Documentation on QA

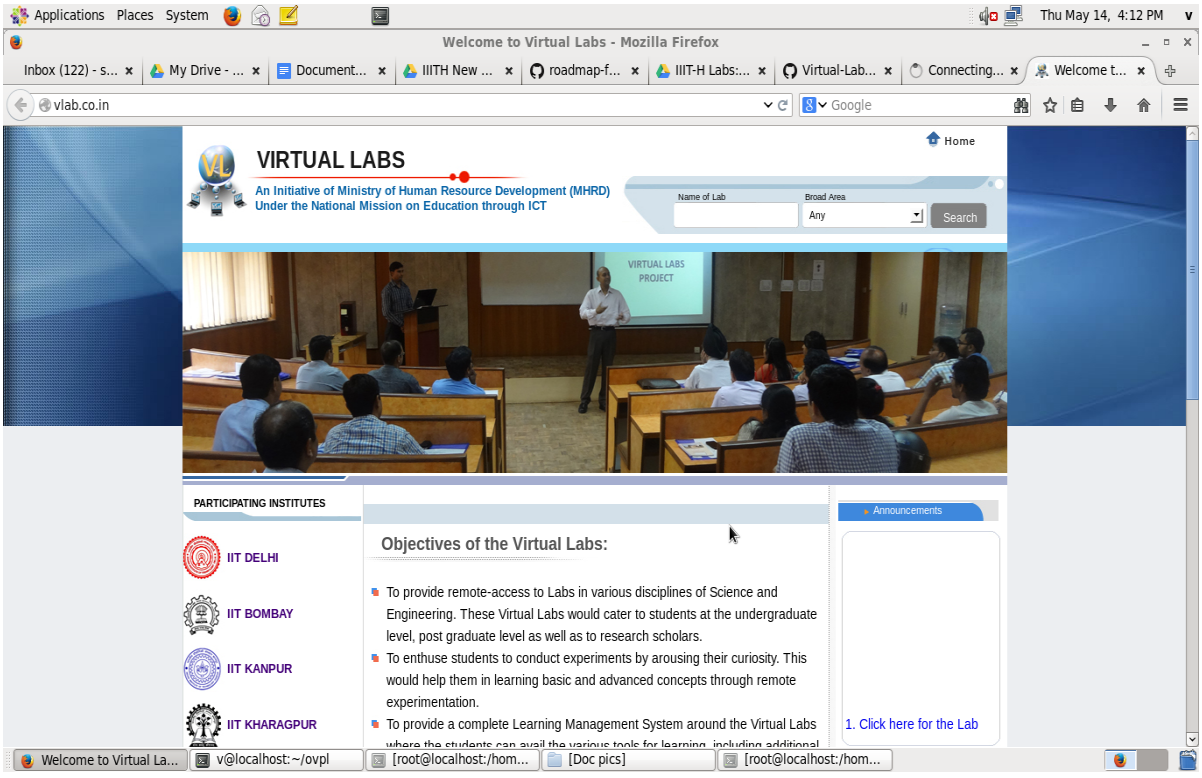
PURPOSE: This document outlines the QA process for Virtual Labs.

WHAT IS QUALITY ASSURANCE ?

Quality assurance is a systematic process of checking to see whether a lab being developed meets the specified requirements.It is like setting up the necessary procedures to be sure that something is working correctly.

