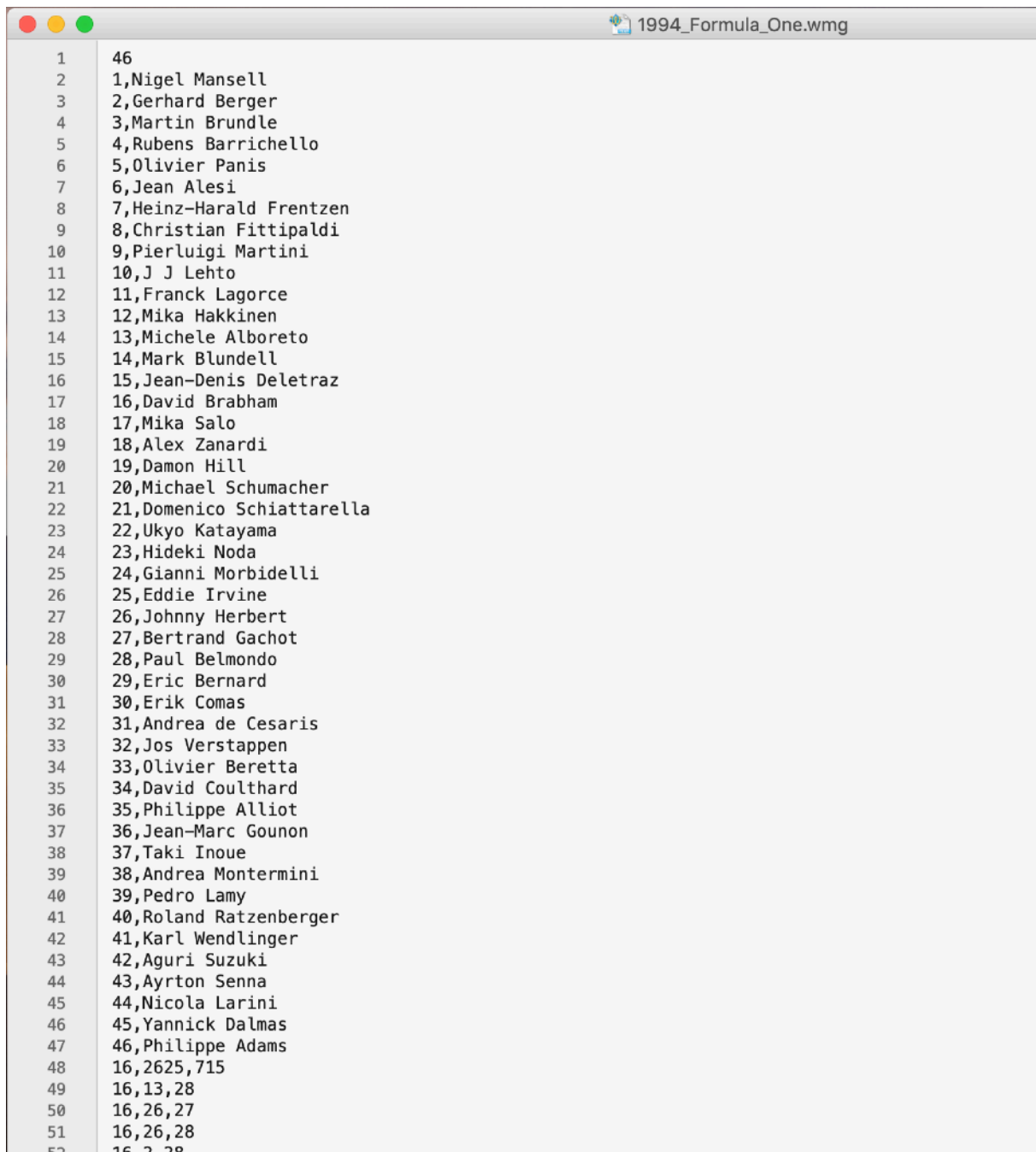


How to read the tournament dataset

The tournament data for this coursework has been obtained from www.preflib.org, a repository of real-world datasets.

The following is a screenshot of the first 51 lines of file `1994_Formula_One.wmg` containing the tournament data for the coursework.



```
1 46
2 1,Nigel Mansell
3 2,Gerhard Berger
4 3,Martin Brundle
5 4,Rubens Barrichello
6 5,Olivier Panis
7 6,Jean Alesi
8 7,Heinz-Harald Frentzen
9 8,Christian Fittipaldi
10 9,Pierluigi Martini
11 10,J J Lehto
12 11,Franck Lagorce
13 12,Mika Hakkinen
14 13,Michele Alboreto
15 14,Mark Blundell
16 15,Jean-Denis Deletraz
17 16,David Brabham
18 17,Mika Salo
19 18,Alex Zanardi
20 19,Damon Hill
21 20,Michael Schumacher
22 21,Domenico Schiattarella
23 22,Ukyo Katayama
24 23,Hideki Noda
25 24,Gianni Morbidelli
26 25,Eddie Irvine
27 26,Johnny Herbert
28 27,Bertrand Gachot
29 28,Paul Belmondo
30 29,Eric Bernard
31 30,Erik Comas
32 31,Andrea de Cesaris
33 32,Jos Verstappen
34 33,Olivier Beretta
35 34,David Coulthard
36 35,Philippe Alliot
37 36,Jean-Marc Gounon
38 37,Taki Inoue
39 38,Andrea Montermini
40 39,Pedro Lamy
41 40,Roland Ratzenberger
42 41,Karl Wendlinger
43 42,Aguri Suzuki
44 43,Ayrton Senna
45 44,Nicola Larini
46 45,Yannick Dalmas
47 46,Philippe Adams
48 16,2625,715
49 16,13,28
50 16,26,27
51 16,26,28
52 16,2,28
```

The format can be explained as follows:

- line 1: contains the number of participants in the competition.
- lines 2-47: contain an identifying number for each participant, along with their real names.
- line 48: contains information about *how* the data has been generated. In this particular case the data has been generated using the results of the individual races of the 1994 season of the

World Formula One Motor Racing Championship. The line contains three numbers. From left to right they represent: (1) the number of races (in this case 16), (2) the total number of preferences derived from the data, (3) the total number of pairwise match-ups. NOTE: DON'T WORRY TOO MUCH ABOUT THIS LINE. IT DOESN'T REALLY PLAY ANY ROLE FOR THE COURSEWORK.

- The remaining lines in the file are all of the format <weight, edge>. For example line 50 says that the edge in the graph *from* participant #26 *to* participant #27 has weight 16. This is derived from the fact that, in the match-up Eddie Irvine vs Johnny Herbert throughout the season, if a is the number of races in which Irvine finished ahead of Herbert, and b is the number of races in which Herbert finished ahead of Irvine, then $a > b$ (so Irvine wins the overall “match”) and furthermore we have $a - b = 16$.