General Notes:

You don’t need to delete the code of the pervious tasks to upload the code of the new task, you can create a new repo or, you could create a branch for each task inside one repo.

Watch this video if you never worked with branches [Link](https://www.youtube.com/watch?v=pDmYNK68IEc)

Task 3:

The main objective is to get started with ROS. Watch the video from task 1 about ROS:

1- Understand the purpose of using ROS

a. <https://youtu.be/sI4jDtR4r64>

b. Read the following link <http://www.clearpathrobotics.com/assets/guides/ros/Intro%20to%20the%20Robot%20Operating%20System.html>

2- install ROS on your virtual machine

3- Write code for 2 ROS nodes, one of them will be a publisher and the other would be a subscriber. Check out the following tutorial

<http://wiki.ros.org/ROS/Tutorials/WritingPublisherSubscriber%28python%29>

Use the code from task 2, and write 2 ROS nodes one of them would be a publisher to the data that are coming from the Arduino, and the other node would a subscriber to the data. The subscriber nodes would send commands to the Arduino to turn ON an led for example.