

Week 3 Project: A High Stakes Investigation

Scenario

You have just been hired by Lucky Duck Casino as a security analyst.

- Lucky Duck has lost a significant amount of money on the roulette tables over the last month.
- The largest losses occurred on March 10, 12, and 15.
- Your manager believes there is a player working with a Lucky Duck dealer to steal money at the roulette tables.
- The casino has a large database with data on wins and losses, player analysis, and dealer schedules.
- You are tasked with navigating, modifying, and analyzing these data files to gather evidence on the rogue player and dealer.
- You will prepare several evidence files to assist the prosecution.
- You must work quickly as Lucky Duck can't afford any more losses.

Lucky Duck Casino has provided you with the following files if required:

- Roulette Player Data: Week of March 10
- Employee Dealer Schedule: Week of March 10

Note: The instructions ask you to set up the files using a wget command, but the files are also provided in compressed zip format if the command does not work.

Lab Environment

- You will use your local Vagrant virtual machine for today's activities. Please note that instructors and students have different access credentials.
 - Username: sysadmin
 - Password: cybersecurity

Instructions

Use your command-line skills to uncover the identities of the rogue casino player and dealer colluding to scam Lucky Duck out of thousands of dollars.

After your investigation, you will provide a summary of your findings to the casino.

Step 1: Investigation Preparation

Your first task is to set up directories to prepare for your investigation.

1. Begin by making a single directory titled `Lucky_Duck_Investigations`.
 2. In this directory, create a directory for this specific investigation titled `Roulette_Loss_Investigation`.
 3. In `Roulette_Loss_Investigation`, create the following directories:
 - o `Player_Analysis` to investigate the casino player.
 - o `Dealer_Analysis` to investigate the dealers.
 - o `Player_Dealer_Correlation` to summarize your findings of the collusion.
 4. Create empty files called `Notes_<Directory Name>` under each subdirectory to store investigation notes.

Step 2: Gathering Evidence

Your next task is to move evidence from the specific days that Lucky Duck experienced heavy losses at the roulette tables.

1. Navigate to the directory where you created the Lucky_Duck_Investigations directory and run the following command to set up the evidence files:
 - wget "https://tinyurl.com/3-HW-setup-evidence" && chmod +x
./3-HW-setup-evidence && ./3-HW-setup-evidence
2. After running this command your current directory should have the following subdirectories:
 - Dealer_Schedules_0310: Contains the dealer schedules.
 - Lucky_Duck_Investigations: Contains the investigation directories and notes files you created.
 - Roulette_Player_WinLoss_0310: Contains the data for player wins and losses.
3. The Dealer_Schedules_0310 and Roulette_Player_WinLoss_0310 directories contain the dealer schedules and win/loss player data from the roulette tables during the week of March 10.
 - Since the losses occurred on March 10, 12, and 15, move the schedules for those days into the directory Dealer_Analysis.

