Instruction Sheet for Arduino
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1 Online / Offline content

1. The online content of Spoken Tutorials can be accessed from :
https://spoken-tutorial.org/tutorial-search/

2. You can also download the Spoken Tutorials for offline learning from :
https://spoken-tutorial.org/cdcontent/

3. From this link download the FOSS categories in the language you wish to learn.

4. The Spoken Tutorial content will be downloaded as a zip file on your machine.

5. Extract the contents of the zip file & access them.

2 The procedure to practise

1. You have been given a set of spoken tutorials and files.

2. You will typically do one tutorial at a time.

3. You may listen to a spoken tutorial and practise by reproducing all the steps shown in the video side-by-side.

4. If you find it difficult to do the above, you may consider listening to the whole tutorial once and then practise during the second hearing.

3 Side-by-side learning video (Only for offline content)

1. Go to the folder name spoken on your machine.

2. Locate index.html file.

3. Open this file with either Firefox or Chrome web browser.

4. The Side-by-Side learning video will appear. This video will explain how to learn from the spoken tutorials.

5. Click on the Play button to play the video.

6. Note all the steps explained therein.

4 Arduino

1. Click on "Select FOSS" or "All FOSS Categories" drop-down and choose "Arduino".

2. Click on "Select Language" or "All Languages" drop-down and choose the language (English, Hindi, Marathi ...) in which you wish to learn.

3. Click on "Submit" button.

4. You will see a list of tutorials based on your selection.

5. Start with the first tutorial in the displayed list.

5 First tutorial: Overview of Arduino

1. Locate the topic "Overview of Arduino" and click on it.

2. To view the tutorial, click on the Play icon which is located in the player.

6 Second tutorial: Electronic components and connections

1. Locate the topic "Electronic components and connections" and click on it.

2. To view the tutorial, click on the Play icon which is located in the player.

3. General introduction to electronic components and how to do the basic connections are covered in this tutorial.

7 Third tutorial: Introduction to Arduino

1. Locate the topic "Introduction to Arduino" and click on it.

2. To view the tutorial, click on the Play icon which is located in the player.

3. How to install Arduino IDE is covered in this tutorial.

8 Fourth tutorial: Arduino Components and IDE

1. Locate the topic "Arduino Components and IDE" and click on it.

2. To view the tutorial, click on the Play icon which is located in the player.

3. Basic components of Arduino and Arduino IDE are covered in this tutorial.

9 Fifth tutorial: First Arduino Program

1. Locate the topic "First Arduino Program" and click on it.

2. To view the tutorial, click on the Play icon which is located in the player.

3. While uploading the program for the first time, you may get error as Permission denied or Can't open device "/dev/ttyACM0" .

4. Refer to the Additional reading material link of this tutorial for solution.

5. Important Note : To execute the sudo commands in the terminal, you need to be given super user permission by your system administrator.

9.1 Instructions to practise

1. Create a folder on the "Desktop" with your "Name-RollNo-Component".
(Eg. "vin-04-arduino").

2. Give a unique name to the files you save, so as to recognize it next time.
(Eg. "Arduino-1-vin").

3. Remember to save all your work in your folder.

4. This will ensure that your files don't get overwritten by someone else.

5. Save your work from time to time, instead of saving it at the end of the task.

9.2 Common instructions for Assignments

1. Attempt the Assignments as instructed in the tutorial.

2. Save your work in your folder.

9.3 Common instructions to use Code files

1. Click on the link "Code files" located below the player and save it in your folder.

2. Extract the downloaded zip file.

3. You will see all the code/source files used in the particular tutorial.

4. Use these files as per the instructions given in the particular tutorial.

5. Play-pause-practise the whole tutorial.

6. Once the tutorial is complete, choose the next tutorial from the playlist which is located on the right side or below the player.

7. Follow all the above instructions, till you complete all the tutorials in the series.

10 Eleventh tutorial: Analog to Digital Conversion

1. This tutorial requires internet connection as we need to install DHT11 library.

11 Twelth tutorial: Wireless Connectivity to Arduino

1. This tutorial requires internet connection as we need to install ESP8266 WiFi module.

2. At 5:07, the tutorial shows to copy a json URL to Additional Board Managers.

3. Follow each and every step as specified in the tutorial.

12 Thirteenth tutorial: Assembly programming through Arduino

1. This tutorial requires internet connection as we need to install avra and avrdude

13 General instructions for Windows users

1. To install Arduino IDE in Windows, follow the steps given in the installation sheet.

2. Intermediate level tutorial requires installation of avra and avrdude.

3. Refer to the Additional reading material link of Assembly programming through Arduino tutorial to do the avrdude installation.