Software Lab (EEP702)

Assignment 2

Name: Dushyant Sahoo
Entry Number: 2011EE50546

Computer Technology
Department of Electrical Engineering

Indian Institute of Technology Delhi

January 20, 2014

Contents

1 Problem Statement:

Develop a shell script which can do following tasks:

1. Fetch available players details from following Web API, which will give player id, name, image url and player detail information url.

   http://m.cricbuzz.com/interview/playerlist

2. Display below query options on console. Fetch required details depends on query selected using player urls available in the data, which is fetched in first point.

   a. Players Name
   b. Country
   c. Role
   d. Players having no.of matches greater than given number in ODIs
   e. Players having no.of runs greater than given number in ODIs
   f. Players having no.of wickets greater than given number in ODIs

3. In the above queries for first query, display player details in below format:
   ===

   Player Name

   a. Country
   b. Age
   c. Player Role: Batting/Bowling/Allrounder
   d. Batting/Bowling Style

   ODI STATS

   e. No.of Matches
   f. Runs
   g. Wickets

   ===

4. For second and third queries you should display names in console and create a folder with the name of queried country/role and save all players images of that country/role in the folder.

5. For remaining queries display player name and related data. Example: if query is players with number of matches greater than 200, output should be like below:

   S.No   Name   No.of Matches
   1   Player1   250
   2   Player2   449

2 Abstract:

This report contains the description of a shell script that performs mutiple function, such as- Downloading data/html pages from internet using shell script, File parsing using curl and regular expressions, Files and folders operations using shell script and Writing control and loop statements in shell script.
Scripting is briefly described in tasks below:

Task-1 marks the fetching of details,i.e. player id,name,image url another informations about the listed players from a given web link.

Task-2 starts console display for querieng various options depending on first query, such as- Player's Name,Country,Role, Players having no.of matches greater than given number in ODIs, Players having no.of runs greater than given number in ODIs, and Players having no.of wickets greater than given number in ODIs.

Task-3 defines a format in which the first query of Task-2 (Player Name) has to be diaplayed on console.

Task-4 needs the creation of folder on the basis of second and third queries of Task-2, and save his details in the same folder, titled his Country/Role.

Task-5 takes care of the last three of the six queries made in Task-2 by displaying the desired data on the console.

3 Algorithm:

Algorithms for all six task-2 processes have been listed sequentially.

Algorithm-1
1) First search the saved file with the name of the player given using 'egrep'.
2) Store this data using a 'regex' and extract URL using 'grep' command.
3) Use 'wget' to store the data from the listed URL.
4) 'Json' utlity is used to dig out rest of the information(as given in the first part of the question) from the json file.

Algorithm-2
1) Save the name of the country name.
2) Start reading the original URL line by line.
3) Store the image URL in a variable.
4) Go to url of player and check if the given country matches with the player's country.
5) If it matches save the image in the folder named by given country.

Algorithm-3
1) Save the role of player.
2) Start reading the original URL line by line.
3) Store the image URL in a variable.
4) Go to URL of player and check if the given role matches with the role of player.
5) If it matches, save the image in the folder named by given country.

Algorithm-4
1) Save the given number in ODIs.
2) Start reading the original URL line by line.
4) Go to URL of player and check if the given number of ODIs are less than ODIs played by the player.
5) if yes print the number of ODI's played by the player.

Write the same Algorithm-4 for rest of the two queries, they are same.

4   Json Parsed Output Format:

echo "Menu"

echo "1. Players name"

echo "2. Country"

echo "3. Role"

echo "4. Players having no.of matches greater than given number in ODIs "

echo "5. Players having no.of runs greater than given number in ODIs "