- Move the files for those days into the directory Player_Analysis.

```

Activities Terminal
sysadmin@UbuntuDesktop: ~ ls
Cybersecurity-Lesson-Plans Desktop Documents Downloads lucky_Duck_investigation Music Pictures Public python Templates Videos
sysadmin@UbuntuDesktop: ~ wget https://tinyurl.com/3-hw-setup-evidence && chmod +x ./3-HW-setup-evidence && ./3-HW-setup-evidence
Connecting to tinyurl.com (tinyurl.com)|172.67.1.225|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://tinyurl.com/3-hw-setup-evidence&e=1525310257&f=24/raw/39f7f1b2ae99fe92d0e62bbdd481/Setup_Evidence_Files.sh [following]
--2021-11-24 12:16:49-- https://gist.githubusercontent.com/ddlinus/e5fcfb951bdd18725142cb3f236da24/raw/39f7f1b2ae99fe92d0e62bbdd481/Setup_Evidence_Files.sh
Resolving gist.githubusercontent.com (gist.githubusercontent.com)|185.199.108.133|:443... connected.
Connecting to gist.githubusercontent.com (gist.githubusercontent.com)|185.199.108.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 32625 (32K) [text/plain]
Saving to: '3-HW-setup-evidence'

3-HW-setup-evidence          100%[=====] 31.86K --.-KB/s   in 0.01s
2021-11-24 12:16:50 (2.19 MB/s) - '3-HW-setup-evidence' saved [32625/32625]

sysadmin@UbuntuDesktop: ~ ls
3-HW-setup-evidence Dealer_Schedules_0310 Documents lucky_Duck_investigation Pictures python Templates
Cybersecurity-Lesson-Plans Desktop Downloads Music Public Roulette_Player_WinLoss_0310 Videos
sysadmin@UbuntuDesktop: ~ mv Roulette_Player_WinLoss_0310/* Roulette_Player_WinLoss_0310* Lucky_Duck_Investigations/Roulette_loss_Investigation/Player_Analysis/
mv: cannot move 'Roulette_Player_WinLoss_0310' to 'Lucky_Duck_Investigations/Roulette_loss_Investigation/Player_Analysis': No such file or directory
sysadmin@UbuntuDesktop: ~ cd Roulette_Player_WinLoss_0310/
sysadmin@UbuntuDesktop: ~/Roulette_Player_WinLoss_0310* mv Roulette_Player_WinLoss_0310* Lucky_Duck_Investigations/Roulette_loss_Investigation/Player_Analysis/
mv: cannot stat 'Roulette_Player_WinLoss_0310*': No such file or directory
sysadmin@UbuntuDesktop: ~ rm Roulette_Player_WinLoss_0310*
0310_mv_loss_player_data 0310_mv_winnings_player_data 0314_mv_loss_player_data 0316_mv_loss_player_data
0311_mv_loss_player_data 0313_mv_loss_player_data 0315_mv_loss_player_data 0317_mv_loss_player_data
sysadmin@UbuntuDesktop: ~/Roulette_Player_WinLoss_0310* mv 0310_mv_loss_player_data /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis/
sysadmin@UbuntuDesktop: ~/Roulette_Player_WinLoss_0310* mv 0311_mv_loss_player_data /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis/
0311_mv_loss_player_data 0313_mv_loss_player_data 0314_mv_loss_player_data 0317_mv_loss_player_data
0312_mv_loss_player_data 0314_mv_loss_player_data 0316_mv_loss_player_data
sysadmin@UbuntuDesktop: ~/Roulette_Player_WinLoss_0310* mv 0312_mv_loss_player_data /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis/
sysadmin@UbuntuDesktop: ~/Roulette_Player_WinLoss_0310* mv 0315_mv_loss_player_data /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis/
sysadmin@UbuntuDesktop: ~/Roulette_Player_WinLoss_0310* mv 0316_mv_loss_player_data /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis/
0311_mv_loss_player_data 0313_mv_loss_player_data 0314_mv_loss_player_data 0316_mv_loss_player_data
0312_mv_loss_player_data 0314_mv_loss_player_data 0317_mv_loss_player_data
sysadmin@UbuntuDesktop: ~ ls
0315_mv_loss_player_data 0316_mv_loss_player_data 0317_mv_loss_player_data
sysadmin@UbuntuDesktop: ~ ls
Notes_Dealer_Analysis
sysadmin@UbuntuDesktop: ~ ls
3-HW-setup-evidence Dealer_Schedules_0310 Documents lucky_Duck_investigation Pictures python Templates
Cybersecurity-Lesson-Plans Desktop Downloads Music Public Roulette_Player_WinLoss_0310 Videos
sysadmin@UbuntuDesktop: ~ cd Dealer_Schedules_0310/
sysadmin@UbuntuDesktop: ~/Dealer_Schedules_0310* mv 0313_Dealer_schedule /home/sysadmin/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop: ~/Dealer_Schedules_0310* mv 0310_Dealer_schedule /home/sysadmin/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop: ~/Dealer_Schedules_0310* mv 0312_Dealer_schedule /home/sysadmin/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop: ~/Dealer_Schedules_0310* mv 0315_Dealer_schedule /home/sysadmin/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop: ~ Dealer_Schedules_0310

```

Step 3: Correlating the Evidence

Your next task is to correlate the large losses from the roulette tables with the dealer schedule. This will help you determine which dealer and player are colluding to steal money from Lucky Duck.

Note: Winnings for Lucky Duck Casino are indicated with a positive number and losses are indicated with a negative number.

Complete the player analysis.

