CS572 Assignment 5

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8.24 (48 pts)

Represent the following sentences in first-order logic, using a consistent vocabulary (which you must define):

Answer:

List of basic vocabulary:

- *Takes(x,c,s)*: student x takes course c in semester s;
- *Passes(x,c,s)*: student x passes course c in semester s;
- *Score(x,c,s)*: the score obtained by student x in course c in semester s;
- *Buys(x,y,z)*: x buys y from z (using a binary predicate with unspecied seller is OK but less felicitous);
- *Sells(x,y,z)*: x sells y to z;
- *Shaves(x,y)*: person x shaves person y;
- *Born(x,c)*: person x is born in country c;
- *Parent(x,y)*: x is a parent of y;
- *Citizen(x,c,r)*: x is a citizen of country c for reason r;
- *Resident(x,c)*: x is a resident of country c;
- *Fools(x,y,t)*: person x fools person y at time t;
- *Student(x), Person(x), Man(x), Barber(x), Expensive(x), Agent(x), Insured(x), Smart(x), Politician(x)*: predicates satised by members of the corresponding categories.

1. Some students took French in spring 200l.
2. Every student who takes French passes it.
3. t