

# Opensource SW Project 1

OSS1 TA  
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# Project Overview

- Make your script program for handling input files in BASH
- Requirement
  1. Get the data of Heung-Min Son's Current Club, Appearances, Goals, Assists in players.csv
  2. Get the team data to enter a league position in teams.csv
  3. Get the Top-3 Attendance matches in mateches.csv
  4. Get the team's league position and team's top scorer in teams.csv & players.csv
  5. Get the modified format of date\_GMT in matches.csv
  6. Get the data of the winning team by the largest difference on home stadium in teams.csv & matches.csv
  7. Exit

```
$ ./2024-OSS-Project1.sh
usage: ./2024-OSS-Project1.sh file1 file2 file3

$ ./2024-OSS-Project1.sh teams.csv players.csv matches.csv
*****OSS1 - Project1*****
*      StudentID : 12345678      *
*      Name : Gildong Hong      *
*****

[MENU]
1. Get the data of Heung-Min Son's Current Club, Appearances, Goals, Assists in
players.csv
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3. Get the Top-3 Attendance matches in mateches.csv
4. Get the team's league position and team's top scorer in teams.csv & players.csv
5. Get the modified format of date_GMT in matches.csv
6. Get the data of the winning team by the largest difference on home stadium in teams.csv
& matches.csv
7. Exit
Enter your CHOICE (1~7) : 1
Do you want to get the Heung-Min Son's data? (y/n) :y
Team:Tottenham Hotspur, Apperance:31, Goal:12, Assist:6

[MENU]
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7. Exit
Enter your CHOICE (1~7) :
```

Error message

whoami

Repeat until 7 (Exit)



# Input files (teams.csv, players.csv)

- The record data of 20 teams in teams.csv

\$ cat teams.csv

common\_name,wins,draws,losses,points\_per\_game,league\_position,cards\_total,shots,fouls

Arsenal,21,7,10,1.84,5,76,377,412

Tottenham Hotspur,23,2,13,1.87,4,62,433,376

Manchester City,32,2,4,2.58,1,46,527,328

Leicester City,15,7,16,1.37,9,67,420,351

Crystal Palace,14,7,17,1.29,12,62,392,386

...

- The record data of 570 players in players.csv

\$ cat players.csv

Full\_name,age,position,Current Club,nationality,appearances\_overall,goals\_overall,assists\_overall

Aaron Cresswell,32,Defender,West Ham United,England,20,0,1

Aaron Lennon,35,Midfielder,Burnley,England,16,1,1

Aaron Mooy,32,Midfielder,Huddersfield Town,Australia,29,3,1

Aaron Ramsey,31,Midfielder,Arsenal,Wales,28,4,6

Aaron Rowe,22,Forward,Huddersfield Town,England,2,0,0

...



# Input file (matches.csv)

- The record data of matches in matches.csv

```
$ cat matches.csv
```

```
date_GMT,attendance,home_team_name,away_team_name,home_team_goal_count,away_team_goal_count,stadium_name
```

```
Aug 10 2018 - 7:00pm,74439,Manchester United,Leicester City,2,1,Old Trafford (Manchester)
```

```
Aug 11 2018 - 11:30am,51749,Newcastle United,Tottenham Hotspur,1,2,St. James' Park (Newcastle upon Tyne)
```

```
Aug 11 2018 - 2:00pm,10353,AFC Bournemouth,Cardiff City,2,0,Vitality Stadium (Bournemouth- Dorset)
```

```
Aug 11 2018 - 2:00pm,24821,Fulham,Crystal Palace,0,2,Craven Cottage (London)
```

```
Aug 11 2018 - 2:00pm,24121,Huddersfield Town,Chelsea,0,3,John Smith's Stadium (Huddersfield- West Yorkshire)
```

```
Aug 11 2018 - 2:00pm,20051,Watford,Brighton & Hove Albion,2,0,Vicarage Road (Watford)
```

```
Aug 11 2018 - 4:30pm,31231,Wolverhampton Wanderers,Everton,2,2,Molineux Stadium (Wolverhampton- West Midlands)
```

```
Aug 12 2018 - 12:30pm,53235,Liverpool,West Ham United,4,0,Anfield (Liverpool)
```

```
Aug 12 2018 - 12:30pm,30784,Southampton,Burnley,0,0,St. Mary's Stadium (Southampton- Hampshire)
```

```
Aug 12 2018 - 3:00pm,59934,Arsenal,Manchester City,0,2,Emirates Stadium (London)
```

```
Aug 18 2018 - 11:30am,30720,Cardiff City,Newcastle United,0,0,Cardiff City Stadium (Cardiff (Caerdydd))
```

```
Aug 18 2018 - 2:00pm,38601,Everton,Southampton,2,1,Goodison Park (Liverpool)
```

```
Aug 18 2018 - 2:00pm,32043,Leicester City,Wolverhampton Wanderers,2,0,King Power Stadium (Leicester- Leicestershire)
```

```
Aug 18 2018 - 2:00pm,58297,Tottenham Hotspur,Fulham,3,1,Wembley Stadium (London)
```

```
...
```

