Pipelining (IV)

Branch Prediction (cont.)

- Loop predictor
  - Loops are a common component of programs.
  - A conditional branch is always at the bottom of a loop that will be repeated N times. N-1 times the branch will not be taken, and 1 time it will be taken.
  - Can be implemented by using a counter.

- History-based prediction: correct 90% of time
  - Assume future behavior will continue the trend
  - If wrong, stall while re-fetching, and update history table.