CIS 623 Structured Programming and Formal Methods
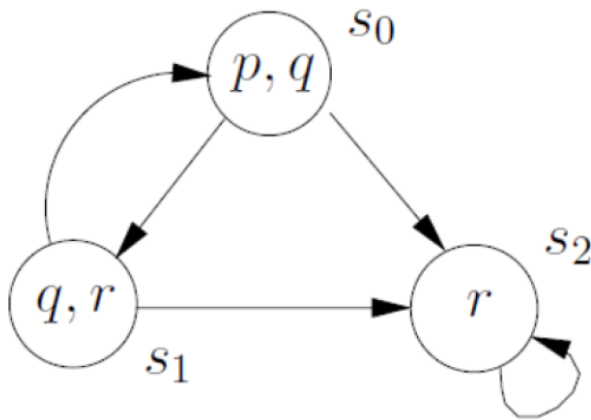
Assignment 7

1. Which of the following satisfaction relations hold for the model M given below?

- M, s0 |= p->q
- M, s0 |= p->r
- M, s0 |= X(q->r)
- M, s0 |= G(p->q)
- M, s0 |= FGr
- M, s0 |= GFr
- M, s0 |= G(p U r)
- M, s0 |= F(p U r)
- M, s0 |= XF(p U r)
- M, s0 |= GF(r R p)

2. Give five more formulas that are not satisfied by the model M and the initial state s0, and five formulas that are satisfied by the same model and state. Our formulas must include at least one temporal logic connector.