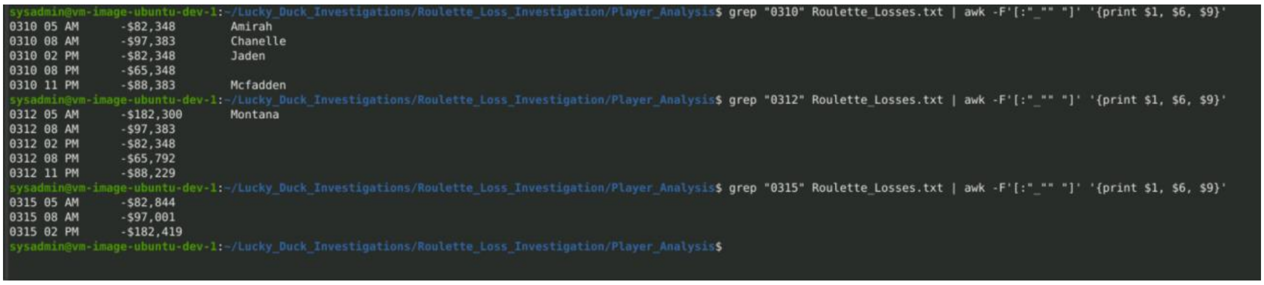
```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep "-" 0310_win_loss_player_data.txt  0312_win_loss_player_data.txt  0315_win_loss_
player_data.txt
0310_win_loss_player_data.txt:05:00:00 AM       -$82,348        Amirah Schneider,Nola Portillo, Mylie Schmidt,Suhayb Maguire,Millicent Betts,Avi Graves
0310_win_loss_player_data.txt:08:00:00 AM       -$97,383        Chanelle Tapia, Shelley Dodson , Valentino Smith, Mylie Schmidt
0310_win_loss_player_data.txt:02:00:00 PM       -$82,348        Jaden Clarkson, Kaidan Sheridan, Mylie Schmidt
0310_win_loss_player_data.txt:08:00:00 PM       -$65,348        Mylie Schmidt, Trixie Velasquez, Jerome Klein ,Rahma Buckley
0310_win_loss_player_data.txt:11:00:00 PM       -$88,383        Mcfadden Wasim, Norman Cooper, Mylie Schmidt
0312_win_loss_player_data.txt:05:00:00 AM       -$182,300       Montana Kirk, Alysia Goodman, Halima Little, Etienne Brady, Mylie Schmidt
0312_win_loss_player_data.txt:08:00:00 AM       -$97,383        Rimsha Gardiner,Fern Cleveland, Mylie Schmidt,Kobe Higgins
0312_win_loss_player_data.txt:02:00:00 PM       -$82,348        Mae Hail,  Mylie Schmidt,Ayden Beil
0312_win_loss_player_data.txt:08:00:00 PM       -$65,792        Tallulah Rawlings,Josie Dawe, Mylie Schmidt,Hakim Stott, Esther Callaghan, Ciaron Villanueva
0312_win_loss_player_data.txt:11:00:00 PM       -$88,229        Vlad Hatfield,Kerys Frazier,Mya Butler, Mylie Schmidt,Lex Oakley,Elin Wormald
0315_win_loss_player_data.txt:05:00:00 AM       -$82,844        Arjan Guzman,Sommer Mann, Mylie Schmidt
0315_win_loss_player_data.txt:08:00:00 AM       -$97,001        Lilianna Devlin,Brendan Lester, Mylie Schmidt,Blade Robertson,Derrick Schroeder
0315_win_loss_player_data.txt:02:00:00 PM       -$182,419        Mylie Schmidt, Corey Huffman
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep "-" 0310_win_loss_player_data.txt  0312_win_loss_player_data.txt  0315_win_loss_
player_data.txt > Roulette_Losses.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ more Roulette_Losses.txt
0310_win_loss_player_data.txt:05:00:00 AM       -$82,348        Amirah Schneider,Nola Portillo, Mylie Schmidt,Suhayb Maguire,Millicent Betts,Avi Graves
0310_win_loss_player_data.txt:08:00:00 AM       -$97,383        Chanelle Tapia, Shelley Dodson , Valentino Smith, Mylie Schmidt
0310_win_loss_player_data.txt:02:00:00 PM       -$82,348        Jaden Clarkson, Kaidan Sheridan, Mylie Schmidt
0310_win_loss_player_data.txt:08:00:00 PM       -$65,348        Mylie Schmidt, Trixie Velasquez, Jerome Klein ,Rahma Buckley
0310_win_loss_player_data.txt:11:00:00 PM       -$88,383        Mcfadden Wasim, Norman Cooper, Mylie Schmidt
0312_win_loss_player_data.txt:05:00:00 AM       -$182,300       Montana Kirk, Alysia Goodman, Halima Little, Etienne Brady, Mylie Schmidt
0312_win_loss_player_data.txt:08:00:00 AM       -$97,383        Rimsha Gardiner,Fern Cleveland, Mylie Schmidt,Kobe Higgins
0312_win_loss_player_data.txt:02:00:00 PM       -$82,348        Mae Hail,  Mylie Schmidt,Ayden Beil
0312_win_loss_player_data.txt:08:00:00 PM       -$65,792        Tallulah Rawlings,Josie Dawe, Mylie Schmidt,Hakim Stott, Esther Callaghan, Ciaron Villanueva
0312_win_loss_player_data.txt:11:00:00 PM       -$88,229        Vlad Hatfield,Kerys Frazier,Mya Butler, Mylie Schmidt,Lex Oakley,Elin Wormald
0315_win_loss_player_data.txt:05:00:00 AM       -$82,844        Arjan Guzman,Sommer Mann, Mylie Schmidt
0315_win_loss_player_data.txt:08:00:00 AM       -$97,001        Lilianna Devlin,Brendan Lester, Mylie Schmidt,Blade Robertson,Derrick Schroeder
0315_win_loss_player_data.txt:02:00:00 PM       -$182,419        Mylie Schmidt, Corey Huffman
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ wc -l Roulette_Losses.txt
13 Roulette_Losses.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ █
```