# 1. Get the data of Heung-Min Son's Current Club, Appearances, Goals, Assists in players.csv

- Print the data of Heung-Min Son's Team, Appearance, Goal, Assist
- The data can be found players.csv

```
$ ./2024-OSS-Project1.sh teams.csv players.csv matches.csv
```

```
*****OSS1 - Project1*****
```

```
*      StudentID : 12345678      *
```

```
*      Name : Gildong Hong      *
```

```
*****
```



whoami

```
[MENU]
```

```
1. Get the data of Heung-Min Son's Current Club, Appearances, Goals, Assists in players.csv
```

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2. Get the team data to enter a league position in teams.csv
```

```
3. Get the Top-3 Attendance matches in matches.csv
```

```
4. Get the team's league position and team's top scorer in teams.csv & players.csv
```

```
5. Get the modified format of date_GMT in matches.csv
```

```
6. Get the data of the winning team by the largest difference on home stadium in teams.csv & matches.csv
```

```
7. Exit
```

```
Enter your CHOICE (1~7) : 1
```

```
Do you want to get the Heung-Min Son's data? (y/n) :y
```

```
Team:Tottenham Hotspur, Appearances:31, Goals:12, Assists:6
```

```
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```

```
...
```

## 2. Get the team data to enter a league position in teams.csv

- Enter the league position and print the team data with that league position
- The team data includes league position, team name, winning rate ( wins / (wins+draws+losses) )
- The data can be found teams.csv

[MENU]

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Enter your CHOICE (1~7) : 2

What do you want to get the team data of league\_position[1~20] : 17

17 Brighton & Hove Albion 0.236842

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### 3. Get the Top-3 Attendance matches in matches.csv

- Print the data of Top-3 Attendance match in order of the highest number
- The data includes information of two teams, date, attendance, stadium
- The data can be found matches.csv
- You can sort data in descending order by field ( command : sort -r -k )

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Enter your CHOICE (1~7) : 3

Do you want to know Top-3 attendance data and average attendance? (y/n) : y

\*\*\*Top-3 Attendance Match\*\*\*

Tottenham Hotspur vs Arsenal (Mar 02 2019 - 12:30pm)

81332 Wembley Stadium (London)

Tottenham Hotspur vs Liverpool (Sep 15 2018 - 11:30am)

80188 Wembley Stadium (London)

Tottenham Hotspur vs Manchester United (Jan 13 2019 - 4:30pm)

80062 Wembley Stadium (London)

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...

(Example for describing “sort” option)

**\$ cat sort-ex1.txt**

LeeBiryong C 65

KimInha B 79

ParkJeongseok A 92

**\$ cat sort-ex1.txt | sort -r -k 3**

ParkJeongseok A 92

KimInha B 79

LeeBiryong C 65

## 4. Get the team's league position and team's top scorer in teams.csv & players.csv

- Use the data of team's name in teams.csv (Do not hard code)
- Print the data of each team's league position and the player with the highest score on each teams
- Data can be found teams.csv, players.csv
- (Hint) Bash's variable "IFS" can recognize word boundaries. You can use it on "for", "select" ... etc ( Default : ' ' (space) )

### (Example for describing "IFS" variable)

```
$ cat ifs.txt
Manchester City,Cardiff City
$ IFS=,
$ for var in $(cat ifs.txt); do echo $var; done
Manchester City
Cardiff City
```

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...