echo "6. Players having no.of wickets greater than given number in ODIs "
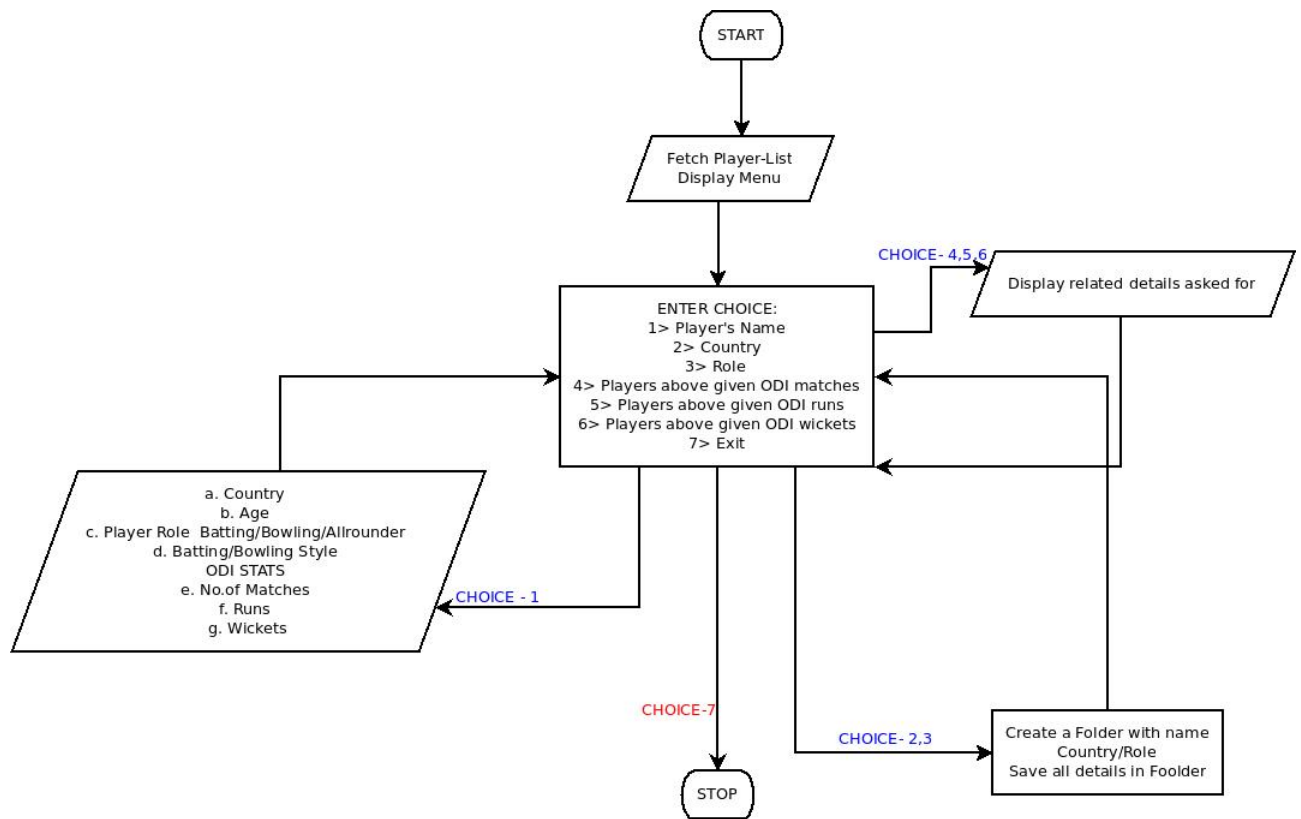
echo "7. Exit "

echo "enter the choice!"

It will keep on asking until the user exits !!!

4.1   Command Description:

- **JSON** is used for parsing in the json file of players on first running the script it will given seven options. 'JavaScript Object Notation', is an open standard format that uses human-readable text to transmit data objects consisting of attributevalue pairs.

- **WGET** is the most elementary of processes where users execute the wget command without any option by simply using the URL of the file to be downloaded in the command line.

- **CURL** is an easy to use command line tool to send and receive files, and it supports almost all major protocols (FILE, FTP, FTPS, HTTP, HTTPS, IMAP, SMTP, SMTPS, TELNET,etc.) in use.

- **GREP** is a command-line utility for searching plain-text data sets for lines matching a regular expression. Its name comes from the ed command g/re/p (globally search a regular expression and print).

- **EGREP** means 'grep -E', where 'E' stands for Extended. Thus, this command searches for extended regular expressions, similar to GREP command.

