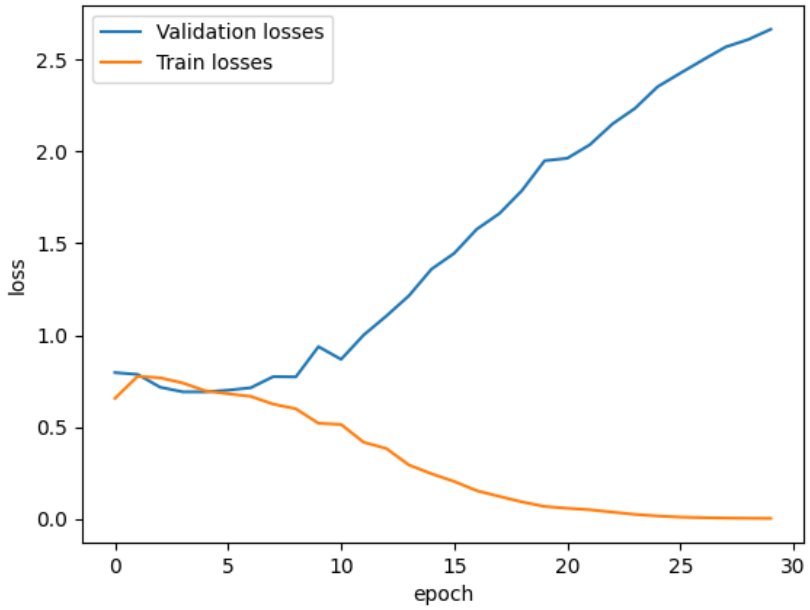
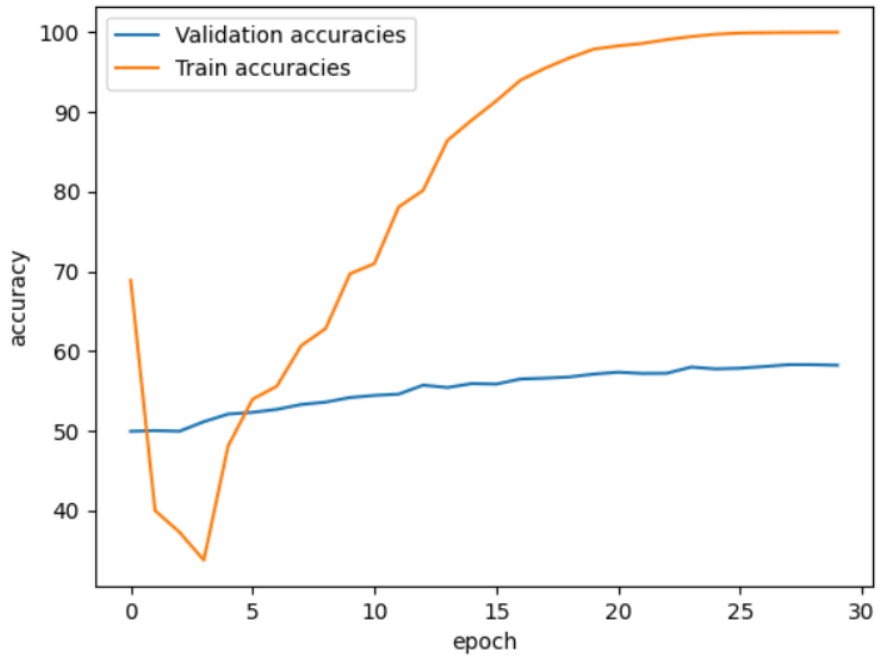
Report on the completion of the fourteenth task.