1. Navigate to the Player_Analysis directory.
2. Use grep to isolate all of the losses that occurred on March 10, 12, and 15.
3. Place those results in a file called Roulette_Losses.
4. Preview the file Roulette_Losses and analyze the data.
 - Record in the Notes_Player_Analysis file:

- The times the losses occurred on each day.
- If there is a certain player that was playing during each of those times.
- The total count of times this player was playing.
 - **Hint:** Use the wc command to find this value.

Linux-Module_default_1637185719314_92480 [Running]

```

Activities Terminal Wed 14:21
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis
File Edit View Search Terminal Help
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis
0310_win_loss_player_data 0315_win_loss_player_data 0314_win_loss_player_data 0316_win_loss_player_data 0317_win_loss_player_data
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis
Notes_Dealer_Analysts
sysadmin@UbuntuDesktop:~$ ls
3-HW-setup-evidence Dealer_Schedules_0310 Documents Lucky_Duck_Investigation Pictures python Templates
Cybersecurity-Lesson-Plans Desktop Downloads Music Public Roulette_Player_WinLoss_0310 Videos
sysadmin@UbuntuDesktop:~$ cd Dealer_Schedules_0310/
sysadmin@UbuntuDesktop:~/Dealer_Schedules_0310/Dealer_Schedule_0312_Dealer_schedule mv 0314_Dealer_schedule 0315_Dealer_schedule 0316_Dealer_schedule 0317_Dealer_schedule
sysadmin@UbuntuDesktop:~/Dealer_Schedules_0310/mv 0310_Dealer_schedule /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop:~/Dealer_Schedules_0310/mv 0312_Dealer_schedule /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop:~/Dealer_Schedules_0310/mv 0315_Dealer_schedule /home/sysadmin/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop:~/Dealer_Schedules_0310/cd
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ ls
0310_win_loss_player_data 0315_win_loss_player_data Notes_Player_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysis$ head 0310_win_loss_player_data
Hour Player Loss
12:00:00 AM $2,583 Haley Hall,Heath Medina,Deniz Howarth,Nada Ferreira
01:00:00 AM $6,273 Mcfadden Wasim,Norman Cooper,Pruitt Krishan,Wooten Zeeshan,Dunne Farrell
02:00:00 AM $8,234 Chanelle Tapia, Shelley Dodson , Valentino Smith
03:00:00 AM $1,738 Conal Walton,Ibrahim Roy, Indiana Moyer, Nola Portillo, Nathaniel Barron
04:00:00 AM $1,800 Amirah Schneider,Myle Schmidt,Suhayb Maguire,Millicent Betts,Avi Graves,Kayan Stewart
05:00:00 AM -$82,348 Amirah Schneider,Nola Portillo, Myle Schmidt,Suhayb Maguire,Millicent Betts,Avi Graves
06:00:00 AM $13,823 Haley Hall,Heath Medina,Deniz Howarth,Nada Ferreira
07:00:00 AM $1,800 Mcfadden Wasim,Norman Cooper,Pruitt Krishan,Wooten Zeeshan,Dunne Farrell
08:00:00 AM -$97,383 Chanelle Tapia, Shelley Dodson , Valentino Smith, Myle Schmidt
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ head 0310_win_loss_player_data | grep - * > Roulette_Losses
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ ls
0310_win_loss_player_data 0312_win_loss_player_data 0315_win_loss_player_data Notes_Player_Analysis Roulette_Losses
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ head Roulette_Losses
0310_win_loss_player_data:05:00:00 AM -$82,348 Amirah Schneider,Nola Portillo, Myle Schmidt,Suhayb Maguire,Millicent Betts,Avi Graves
0310_win_loss_player_data:08:00:00 AM -$97,383 Chanelle Tapia, Shelley Dodson , Valentino Smith, Myle Schmidt
0310_win_loss_player_data:02:00:00 PM -$82,348 Jaden Clarkson, Kaidan Sheridan, Myle Schmidt
0310_win_loss_player_data:11:00:00 PM -$82,348 Myle Schmidt,Shelley Dodson , Valentino Smith,Rahma Buckley
0310_win_loss_player_data:11:00:00 AM -$88,383 Mcfadden Wasim,Norman Cooper,Myle Schmidt
0312_win_loss_player_data:05:00:00 AM -$182,300 Montana Kirk,Alysia Goodman,Halima Little, Etienne Brady, Myle Schmidt
0312_win_loss_player_data:08:00:00 AM -$97,383 Rinsha Gardiner,Fern Cleveland, Myle Schmidt,Kobe Higgins
0312_win_loss_player_data:02:00:00 PM -$82,348 Max Hall, Myle Schmidt,Ayden Bell
0312_win_loss_player_data:08:00:00 PM -$65,792 Tallulah Rawlings,Josie Dawe, Myle Schmidt,Hakim Stott, Esther Callaghan, Claron Villanueva
0312_win_loss_player_data:11:00:00 PM -$88,229 Vlad Hatfield,Kerry Frazier,Mya Butler, Myle Schmidt,Lex Oakley,Elin Wormald
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ head Roulette_Losses >> Notes_Player_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ nano Notes_Player_Analysis
Use "fg" to return to nano.

[1]+ Stopped nano Notes_Player_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ nano Notes_Player_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ nano Notes_Player_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$ grep 'Myle Schmidt' Roulette_Losses| wc -l
13
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Player_Analysts$
```

```
05:00:00 AM Mylie Schmidt
08:00:00 AM Mylie Schmidt
02:00:00 PM Mylie Schmidt
08:00:00 PM Mylie Schmidt
11:00:00 PM Mylie Schmidt
05:00:00 AM Mylie Schmidt
08:00:00 AM Mylie Schmidt
02:00:00 PM Mylie Schmidt
08:00:00 PM Mylie Schmidt
05:00:00 AM Mylie Schmidt
08:00:00 AM Mylie Schmidt
```

