

Exercises 2 – 4 are programming problems. Submit them in a single file named `a14.pl` electronically per the instructions for your course. Exercise 5 is a written exercise. Submit it in a single pdf file named `a14written.pdf` electronically per the instructions for your course.

1. Study Bratko, Section 6.7.
2. Do Bratko, Exercise 6.11.
Test your program with

```
?- see( 'myfile.pl' ), findallterms( Term ), seen.
```

using this file

<http://www.cslab.pepperdine.edu/warford/cosc450/myfile.txt>

which should produce

```
term(term1)
term(term2)
term(term3)
abc
def(1,2)
```

If you query `findallterms/1` with `Term` instantiated, only those terms should be found. So, the query

```
?- see( 'myfile.pl' ), findallterms( abc ), seen.
```

should produce

```
abc
```

The name of the file is `myfile.txt` to bypass security on download. Change the name to `myfile.pl` after you download it.

3. Do Bratko, Exercise 6.13.

```
?- starts( abc, 97 ).
```

should succeed because 97 is the ascii value for the letter a, and

```
?- starts( abc, Ch ).
```

should give

```
Ch = 97.
```

4. Do Bratko, Exercise 6.14.

5. Write a summary paper of Sections 1–5 of the article, *Unification: A Multidisciplinary Survey*.

<http://www.cslab.pepperdine.edu/warford/cosc450/Unification-Knight.pdf>

For each section, write a one paragraph description that (a) summarizes in your own words what the section is about, and (b) describes what you consider to be the most important or interesting points. Then, answer the following questions.

1. Using Definitions 1.1, 1.2, and 1.3, is

$f(x, g(y, b))$

unifiable with

$f(f(a), g(g(a, f(a)), b))$?

If so, show the substitution that unifies them.

2. Write the tree representation of the term

$f(g(x), h(f(x)), i(f(x)))$

3. Write the graph representation of the term

$f(g(x), h(f(x)), i(f(x)))$