CS101

Group #206

Akinator

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Akinator

1. We have attempted to build a game like Akinator- The Web Genius, which attempts to determine which character the player has in mind by asking him or her a series of questions, to which the player can answer in "Yes", "No" or "Don't Know".

2. To create a database of selected personalities and frame the questions to be asked.

3. To design the decision tree.

Challenges

1. The algorithm of the programme is based on decision trees. A problem was being faced involving how to design the decision tree i.e. how to go to the child questions and how to go through them.
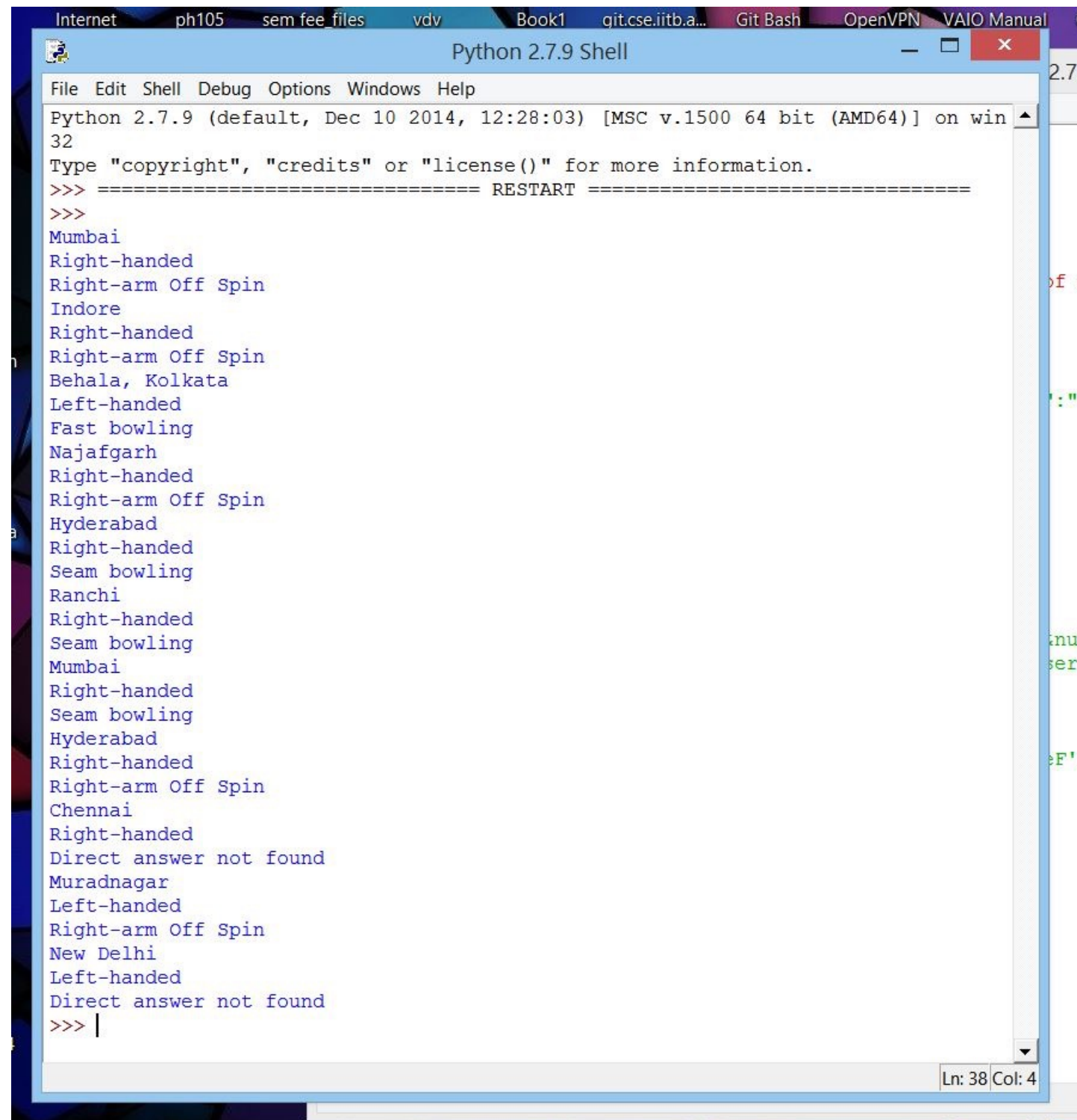
   This was solved by adding a YESCODE for every question i.e. the question number which the programme will go to if a YES answer is given.