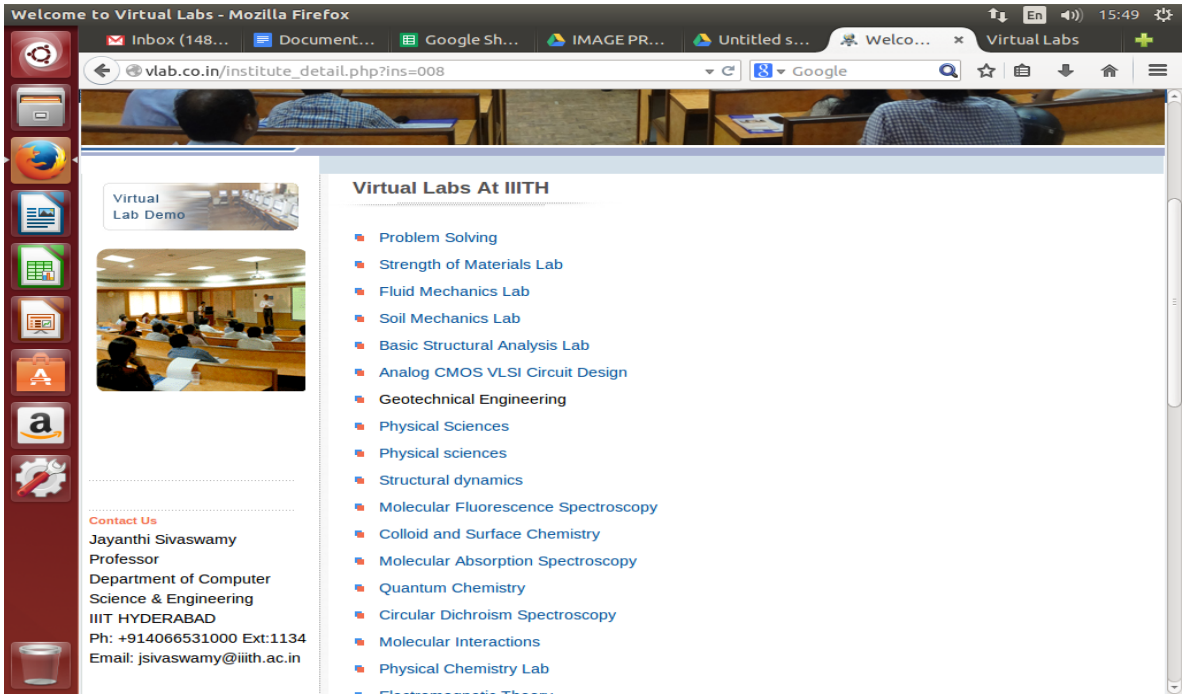
STEPS TO BE PERFORMED WHILE DOING QA :

Step 1: Firstly you need to go to www.vlab.co.in website, there you can find virtual labs related to all institutes as below :



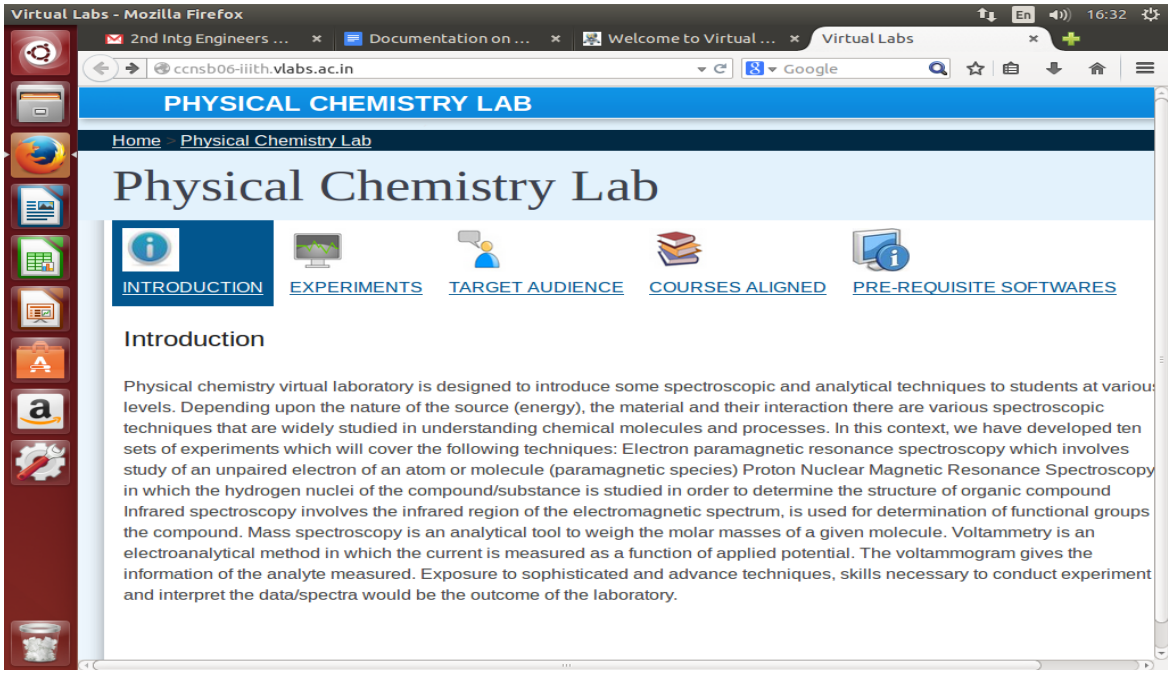
vlab.co.in Home page

Step 2: Click on the institute then you can see the list of labs. You can see that in the below screenshot.