Complete the dealer analysis.

1. Navigate to the Dealer_Analysis directory.
2. This file contains the dealer schedules for the various Lucky Duck casino games: Blackjack, Roulette, and Texas Hold 'Em.
 - o Preview the schedule to view the format and to understand how the data is separated.
3. Using your findings from the player analysis, create a separate script to look at each day and time that you determined losses occurred. Use awk, pipes, and grep to isolate out the following four fields:
 - o Time
 - o a.m./p.m.
 - o First name of roulette dealer
 - o Last name of roulette dealer
4. For example, if a loss occurred on March 10 at 2 p.m., you would write one script to find the roulette dealer who was working at that specific day and time.
 - o **Hint:** You will have many scripts, but only a small change is required for each script.

5. Run all of the scripts and append those results to a file called Dealers_working_during_losses.
6. Preview your file Dealers_working_during_losses and analyze the data.
 - o Record in the Notes_Dealer_Analysis file:
 - The primary dealer working at the times where losses occurred.
 - How many times the dealer worked when major losses occurred.
7. Complete the player/employee correlation.
 - o In the notes file of the Player_Dealer_Correlation directory, add a summary of your findings noting the player and dealer you believe are colluding to scam Lucky Duck.
 - o Make sure to document your specific reasons for this finding.

Linux-Module_default_1637185719314_92480 [Running]

Activities Terminal ▾

sysadmin@UbuntuDesktop: ~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis

File Edit View Search Terminal Help

GNU nano 2.9.3 find_by_time.sh

```
#!/bin/bash

cat 0310_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '05:00:00 AM' > Dealers_working_during_losses
cat 0310_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '08:00:00 AM' >> Dealers_working_during_losses
cat 0310_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '02:00:00 PM' >> Dealers_working_during_losses
cat 0310_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '08:00:00 PM' >> Dealers_working_during_losses
cat 0310_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '11:00:00 PM' >> Dealers_working_during_losses
cat 0312_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '05:00:00 AM' >> Dealers_working_during_losses
cat 0312_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '08:00:00 AM' >> Dealers_working_during_losses
cat 0312_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '02:00:00 PM' >> Dealers_working_during_losses
cat 0312_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '08:00:00 PM' >> Dealers_working_during_losses
cat 0312_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '11:00:00 PM' >> Dealers_working_during_losses
cat 0315_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '05:00:00 AM' >> Dealers_working_during_losses
cat 0315_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '08:00:00 PM' >> Dealers_working_during_losses
cat 0315_Dealer_schedule | awk -F" " '{print $1, $2, $$,$6}' | grep '02:00:00 PM' >> Dealers_working_during_losses
```