5   Flow chart:

START

Fetch Player-List
Display Menu

ENTER CHOICE:
1> Player's Name
2> Country
3> Role
4> Players above given ODI matches
5> Players above given ODI runs
6> Players above given ODI wickets
7> Exit

CHOICE- 4,5,6

Display related details asked for

a. Country
b. Age
c. Player Role Batting/Bowling/Allrounder
d. Batting/Bowling Style
ODI STATS
e. No.of Matches
f. Runs
g. Wickets

CHOICE - 1

CHOICE-7

STOP

CHOICE- 2,3

Create a Folder with name
Country/Role
Save all details in Foolder

6   Output Screen shots:

8

Choice-1 Console:

```
dushyantsahoo@ubuntu: ~/Desktop/system software/assignment2
5.  Players having no.of runs greater than given number in ODIs
6.  Players having no.of wickets greater than given number in ODIs
7. Exit
enter the choice!
1
enter the player name
Ian Bell
http://m.cricbuzz.com/interview/playerProfile/385
--------------------------------------------------------
--------------------------------------------------------
Ian Bell
a. Country-England
b. Age-33
c. Player Role-Batsman
d. Bat/Bowl style-Right Handed Bat/Right-arm medium
-------ODI STATS---------
e. Number of matches-            153
f. Runs-5032
g. Wickets-6
--------------------------------------------------------
--------------------------------------------------------
Menu
1.  Players name
2.  Country
```