c. Fill in the analysis in Notes_Player_Analysis.txt with the followings:
  a. The time losses occurred on each day.

```
grep "0310" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}
grep "0312" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}
```

grep "0315" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}

(this also gets the first name of the player on the list, which I don't know how to omit)

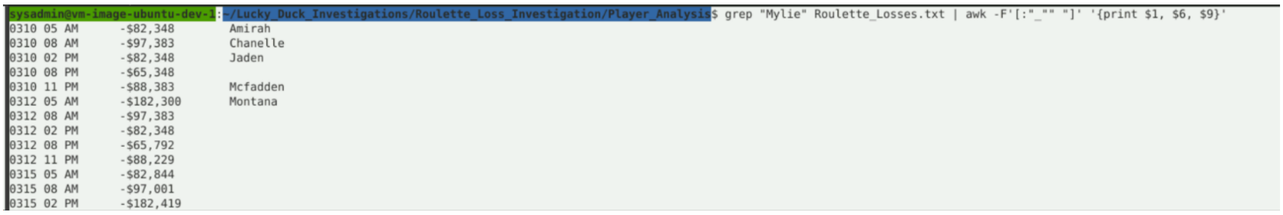


```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep "0310" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}'
0310 05 AM      -$82,348        Amirah
0310 08 AM      -$97,383        Chanelle
0310 02 PM      -$82,348        Jaden
0310 08 PM      -$65,348
0310 11 PM      -$88,383        Mcfadden
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep "0312" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}'
0312 05 AM      -$182,300       Montana
0312 08 AM      -$97,383
0312 02 PM      -$82,348
0312 08 PM      -$65,792
0312 11 PM      -$88,229
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep "0315" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}'
0315 05 AM      -$82,844
0315 08 AM      -$97,001
0315 02 PM      -$182,419
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$
```

- If there is a certain player who was playing during each losses -- Mylie was there playing on given days and times.

