CSE 579 Project Milestone 2
Solutions to Basic Clingo Problems

Problem 1

Consider the ASP program below from Unit 3 Module 2.

```
p
r <- p ^ q
```

Find all the stable models of this program using clingo and fill in the following table. When writing down the command line, assume the clingo program is saved in file “p1.txt”.

Input Program	p. r :- p, q.
Command Line	clingo p1.txt 0
Output (truncated)	clingo version 5.4.0 Reading from p1.txt p1.txt:2:9-10: info: atom does not occur in any rule head: q Solving... Answer: 1 p SATISFIABLE Models : 1 Calls : 1 Time : 0.038s (Solving: 0.00s 1st Model: 0.00s Unsat: 0.00s) CPU Time : 0.016s

Problem 2

Consider the ASP program below from Unit 3 Module 6.

p <- ¬q
q <- ¬p

Find all the stable models of this program using clingo and fill in the following table. When writing down the command line, assume the clingo program is saved in file “p2.txt”.

Input Program	p :- not q. q :- not p.
Command Line	clingo p2.txt 0
Output (truncated)	clingo version 5.4.0 Reading from p2.txt Solving... Answer: 1 q Answer: 2 p SATISFIABLE Models : 2 Calls : 1 Time : 0.000s (Solving: 0.00s 1st Model: 0.00s Unsat: 0.00s) CPU Time : 0.000s

Problem 3

Consider the ASP program below consisting of rules from Unit 3 Module 7.

p <- ¬p
p v q

Find all the stable models of this program using clingo and fill in the following table. When writing down the command line, assume the clingo program is saved in file “p3.txt”.

Hint: rule “p v q” can be seen as “p v q <- T”.

Input Program	p :- not p. p; q.
Command Line	clingo p3.txt 0
Output (truncated)	clingo version 5.4.0 Reading from p3.txt Solving... Answer: 1 p SATISFIABLE Models : 1 Calls : 1 Time : 0.017s (Solving: 0.00s 1st Model: 0.00s Unsat: 0.00s) CPU Time : 0.000s