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Answer To The Question No: 3.

Update gate: The update gate of helps the GRU model to determine the quantity of past information which are coming from the previous time steps, needs to be passed along to the future. It actually allow us to control how much of the new state is just a copy of the old state.

Reset gate: A reset gate helps the GRU model to control how much of the previous state, we might still want to remember as well as to determine how much of the past information to forget.

The difference of workflow of LSTM and GRU:

1. LSTM has three gates which are input gate, output gate and forget gate whereas GRU has only two gates - update gate and reset gate.

2. GRU reset gate is directly applied to the previous hidden state whereas this functionalities is done by the input gate in LSTM.

III) GRU doesn't have any cell memory and an output gate but these are present in LSTM.

IV) LSTM calculates hidden states with the help of output control information whereas GRU computes hidden state with the help of update gate and a weighted version of update gate and information set.

GRU is faster than RNN because there is no cell memory and the data flow is done by the mathematical computation. Moreover, RNN faces short term memory problem due to vanishing gradient problem. As, GRU can overcome vanishing gradient problem, it performs better than RNN. GRU has just two gates, update and resets which are capable of learning which inputs in the sequence are more important and also stores the information in the memory unit which also helps GRU to work faster than RNN. For those reason, GRU is faster in compare to RNN.