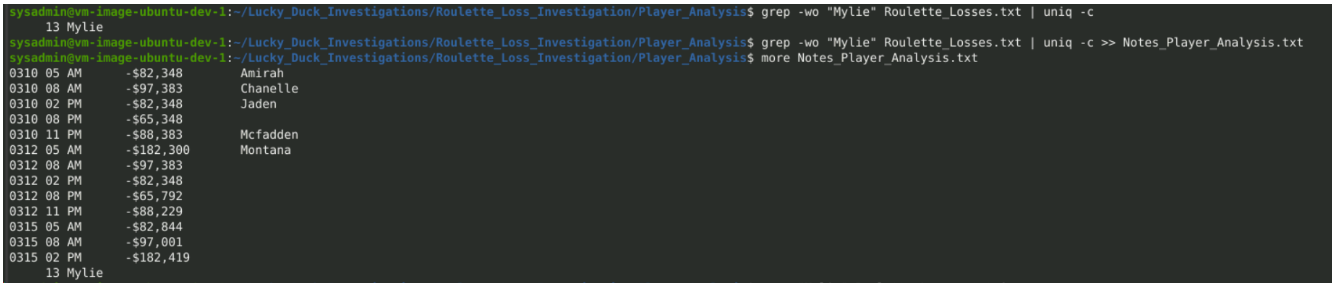
  grep "Mylie" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}'

  Grep "Mylie" Roulette_Losses.txt | wc -l



```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep "Mylie" Roulette_Losses.txt | awk -F'[:"_"" "]' '{print $1, $6, $9}'
0310 05 AM      -$82,348        Amirah
0310 08 AM      -$97,383        Chanelle
0310 02 PM      -$82,348        Jaden
0310 08 PM      -$65,348
0310 11 PM      -$88,383        Mcfadden
0312 05 AM      -$182,300       Montana
0312 08 AM      -$97,383
0312 02 PM      -$82,348
0312 08 PM      -$65,792
0312 11 PM      -$88,229
0315 05 AM      -$82,844
0315 08 AM      -$97,001
0315 02 PM      -$182,419
```

  ○ Total times this player was playing :
    grep -wo "Mylie" Roulette_Losses.txt | uniq -c



```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep -wo "Mylie" Roulette_Losses.txt | uniq -c
     13 Mylie
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ grep -wo "Mylie" Roulette_Losses.txt | uniq -c >> Notes_Player_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Analysis$ more Notes_Player_Analysis.txt
0310 05 AM      -$82,348        Amirah
0310 08 AM      -$97,383        Chanelle
0310 02 PM      -$82,348        Jaden
0310 08 PM      -$65,348
0310 11 PM      -$88,383        Mcfadden
0312 05 AM      -$182,300       Montana
0312 08 AM      -$97,383
0312 02 PM      -$82,348
0312 08 PM      -$65,792
0312 11 PM      -$88,229
0315 05 AM      -$82,844
0315 08 AM      -$97,001
0315 02 PM      -$182,419
     13 Mylie
```

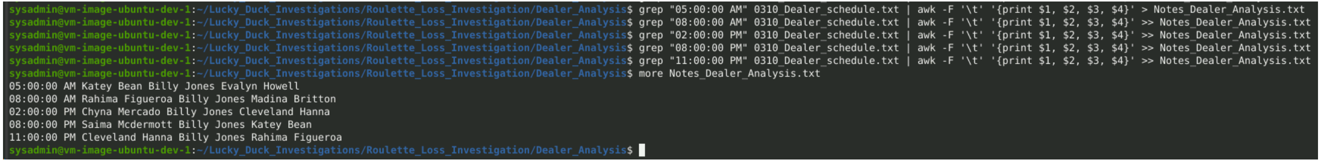
To count all possible players and see how many times they were playing:

Didn't used this:

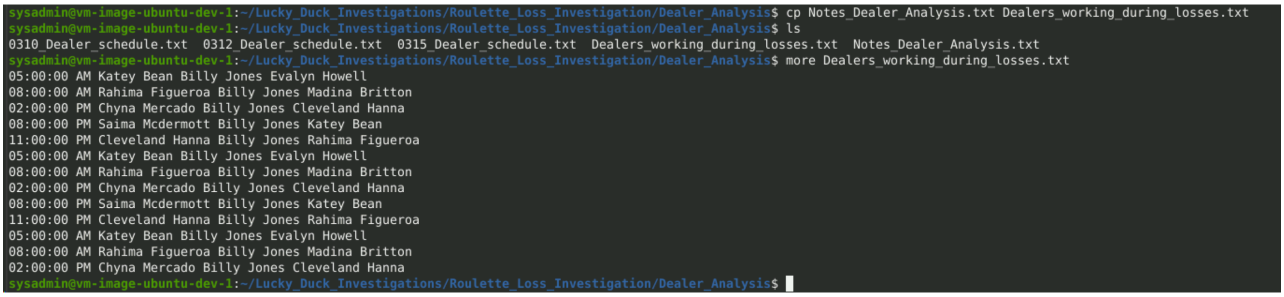
grep -o -w '[[:alpha:]]\+' Roulette_Losses.txt | awk '{ count[$0]++ } END { for (name in count) print name, count[name] }' | sort -k2nr