Challenges

2. Deciding the type of characters and attributes the database would store, and designing the decision tree, was a tough task.

   We initially decided to scrape the attributes of cricketers and footballers from websites like cricinfo.com. However we were unable to do so. So we decided to take out some attributes using Google Direct search. This was done using BeautifulSoup library of Python.
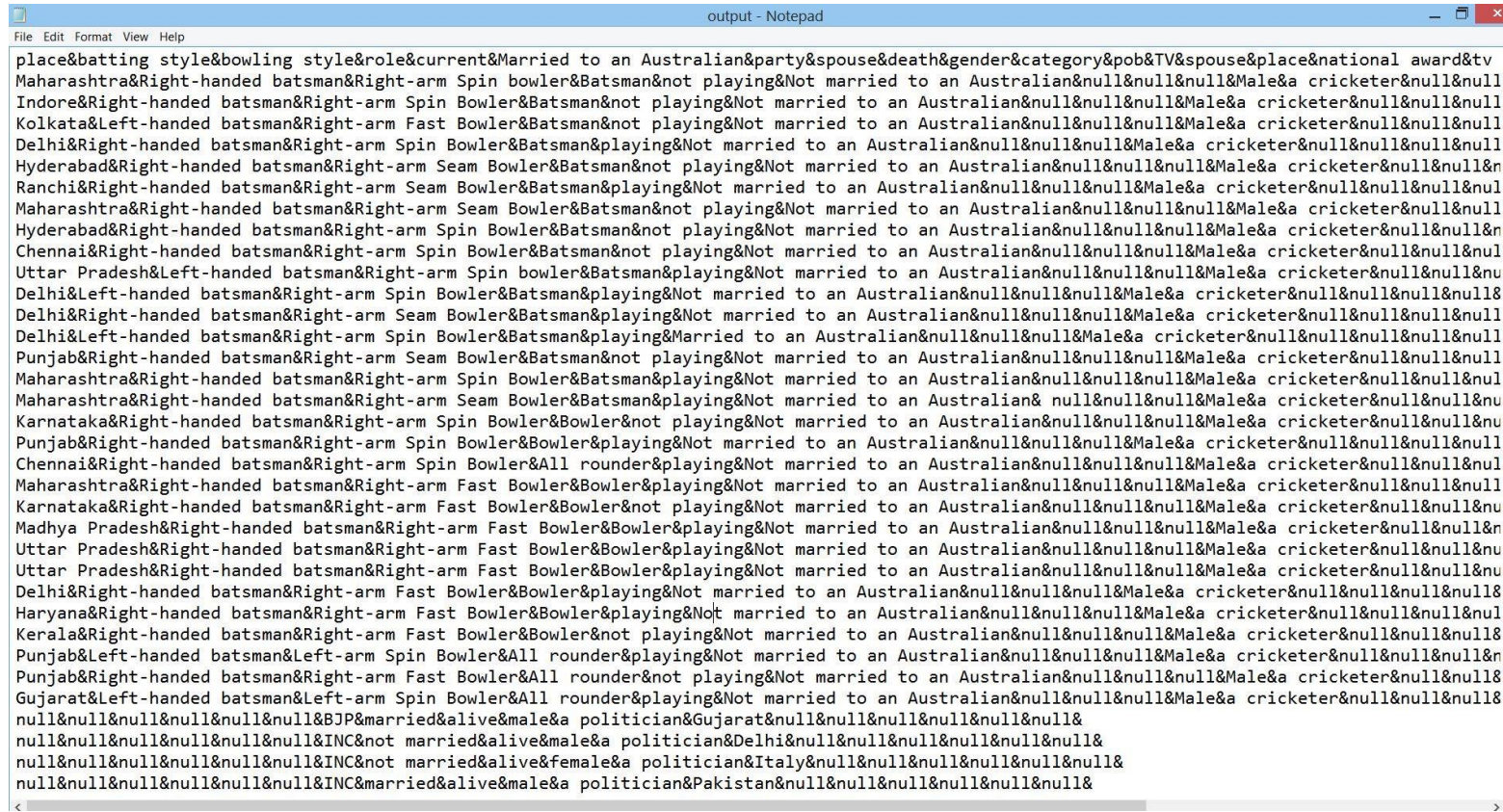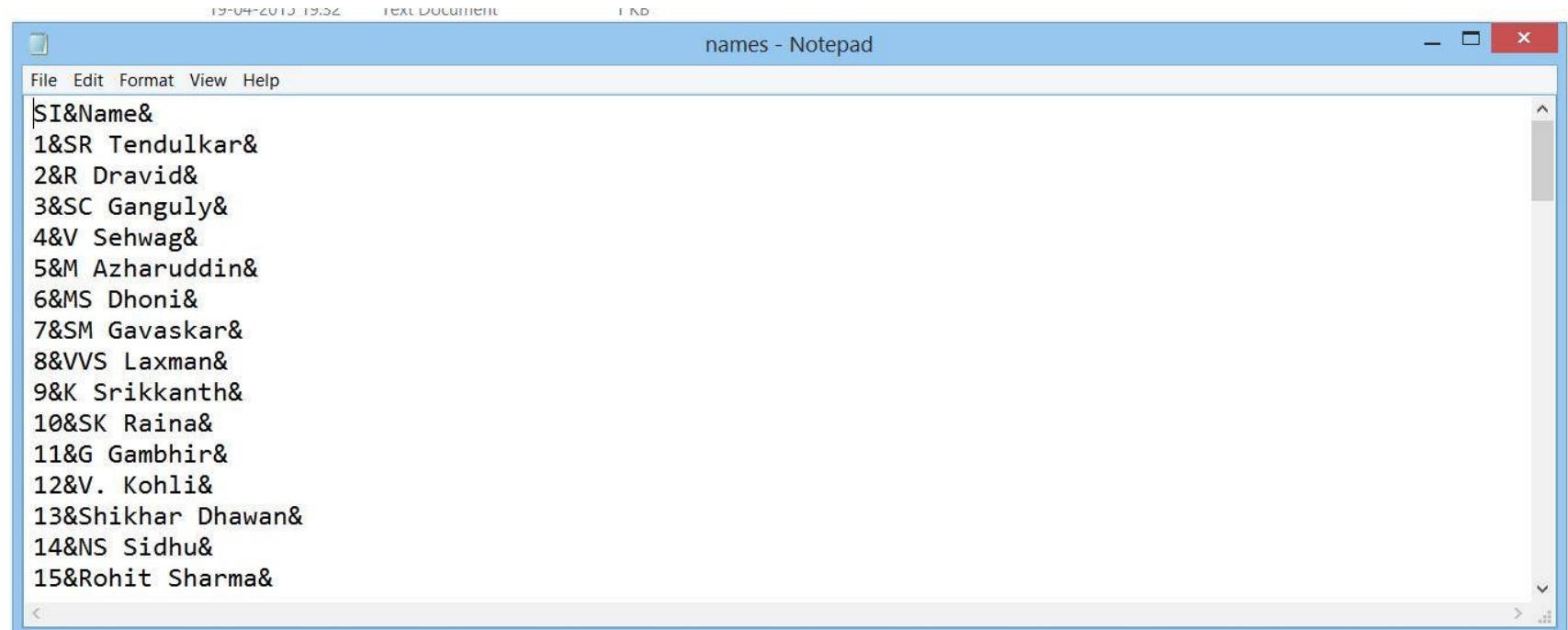
Screenshot of scraping output


```
Internet      ph105    sem fee_files    vdv    Book1    git.cse.iitb.a...    Git Bash    OpenVPN    VAIO Manual    G

                        Python 2.7.9 Shell                    _  □  ×        2.7.9

File  Edit  Shell  Debug  Options  Windows  Help
Python 2.7.9 (default, Dec 10 2014, 12:28:03) [MSC v.1500 64 bit (AMD64)] on win
32
Type "copyright", "credits" or "license()" for more information.
>>> ============================== RESTART ==============================    of c
>>>
Mumbai
Right-handed
Right-arm Off Spin                                                              ':"+
Indore
Right-handed
Right-arm Off Spin
Behala, Kolkata
Left-handed
Fast bowling
Najafgarh
Right-handed
Right-arm Off Spin
Hyderabad
Right-handed
Seam bowling
Ranchi
Right-handed
Seam bowling                                                                    num
Mumbai                                                                          ser-
Right-handed
Seam bowling
Hyderabad
Right-handed                                                                    F'}
Right-arm Off Spin
Chennai
Right-handed
Direct answer not found
Muradnagar
Left-handed
Right-arm Off Spin
New Delhi
Left-handed
Direct answer not found
>>> |

                                                                    Ln: 38 Col: 4
```

