Question 1 (15 points): While on his way to CMPUT 229 class, Thomas got a text from his boyfriend that he may be invited for Thanksgiving dinner at their house. Thomas is a dedicated student and wants to pay attention to the lecture. However, he is also very anxious to receive the confirmation that he is actually invited. He keeps his phone on vibrate mode during the lecture. He would like to reply very soon after receiving any further texts. The app that they use for texting has three modes of interaction: interruptions, polling, and polling watchdog. Explain how each of these modes work in this scenario and list advantages and disadvantages of each of them.

1. (**5 points**) Interruptions

   Thomas will be notified about a text as soon as it arrives. The advantage is that Thomas will be able to reply immediately. The disadvantage is that his attention will be taken away from the lecture at any moment.

2. (**5 points**) Polling

   The app will not notify Thomas about arriving texts and thus Thomas will have to monitor the phone from time to time for the arrival of a text. Thomas may waste time checking for texts when they have hot arrived.

3. (**5 points**) Polling Watchdog

   When a message arrives, the app will start a timer. If Thomas does not check for messages before the end of the set time, the phone will vibrate. Thomas will be able to focus on the lecture and there will not be a very long delay to respond to an arriving message.