[Read 16 lines]

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo M-A Mark Text
^X Exit ^R Read File ^M Replace ^U Uncut Text ^T To Linter ^A Go To Line M-E Redo M-G Copy Text

```
Linux-Module_default_1637185719314_92480 [Running]
Activities Terminal Wed 16:10
sysadmin@UbuntuDesktop: ~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis
File Edit View Search Terminal Help
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0312_Dealer_schedule 0315_Dealer_schedule find_by_time.sh Notes_Dealer_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ nano find_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ chmod +x find_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0312_Dealer_schedule 0315_Dealer_schedule find_by_time.sh Notes_Dealer_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ./find_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0312_Dealer_schedule 0315_Dealer_schedule Dealers_working_during_losses find_by_time.sh Notes_Dealer_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ nano find_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ cat Dealers_working_during_losses
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
05:00:00 AM Billy Jones
08:00:00 AM Billy Jones
02:00:00 PM Billy Jones
08:00:00 PM Billy Jones
11:00:00 PM Billy Jones
05:00:00 AM Billy Jones
08:00:00 PM Billy Jones
02:00:00 PM Billy Jones
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ grep "Billy Jones" Dealers_working_during_losses | wc -l
13
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ touch Notes_Player_Dealer_correlation
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ nano Notes_Player_Dealer_correlation
sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$ cat Notes_Player_Dealer_correlation
The player, Myles Schmidts and the dealer, Billy Jones were both playing and working at the time of the loss respectively and that is very suspicious and raised for concern. They were both playing and working 13 times.

sysadmin@UbuntuDesktop:~/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis$
```

Step 4: Scripting Your Tasks

You manager is impressed with the work you have done so far on the investigation.

They tasked you with building a shell script that can easily analyze future employee schedules. They will use this to determine which employee was working at a specific time in the case of future losses.

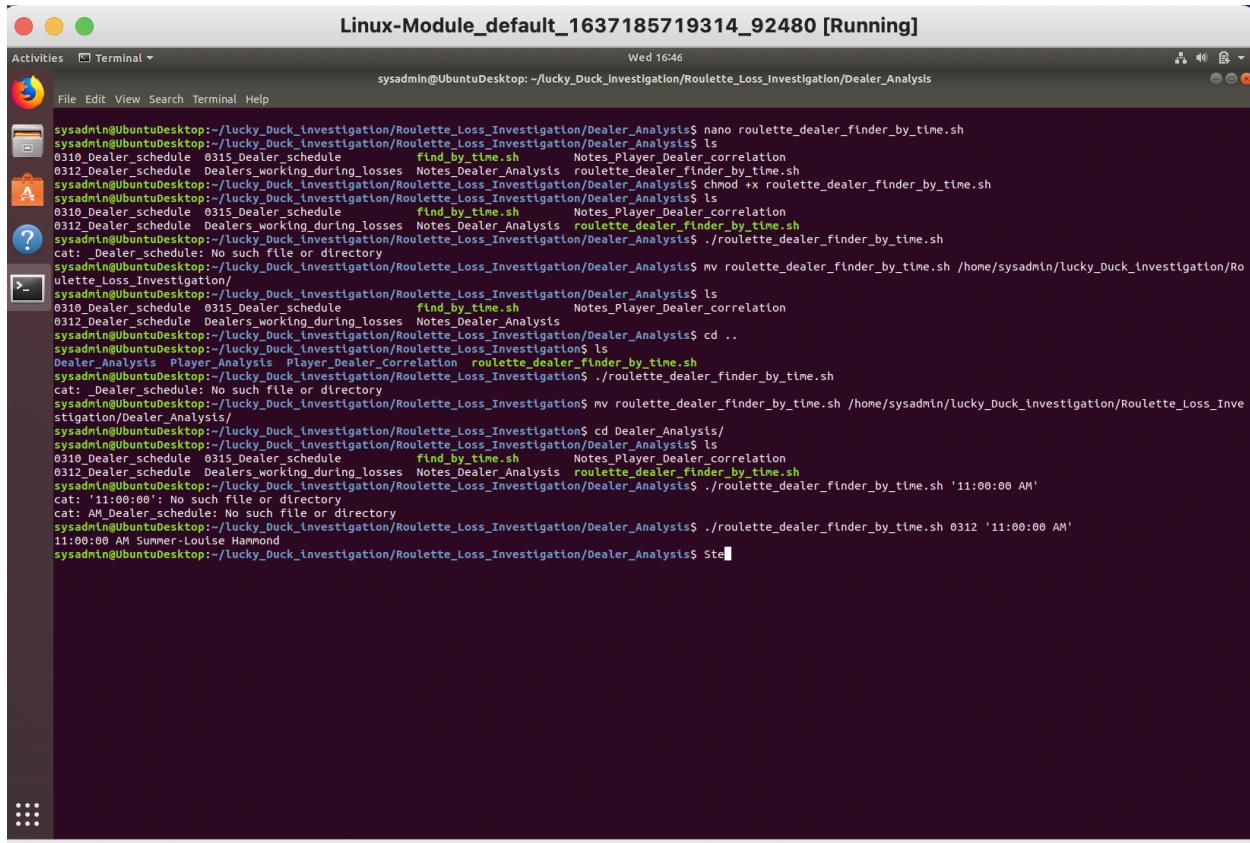
Complete the following tasks:

