

2002 Paper 9 Question 14

Natural Language Processing

The Ultimate Dating Agency has a database which contains enough information to respond to requests like:

List every computer scientist with any friends who obsess(es) about some reprogrammable device(s).

- (a) Describe the different queries that result from adding each morphological suffix in brackets. [2 marks]
- (b) Give formulae of first-order logic which represent these different queries. [6 marks]
- (c) Describe techniques for morphological analysis, syntactic parsing and compositional semantic interpretation that would output such representations. [9 marks]
- (d) How might the database information be represented and queried? [3 marks]