CSCC24 Execise 5

1. Translate each of the following into first order logic.

a. $\exists x,y,z((\text{friend}(x, \text{me}) \land \text{friend}(y, x)) \lor (\text{cousin}(\text{mycousin}, \text{me}) \land \text{friend}(z, \text{cousin})))$

b. $\exists x,y(\text{knows}(\text{Alice}, \text{Charlie}) \lor \text{knows}(\text{Bob}, \text{Charlie}) \lor ((\text{takes}(\text{Charlie}, y) \land \text{take}(x, y)) \rightarrow \text{knows}(x, \text{Charlie})))$

c. $\forall x,y(\text{likes}(x, \text{me}) \land (\text{likes}(\text{me}, y) \land \text{likes}(x,y)))$

d. $\forall x((\text{read}(x) \lor \text{hire}(x) \lor \text{attend}(x) \rightarrow \text{understand}(x)) \rightarrow \text{passFinal}(x) \rightarrow \text{passCourse}(x))$

e. $\forall x(\text{hasGoodResume}(x) \rightarrow \text{hasJob}(x) \rightarrow \text{hasWorkExp}(x) \rightarrow \text{hasGoodResume}(x))$