Dealer Analysis

a. grep "05:00:00 AM" 0310_Dealer_schedule.txt | awk -F '\t' '{print $1, $2, $3, $4}' > Notes_Dealer_Analysis.txt



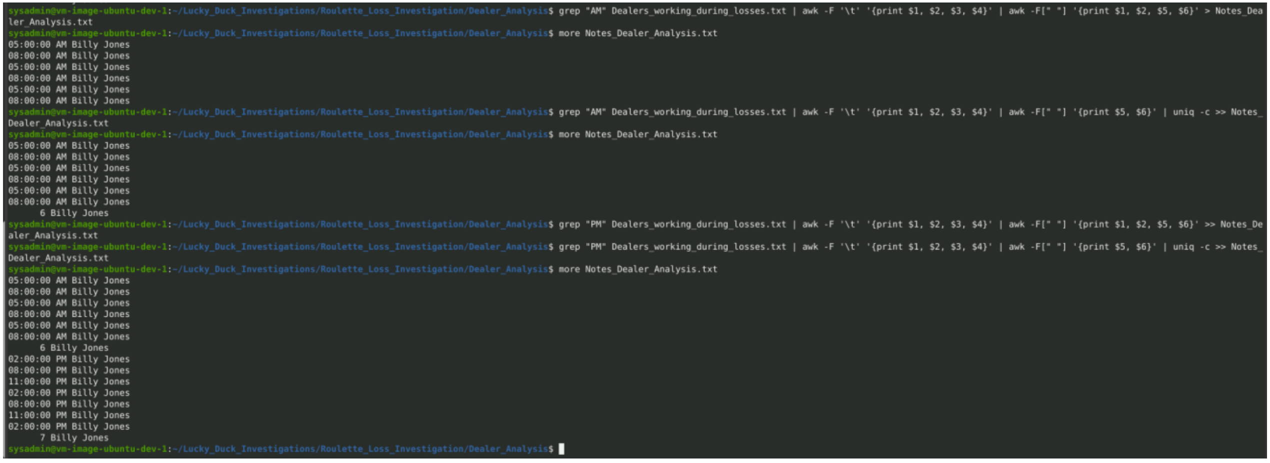
```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "05:00:00 AM" 0310_Dealer_schedule.txt | awk -F '\t' '{print $1, $2, $3, $4}' > Notes_Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "08:00:00 AM" 0310_Dealer_schedule.txt | awk -F '\t' '{print $1, $2, $3, $4}' >> Notes_Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "02:00:00 PM" 0310_Dealer_schedule.txt | awk -F '\t' '{print $1, $2, $3, $4}' >> Notes_Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "08:00:00 PM" 0310_Dealer_schedule.txt | awk -F '\t' '{print $1, $2, $3, $4}' >> Notes_Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "11:00:00 PM" 0310_Dealer_schedule.txt | awk -F '\t' '{print $1, $2, $3, $4}' >> Notes_Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ more Notes_Dealer_Analysis.txt
05:00:00 AM Katey Bean Billy Jones Evalyn Howell
08:00:00 AM Rahima Figueroa Billy Jones Madina Britton
02:00:00 PM Chyna Mercado Billy Jones Cleveland Hanna
08:00:00 PM Saima Mcdermott Billy Jones Katey Bean
11:00:00 PM Cleveland Hanna Billy Jones Rahima Figueroa
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ 
```



```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ cp Notes_Dealer_Analysis.txt Dealers_working_during_losses.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule.txt  0312_Dealer_schedule.txt  0315_Dealer_schedule.txt  Dealers_working_during_losses.txt  Notes_Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ more Dealers_working_during_losses.txt
05:00:00 AM Katey Bean Billy Jones Evalyn Howell
08:00:00 AM Rahima Figueroa Billy Jones Madina Britton
02:00:00 PM Chyna Mercado Billy Jones Cleveland Hanna
08:00:00 PM Saima Mcdermott Billy Jones Katey Bean
11:00:00 PM Cleveland Hanna Billy Jones Rahima Figueroa
05:00:00 AM Katey Bean Billy Jones Evalyn Howell
08:00:00 AM Rahima Figueroa Billy Jones Madina Britton
02:00:00 PM Chyna Mercado Billy Jones Cleveland Hanna
08:00:00 PM Saima Mcdermott Billy Jones Katey Bean
11:00:00 PM Cleveland Hanna Billy Jones Rahima Figueroa
05:00:00 AM Katey Bean Billy Jones Evalyn Howell
08:00:00 AM Rahima Figueroa Billy Jones Madina Britton
02:00:00 PM Chyna Mercado Billy Jones Cleveland Hanna
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ 
```