Screenshot of final text files of Input(names) and Output(attributes)

output - Notepad

```
place&batting style&bowling style&role&current&Married to an Australian&party&spouse&death&gender&category&pob&TV&spouse&place&national award&tv
Maharashtra&Right-handed batsman&Right-arm Spin bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null
Indore&Right-handed batsman&Right-arm Spin Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Kolkata&Left-handed batsman&Right-arm Fast Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Delhi&Right-handed batsman&Right-arm Spin Bowler&Batsman&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Hyderabad&Right-handed batsman&Right-arm Seam Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&n
Ranchi&Right-handed batsman&Right-arm Seam Bowler&Batsman&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nul
Maharashtra&Right-handed batsman&Right-arm Seam Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Hyderabad&Right-handed batsman&Right-arm Spin Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&n
Chennai&Right-handed batsman&Right-arm Spin Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nul
Uttar Pradesh&Left-handed batsman&Right-arm Spin bowler&Batsman&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nu
Delhi&Left-handed batsman&Right-arm Spin Bowler&Batsman&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null&
Delhi&Right-handed batsman&Right-arm Seam Bowler&Batsman&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Delhi&Left-handed batsman&Right-arm Spin Bowler&Batsman&playing&Married to an Australian&null&null&null&Male&a cricketer&null&null&null&null
Punjab&Right-handed batsman&Right-arm Seam Bowler&Batsman&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Maharashtra&Right-handed batsman&Right-arm Spin Bowler&Batsman&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Maharashtra&Right-handed batsman&Right-arm Seam Bowler&Batsman&playing&Not married to an Australian& null&null&null&Male&a cricketer&null&null&nu
Karnataka&Right-handed batsman&Right-arm Spin Bowler&Bowler&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nu
Punjab&Right-handed batsman&Right-arm Spin Bowler&Bowler&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null&
Chennai&Right-handed batsman&Right-arm Spin Bowler&All rounder&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nul
Maharashtra&Right-handed batsman&Right-arm Fast Bowler&Bowler&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Karnataka&Right-handed batsman&Right-arm Fast Bowler&Bowler&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nu
Madhya Pradesh&Right-handed batsman&Right-arm Fast Bowler&Bowler&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&n
Uttar Pradesh&Right-handed batsman&Right-arm Fast Bowler&Bowler&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nu
Uttar Pradesh&Right-handed batsman&Right-arm Fast Bowler&Bowler&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&nu
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Haryana&Right-handed batsman&Right-arm Fast Bowler&Bowler&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null&nul
Kerala&Right-handed batsman&Right-arm Fast Bowler&Bowler&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null
Punjab&Left-handed batsman&Left-arm Spin Bowler&All rounder&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null&n
Punjab&Right-handed batsman&Right-arm Fast Bowler&All rounder&not playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null&
Gujarat&Left-handed batsman&Left-arm Spin Bowler&All rounder&playing&Not married to an Australian&null&null&null&Male&a cricketer&null&null&null&
null&null&null&null&null&null&BJP&married&alive&male&a politician&Gujarat&null&null&null&null&null&null&
null&null&null&null&null&null&INC&not married&alive&male&a politician&Delhi&null&null&null&null&null&null&
null&null&null&null&null&null&INC&not married&alive&female&a politician&Italy&null&null&null&null&null&null&
null&null&null&null&null&INC&married&alive&male&a politician&Pakistan&null&null&null&null&null&null&
```


names - Notepad

```
SI&Name&
1&SR Tendulkar&
2&R Dravid&
3&SC Ganguly&
4&V Sehwag&
5&M Azharuddin&
6&MS Dhoni&
7&SM Gavaskar&
8&VVS Laxman&
9&K Srikkanth&
10&SK Raina&
11&G Gambhir&
12&V. Kohli&
13&Shikhar Dhawan&
14&NS Sidhu&
15&Rohit Sharma&
```

Challenges

3. In case the player does not know the answer to a question, he should have the option of choosing a Don't Know option in addition to YES or NO.

   The Don't Know feature was implemented. If their is no variation in a quality left for a particular attribute, then control moves to next quality(question). If their are no more questions left, the game terminates. If none of the above cases happen, the loop will simply jump to next iteration and ask question related to next quality.

Challenges

4. We had decided to add a feature which will allow a player to add a character to the database. The final addition into the database will be allowed by any of the team members of the project, after the entry is verified by any of the team member. The final entry into the database will happen through a password which will be known to the team members only. This is being done so that no bogus entries are made in the database.

This feature has been implemented. At the end of the game, if a character was not successfully guessed, the game will give an option of entering a character's name. The input has to be done on command line console. The instructions to enter will be given. The name will be added to a file only after entering a password. The name will not go in the main database. It can be entered afterwards.

Future Work

1. A probabilistic approach may be added so as to reduce the number of questions asked before determining the character.

2. A larger database can be designed.

3. Can store the responses given by different user which will help in determining the frequency of the path to the personality.

THANK YOU