Instruction Sheet for PhET Simuations for Mathematics Spoken Tutorial Team IIT Bombay



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 reproduce all the steps shown in the video using the Side-by-Side learning method.
- 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 named 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 PhET Simulations for Mathematics

- Click on "Select FOSS" or "All FOSS Categories" drop-down and choose " PhET Simulations for Mathematics".
- 2. Click on "Select Language" or "All Languages" drop-down and choose the language (English, Hindi, ..) 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: Introduction to PhET Simulations

- 1. Locate the topic "Introduction to PhET Simulations" and click on it.
- 2. To view the tutorial, click on the Play icon which is located in the player.
- 3. The Pre-requisite will be visible below the player (only for Online contents).
- 4. Outline, Assignments, Code Files and Slides are available below the player.
- 5. Adjust the size of the browser in such a way that you are able to practice in parallel.
- 6. You will need internet connection to download the PhET Simulations.

5.1 Common Instructions to Practise

- 1. You can save your work by taking screenshots of the interface and saving the images in a folder.
- 2. Play-pause-practise the whole tutorial.
- 3. Once the tutorial is complete, choose the next tutorial from the playlist which is located on the right side or below the player.
- 4. Follow all the above instructions, till you complete all the tutorials in the series

5.2 Common instructions for Assignments

- 1. Attempt the ${\tt Assignments}$ as instructed in the tutorial.
- 2. Take the screenshots and save the images in a folder.
- 3. Solve the numericals and note the values in your observation note book

5.3 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.