grep "AM" Dealers_working_during_losses.txt | awk -F '\t' '{print $1, $2, $3, $4}' | awk -F[" "] '{print $1, $2, $5, $6}' > Notes_Dealer_Analysis.txt

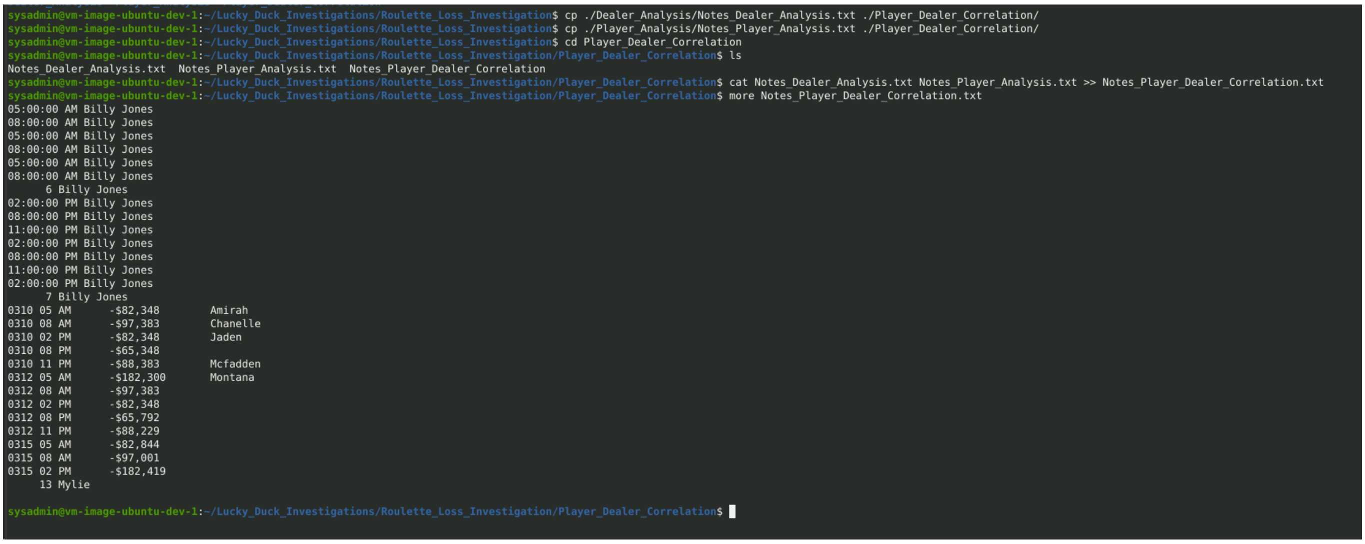
grep "PM" Dealers_working_during_losses.txt | awk -F '\t' '{print $1, $2, $3, $4}' | awk -F[" "] '{print $5, $6}' | uniq -c >> Notes_Dealer_Analysis.txt



```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "AM" Dealers_working_during_losses.txt | awk -F '\t' '{print $1, $2, $3, $4}' | awk -F[" "] '{print $1, $2, $5, $6}' > Notes_Dea
ler_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ more Notes_Dealer_Analysis.txt
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "AM" Dealers_working_during_losses.txt | awk -F '\t' '{print $1, $2, $3, $4}' | awk -F[" "] '{print $5, $6}' | uniq -c >> Notes_
Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ more Notes_Dealer_Analysis.txt
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
      6 Billy Jones
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "PM" Dealers_working_during_losses.txt | awk -F '\t' '{print $1, $2, $3, $4}' | awk -F[" "] '{print $1, $2, $5, $6}' >> Notes_De
aler_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ grep "PM" Dealers_working_during_losses.txt | awk -F '\t' '{print $1, $2, $3, $4}' | awk -F[" "] '{print $5, $6}' | uniq -c >> Notes_
Dealer_Analysis.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ more Notes_Dealer_Analysis.txt
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
      6 Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
02:00:00 PM Billy Jones
      7 Billy Jones
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ 
```