1. **The purpose of the task.**
   The main goal of this task is to find the best NN for predicing positive and negtive reviews from the IMDB dataset. Build loss and accuracy curves
2. **Train the Neural networks.**
   a) **Model A (1 hidden layer, 30 epochs, bidirectional = False, no batchnorm, no dropout, no stopwords deleting).**
      i) **Loss curve**

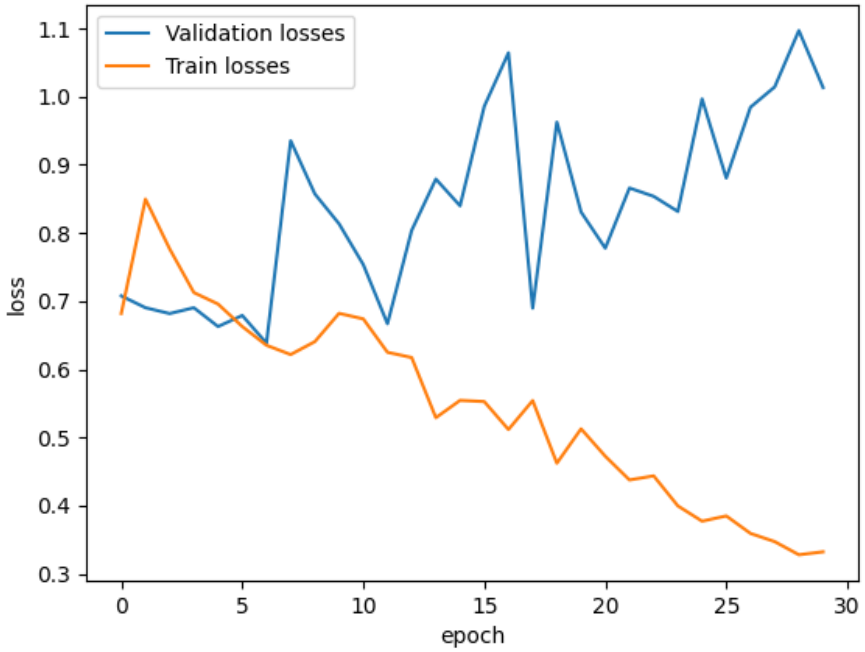


      ii) **Accuracy curve**

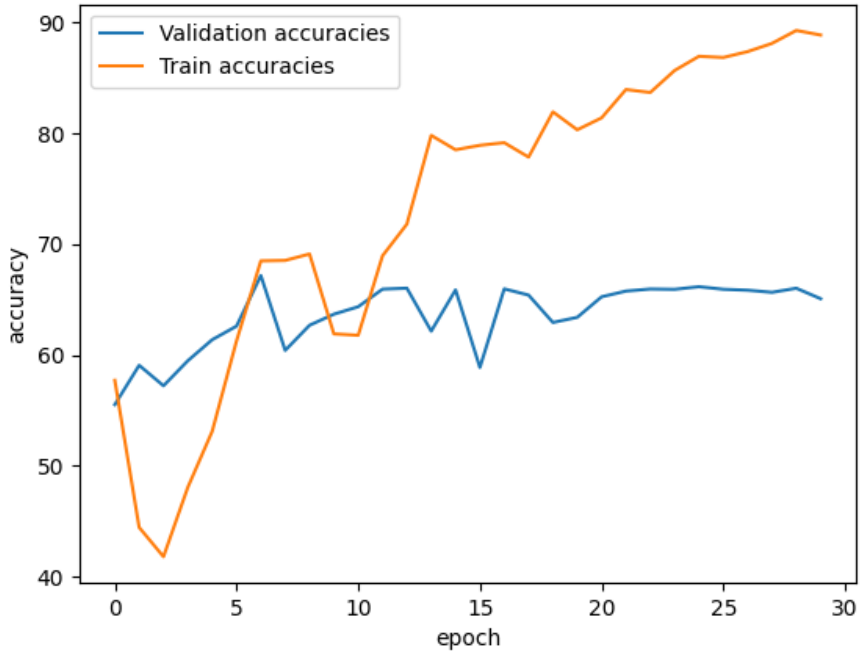


b) Model B (1 hidden layer, 30 epochs, bidirectional=True, with batchnorm, with dropout, no stopwords deleting).

