Assignments 3.3

一、阅读 (Reading)

1. 阅读教材.

2. 课外阅读：

Predicate Logic (3) -by Gerard O'Regan.pdf.pdf

二、问题解答 (Problems)

1. 教材 P53：题 14.

2. 教材 P53：题 15 (5，6).

3. Formalize and prove the following statements(the domain of discourse is universe，论域为全总域).

(1) Every computer science major is a logical thinker.

John is a computer science major.

Therefore, there is some logical thinker.

(2) All computer science majors are people.

Some computer science majors are logical thinkers.

Therefore, some people are logical thinkers.

(3) Socrates(苏格拉底) is a philosopher.

All philosophers are human.

All humans are mortal.

Therefore, Socrates is mortal.

4. Consider the following problem. We know that horses are faster than dogs and that there is a greyhound that is faster than every rabbit. We know that Harry is a horse and that Ralph is a rabbit. Our job is to derive the fact that Harry is faster than Ralph. (tips: greyhound 也是 dog; x 比 y 跑得快，y 比 z 跑得快，则 x 比 z 跑得快.)