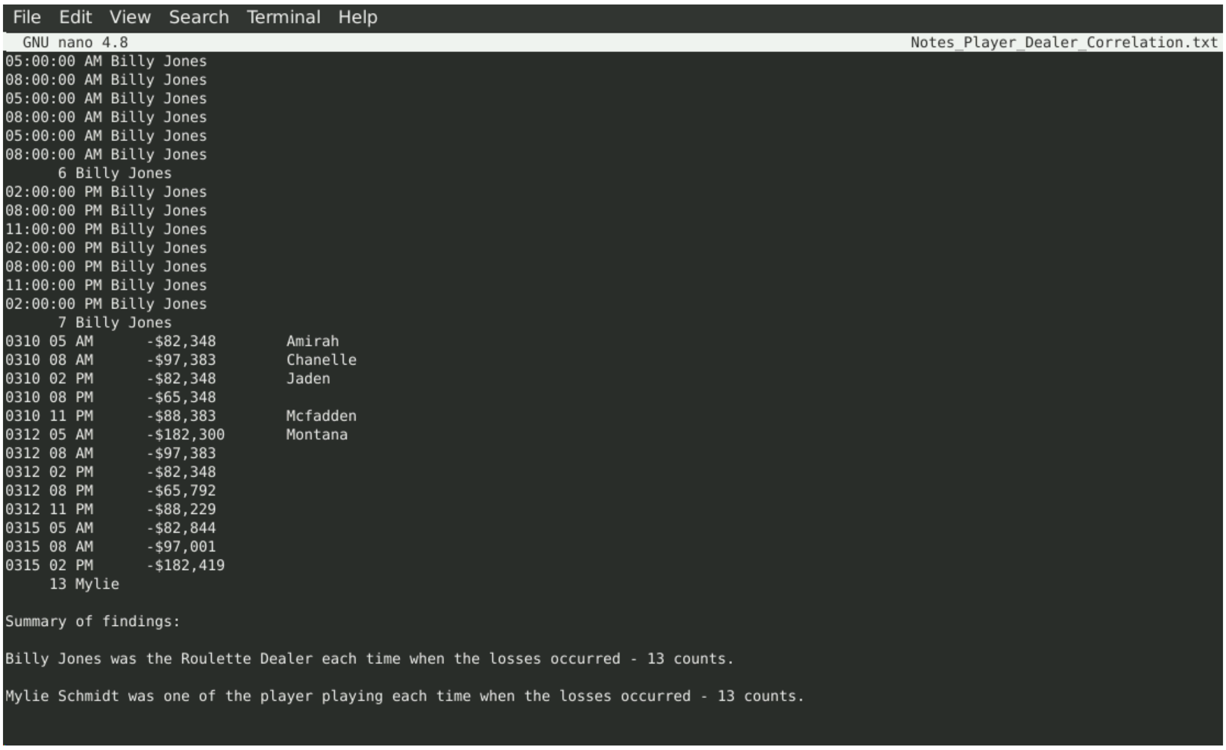
Step 3: Correlating the Evidence

Player_Dealer_Correlation



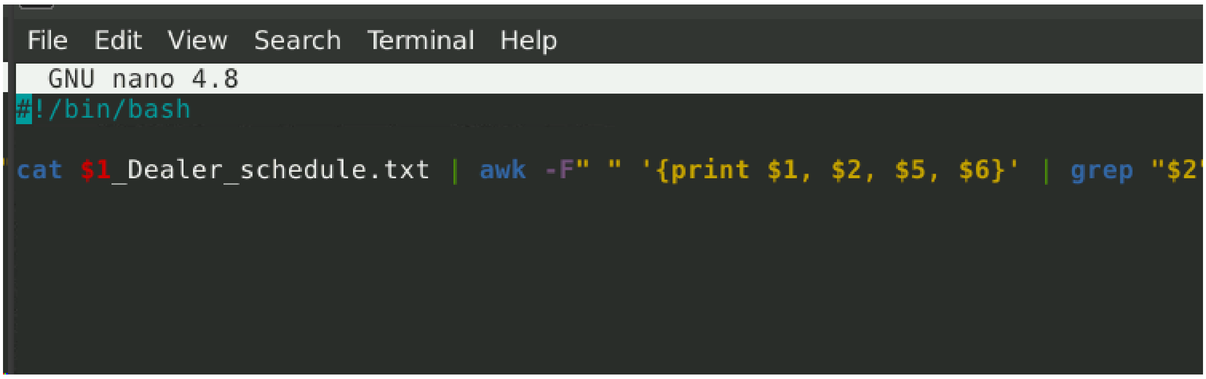
```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation$ cp ./Dealer_Analysis/Notes_Dealer_Analysis.txt ./Player_Dealer_Correlation/
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation$ cp ./Player_Analysis/Notes_Player_Analysis.txt ./Player_Dealer_Correlation/
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation$ cd Player_Dealer_Correlation
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Dealer_Correlation$ ls
Notes_Dealer_Analysis.txt  Notes_Player_Analysis.txt  Notes_Player_Dealer_Correlation
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Dealer_Correlation$ cat Notes_Dealer_Analysis.txt Notes_Player_Analysis.txt >> Notes_Player_Dealer_Correlation.txt
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Dealer_Correlation$ more Notes_Player_Dealer_Correlation.txt
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
      6 Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
02:00:00 PM Billy Jones
      7 Billy Jones
0310 05 AM      -$82,348        Amirah
0310 08 AM      -$97,383        Chanelle
0310 02 PM      -$82,348        Jaden
0310 08 PM      -$65,348
0310 11 PM      -$88,383        Mcfadden
0312 05 AM      -$182,300       Montana
0312 08 AM      -$97,383
0312 02 PM      -$82,348
0312 08 PM      -$65,792
0312 11 PM      -$88,229
0315 05 AM      -$82,844
0315 08 AM      -$97,001
0315 02 PM      -$182,419
     13 Mylie

sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Player_Dealer_Correlation$ 
```

