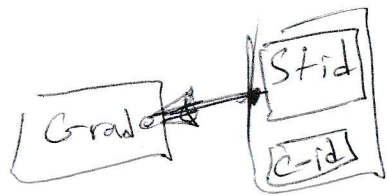


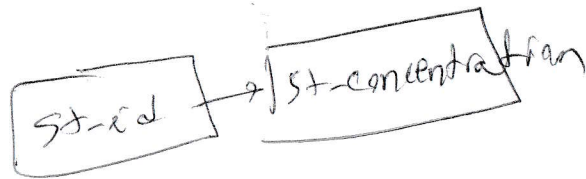
3NF

$R_{1.1}(\underline{st-id}, \underline{c-id}, Grade)$

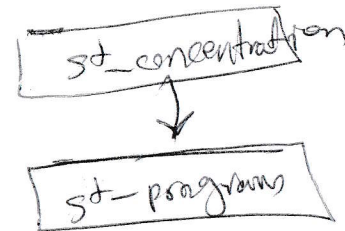


FD  $\{ st-id, c-id \rightarrow Grade$

$R_{1.2.1}(st-id, st-concentration)$   $R_{1.2.2}(st-concentration, st-program)$



FD  $\{ st-id \rightarrow st-concentration \}$



FD  $\{ st-concentration \rightarrow st-program \}$