Enter your CHOICE (1~7) : 4

Do you want to get each team's ranking and the highest-scoring player? (y/n) : y

1 Manchester City  
Sergio Aguero 21

2 Liverpool  
Sadio Man? 22

3 Chelsea  
Eden Hazard 16

...

19 Fulham  
Aleksandar Mitrovi? 11

20 Huddersfield Town  
Karlán Ahearne-Grant 4

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...



## 5. Get the modified format of date\_GMT in matches.csv

- Modified the data of date\_GMT in matches.csv
- Format : [yyyy/mm/dd h:mm(am|pm)]
- USE sed of BASH
- Prints 10 lines of modified date\_GMT
- Data can be found in matches.csv

```
[MENU]
...

Enter your CHOICE (1~7) : 5
Do you want to modify the format of date? (y/n) : y
2018/03/10 7:00pm
2018/03/11 11:30am
2018/03/11 2:00pm
2018/03/11 2:00pm
2018/03/11 2:00pm
2018/03/11 2:00pm
2018/03/11 4:30pm
2018/03/12 12:30pm
2018/03/12 12:30pm
2018/03/12 3:00pm

[MENU]
...
```

## 6. Get the data of the winning team by the largest difference on home stadium in teams.csv & matches.csv

- Select team number
- Print the data of the selected team's game won by the largest goal difference on home stadium
- Data can be found teams.csv, matches.csv

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...

Enter your CHOICE (1~7) : 6

- |                       |                             |
|-----------------------|-----------------------------|
| 1) Arsenal            | 11) Liverpool               |
| 2) Tottenham Hotspur  | 12) Chelsea                 |
| 3) Manchester City    | 13) West Ham United         |
| 4) Leicester City     | 14) Watford                 |
| 5) Crystal Palace     | 15) Newcastle United        |
| 6) Everton            | 16) Cardiff City            |
| 7) Burnley            | 17) Fulham                  |
| 8) Southampton        | 18) Brighton & Hove Albion  |
| 9) AFC Bournemouth    | 19) Huddersfield Town       |
| 10) Manchester United | 20) Wolverhampton Wanderers |

Enter your team number : 5

Dec 01 2018 - 3:00pm  
Crystal Palace 2 vs 0 Burnley

Feb 02 2019 - 3:00pm  
Crystal Palace 2 vs 0 Fulham

Mar 30 2019 - 3:00pm  
Crystal Palace 2 vs 0 Huddersfield Town

May 12 2019 - 2:00pm  
Crystal Palace 5 vs 3 AFC Bournemouth

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...

# 7. Exit

- The menu selection should continue to repeat until option 7 is chosen
- When option 7(Exit), it will print 'Bye' and then exit the program

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  7. Exit
- Enter your CHOICE (1~7) : 7  
Bye!

\$

# Requirements

- Do not use Python and other libraries such as pandas.
- Do not Hard Code with the team's name, players ... etc.
- If you don't use shell script with three csv files, print error message.
- Be sure to print your name and student id.
- Upload the code to Github and submit the Github link. (Private)
- Submission File : sh file, TXT file with Github Link, readme.(docx | hwp)

# Submission

- Submission Files
  - Submit your script file named proj1\_SID\_ENGNAME.sh
    - SID: Student Number, ENGNAME: your name
    - Ex) prj1\_12345678\_honggildong.sh
  - You should contain README.(hwp | docx) file for detailed description
  - Upload the code to GitHub(**Private**) and submit the GitHub link
    - Submit it as a text file
- Due date
  - 05/12(Sun) 23:59 in I-Class
- TA will verify your submissions using auto-script copy checking tools
- Enjoy BASH!

**Thanks for listening**