Putting the finding summary: Only the summary bits are edited manually.

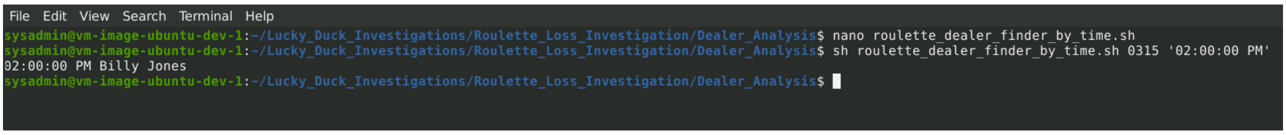


```
  GNU nano 4.8                                                                          Notes_Player_Dealer_Correlation.txt
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
      6 Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
02:00:00 PM Billy Jones
      7 Billy Jones
0310 05 AM      -$82,348        Amirah
0310 08 AM      -$97,383        Chanelle
0310 02 PM      -$82,348        Jaden
0310 08 PM      -$65,348
0310 11 PM      -$88,383        Mcfadden
0312 05 AM      -$182,300       Montana
0312 08 AM      -$97,383
0312 02 PM      -$82,348
0312 08 PM      -$65,792
0312 11 PM      -$88,229
0315 05 AM      -$82,844
0315 08 AM      -$97,001
0315 02 PM      -$182,419
     13 Mylie

Summary of findings:

Billy Jones was the Roulette Dealer each time when the losses occurred - 13 counts.

Mylie Schmidt was one of the player playing each time when the losses occurred - 13 counts.
```

Writing scripts:



```
  GNU nano 4.8
#!/bin/bash

cat $1_Dealer_schedule.txt | awk -F" " '{print $1, $2, $5, $6}' | grep "$2
```



```
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ nano roulette_dealer_finder_by_time.sh
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ sh roulette_dealer_finder_by_time.sh 0315 '02:00:00 PM'
02:00:00 PM Billy Jones
sysadmin@vm-image-ubuntu-dev-1:~/Lucky_Duck_Investigations/Roulette_Loss_Investigation/Dealer_Analysis$ 
```

Compressing the files: Completed as per the instructions.

Submitting the Google link: Completed as per the instructions.

The End.