Choice-4 Console

```
dushyantsahoo@ubuntu: ~/Desktop/system software/assignment2
3.  Role
4.  Players having no.of matches greater than given number in ODIs
5.  Players having no.of runs greater than given number in ODIs
6.  Players having no.of wickets greater than given number in ODIs
7. Exit
enter the choice!
4
Give the number of ODIs
50
S.No.            Name           Matches
2.      Cameron Leon White       88
3.      Bradley James Haddin      115
4.      Xavier John Doherty      58
5.      Ian Ronald Bell        154
6.      Eoin Joseph Gerard Morgan       133
7.      Ravinder Singh Bopara       117
8.      Stuart Christopher John Broad       111
9.      James Michael Anderson       187
10.      Brendon Barrie McCullum       237
11.      Martin James Guptill      95
12.      Kane Stuart Williamson      62
13.      Luteru Ross Poutoa Lote Taylor       146
14.      Grant David Elliott      54
15.      Nathan Leslie McCullum      76
```
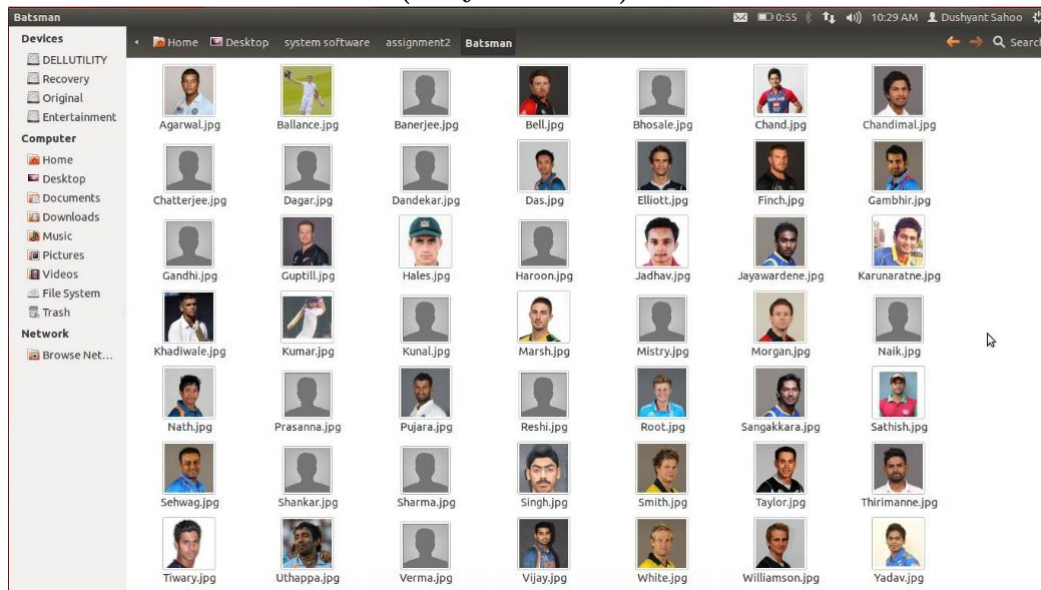
Choice-5 Console

```
dushyantsahoo@ubuntu: ~/Desktop/system software/assignment2
5.  Players having no.of runs greater than given number in ODIs
6.  Players having no.of wickets greater than given number in ODIs
7. Exit
enter the choice!
5
Give the number of runs
1000
S.No.           Name            Run
2.       Aaron James Finch       1415
3.       Shaun Edward Marsh      1667
4.       Steven Smith      1005
5.       Cameron Leon White      2037
6.       Bradley James Haddin      2944
7.       Ian Ronald Bell      5112
8.       Joseph Edward Root      1506
9.       Eoin Joseph Gerard Morgan      3846
10.       Ravinder Singh Bopara      2651
11.       Jos Buttler      1030
12.       Brendon Barrie McCullum      5432
13.       Martin James Guptill      3049
14.       Kane Stuart Williamson      2189
15.       Luteru Ross Poutoa Lote Taylor      4640
16.       Grant David Elliott      1162
17.       Nathan Leslie McCullum      1027
```
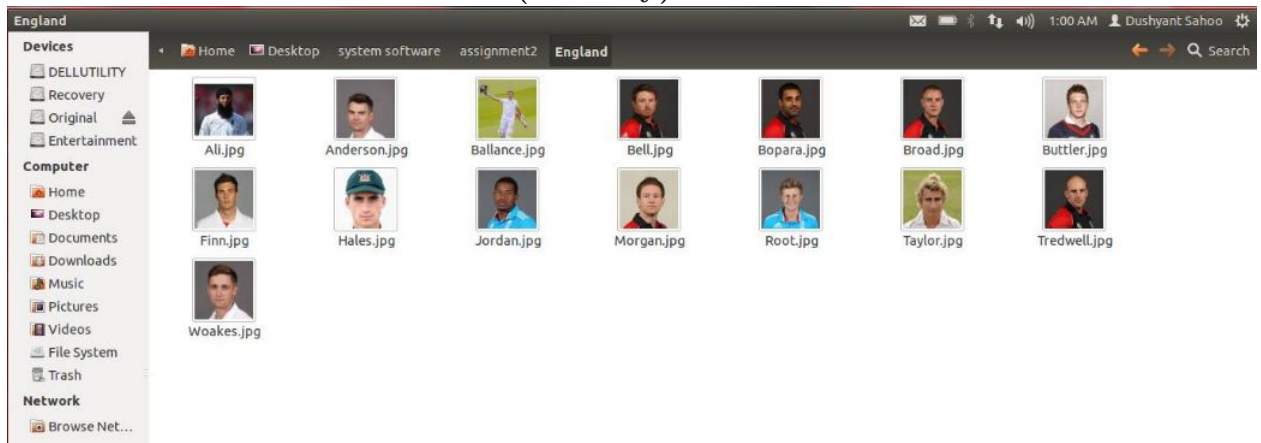
Choice-6 Console:

```
dushyantsahoo@ubuntu: ~/Desktop/system software/assignment2
4.  Players having no.of matches greater than given number in ODIs
5.  Players having no.of runs greater than given number in ODIs
6.  Players having no.of wickets greater than given number in ODIs
7. Exit
enter the choice!
6
Give the number of wickets
50
S.No.           Name            Wickets
2.       Mitchell Aaron Starc      59
3.       Xavier John Doherty      55
4.       Stuart Christopher John Broad      168
5.       James Michael Anderson      263
6.       Steven Finn      72
7.       James Tredwell      59
8.       Nathan Leslie McCullum      53
9.       Timothy Grant Southee      110
10.       Mitchell John McClenaghan      63
11.       Daniel Luca Vettori      289
12.       Kyle David Mills      237
13.       Tillakaratne Mudiyanselage Dilshan      95
14.       Narangoda Liyanaarachchilage Thisara Chirantha Perera      111
15.       Kulasekara Mudiyanselage Dinesh Nuwan Kulasekara      176
16.       Angelo Davis Mathews      91
```

Task-4 (Player's Role) Console:

Task-4 (Country) Console:

7   Results and Conclusions:

We have succesfully implemented the following in this assignment:

- Downloading data/html pages from internet using shell script.

- File parsing using json,curl and regular expressions.

- Files and folders operations using shell script.

- Writing control and loop statements in shell script.