1. Remain in the Dealer_Analysis directory. Develop a shell script called roulette_dealer_finder_by_time.sh that can analyze the employee schedule to easily find the roulette dealer at a specific time.

Hint: You will be using a script similar to the one you created for the dealer analysis

step, but you will not output the results into a file.

- Design the shell script to accept the following two arguments:
 - One for the date (four digits)
 - One for the time
2. **Note:** The argument should be able to accept a.m. or p.m.
3. Test your script on the schedules to confirm it outputs the correct dealer at the time specified.



```
Linux-Module_default_1637185719314_92480 [Running]
Activities Terminal
File Edit View Search Terminal Help
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ nano roulette_dealer_finder_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0315_Dealer_schedule      find_by_time.sh          Notes_Player_Dealer_correlation
0312_Dealer_schedule Dealers_working_during_losses Notes_Dealer_Analysis roulette_dealer_finder_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ chmod +x roulette_dealer_finder_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0315_Dealer_schedule      find_by_time.sh          Notes_Player_Dealer_correlation
0312_Dealer_schedule Dealers_working_during_losses Notes_Dealer_Analysis roulette_dealer_finder_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ./roulette_dealer_finder_by_time.sh
cat: _Dealer_schedule: No such file or directory
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ mv roulette_dealer_finder_by_time.sh /home/sysadmin/lucky_Duck_investigation/Roulette_Loss_Investigation/
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0315_Dealer_schedule      find_by_time.sh          Notes_Player_Dealer_correlation
0312_Dealer_schedule Dealers_working_during_losses Notes_Dealer_Analysis
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ cd ..
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation$ ls
Dealer_Analysis Player_Analysis Player_Dealer_Correlation roulette_dealer_finder_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation$ ./roulette_dealer_finder_by_time.sh
cat: Dealer_schedule: No such file or directory
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation$ mv roulette_dealer_finder_by_time.sh /home/sysadmin/lucky_Duck_investigation/Roulette_Loss_Investigation/Dealer_Analysis/
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation$ cd Dealer_Analysis/
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ls
0310_Dealer_schedule 0315_Dealer_schedule      find_by_time.sh          Notes_Player_Dealer_correlation
0312_Dealer_schedule Dealers_working_during_losses Notes_Dealer_Analysis roulette_dealer_finder_by_time.sh
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ./roulette_dealer_finder_by_time.sh '11:00:00 AM'
cat: '11:00:00': No such file or directory
cat: AM_Dealer_schedule: No such file or directory
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ ./roulette_dealer_finder_by_time.sh 0312 '11:00:00 AM'
11:00:00 AM Summer-Louise Hammond
sysadmin@UbuntuDesktop:~/lucky_Duck_Investigation/Roulette_Loss_Investigation/Dealer_Analysis$ Stc
```

Bonus

- In case there is future fraud on the other Lucky Duck games, create a shell script called `roulette_dealer_finder_by_time_and_game.sh` that has the three following arguments:
 - Specific time
 - Specific date

- Casino game being played
- **Hint:** The argument does not need to name the specific casino game.