i) Loss curve

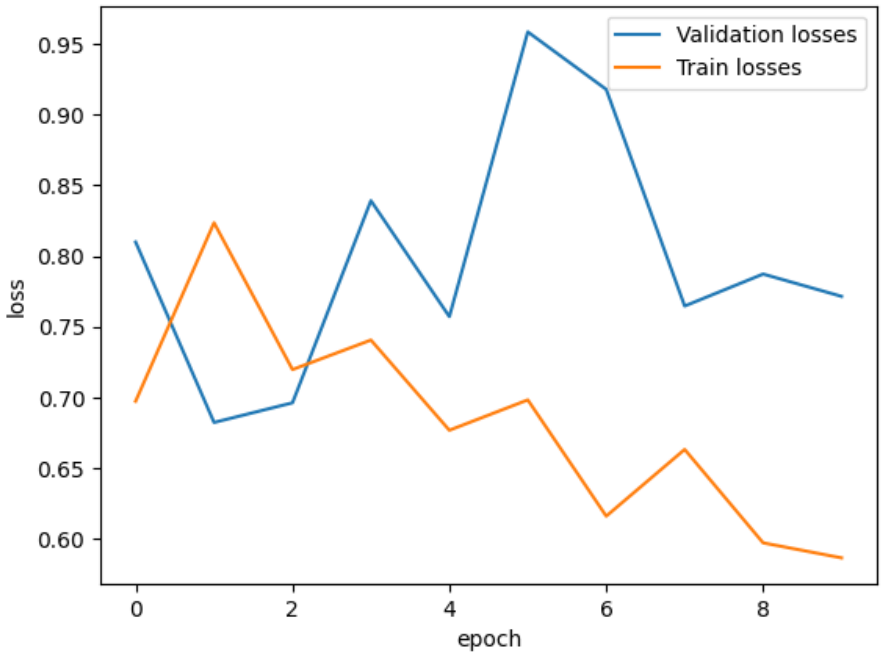


ii) Accuracy curve

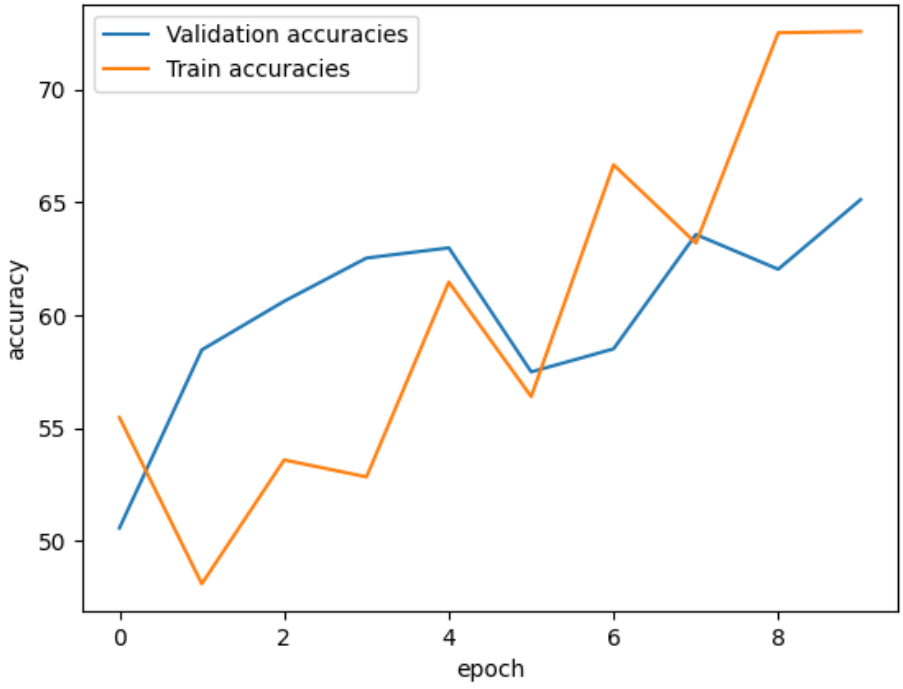


c) Model C (2 hidden layer, 10 epochs, bidirectional=True, with batchnorm, with dropout, with stopwords deleting)

i) Loss curve



ii) Accuracy curve



3. Conclusion.

- As we can see, the first two models overfitted the data so they could be stopped in the 10th epoch.

- The best final accuracy of about 65% gave the model that had batch normalization, dropout, stopword detection and also two hidden layers of the LSTM.
- As the accuracy of the last model continued to decrease continues, maybe we should consider adding more epochs to train it.