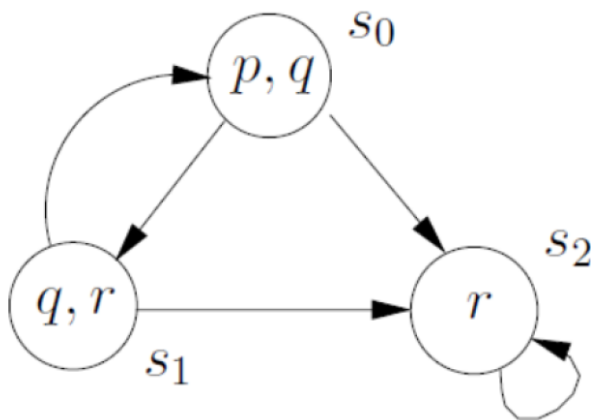


CIS 623 Structured Programming and Formal Methods

Assignment 7

Kevin MartinV

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



- $M, s_0 \models p \rightarrow q$
 - $M, s_0 \models p \rightarrow r$
 - $M, s_0 \models X(q \rightarrow r)$
 - $M, s_0 \models G(p \rightarrow q)$
 - $M, s_0 \models FGr$
 - $M, s_0 \models GF r$
 - $M, s_0 \models G(p \cup r)$
 - $M, s_0 \models F(p \cup r)$
 - $M, s_0 \models XF(p \cup r)$
 - $M, s_0 \models GF(r \mathbin{\mathsf{R}} p)$
- Give five more formulas that are not satisfied by the model M and the initial state s_0 , and five formulas that are satisfied by the same model and state. Our formulas must include at least one temporal logic connector.

Satisfied by model M:1. M

Not Satisfied by Model M:1. M