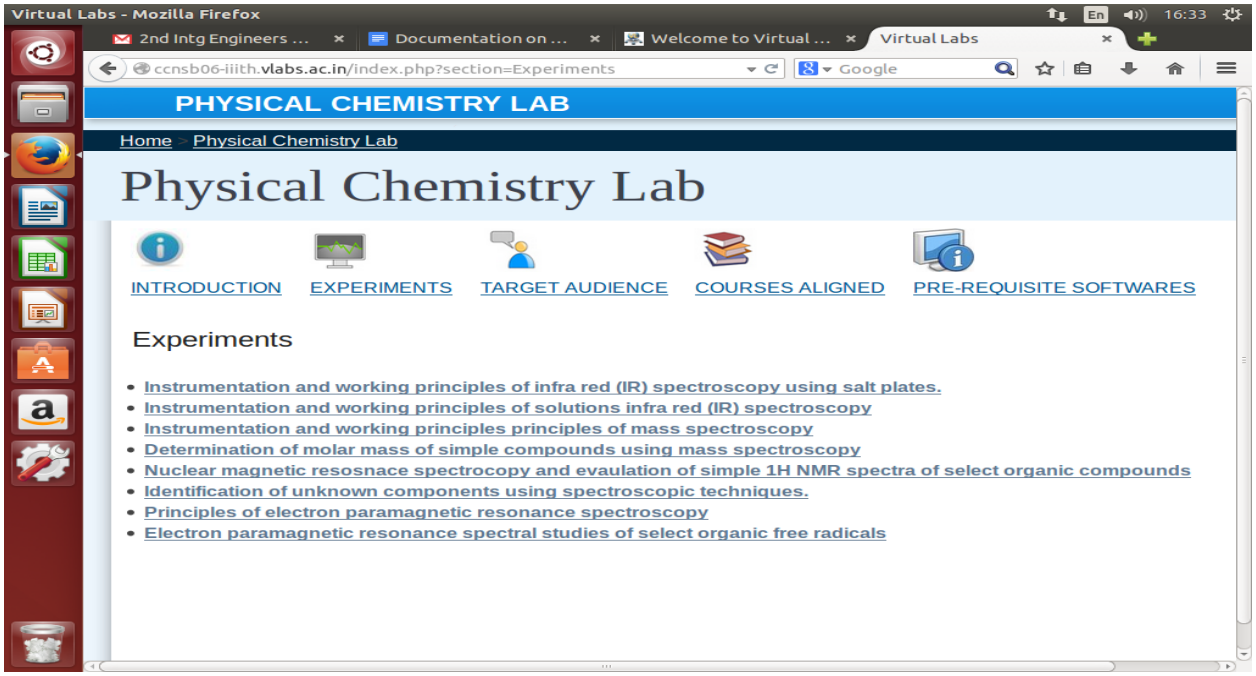
List of labs in IIIT-Hyderabad

(i) Click on any of the lab for, example Physical Chemistry Lab:



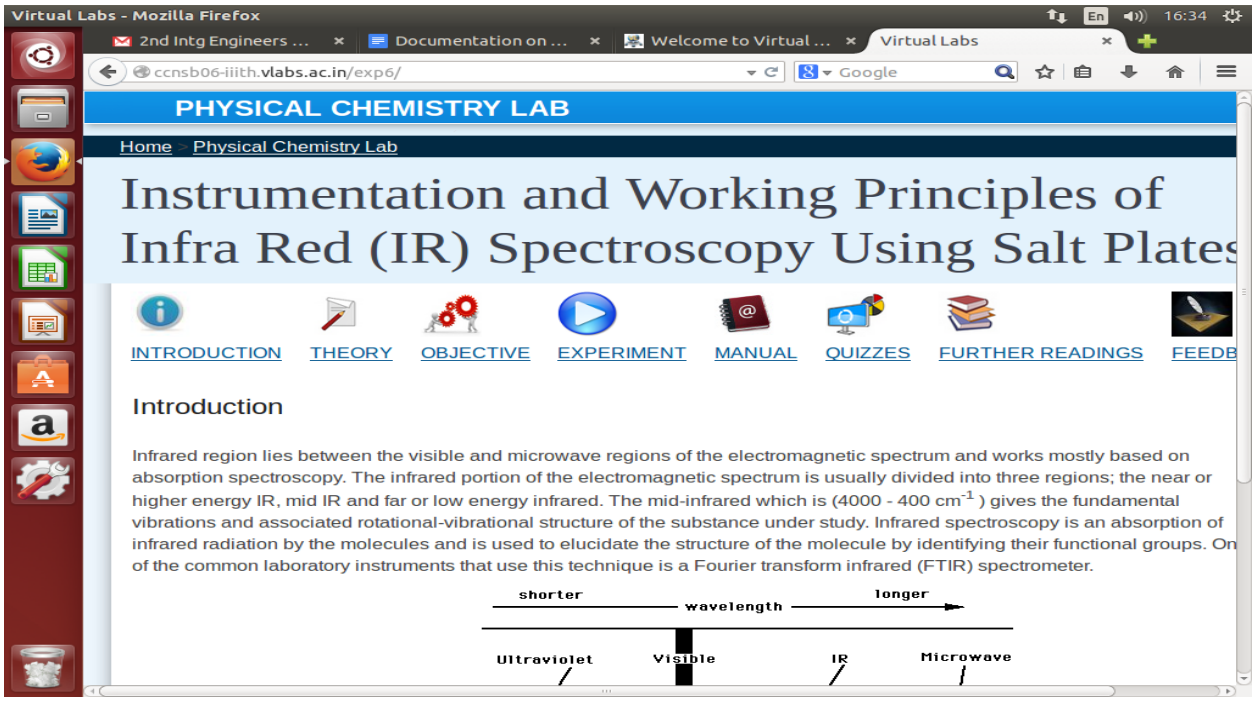
Physical Chemistry home page

(ii) Click on the Experiment tab, there you can see the list of experiments:



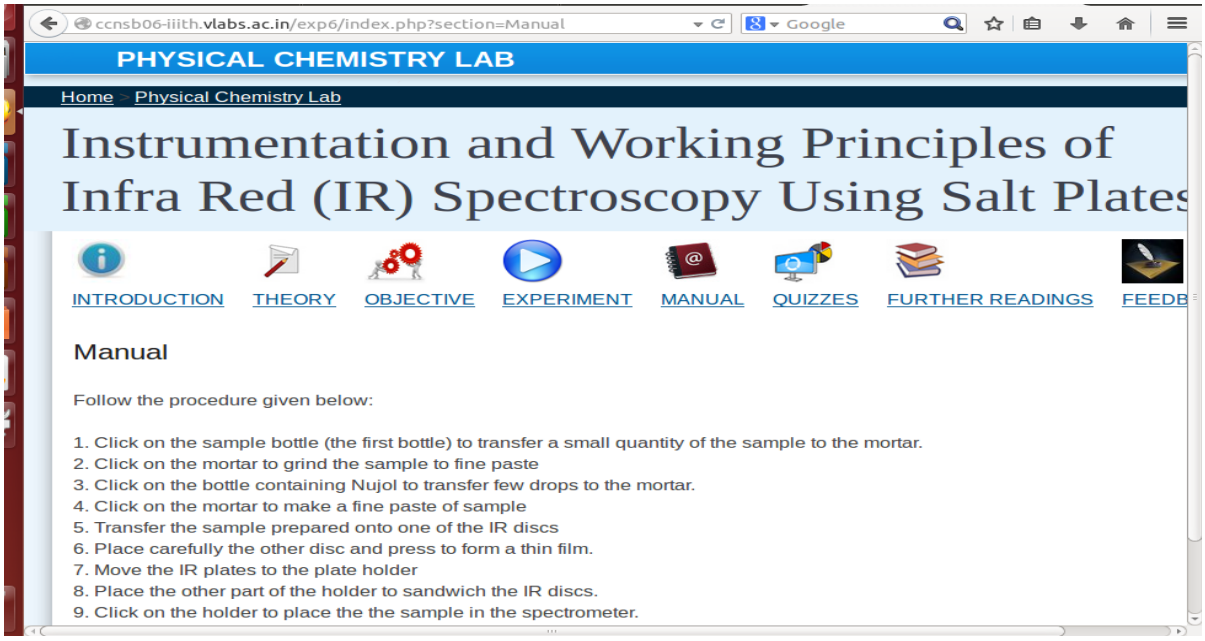
List of Experiments

(iii) Click on any of the experiment, for example Instrumentation and Working Principles of Infrared (IR) Spectroscopy Using Salt Plates.



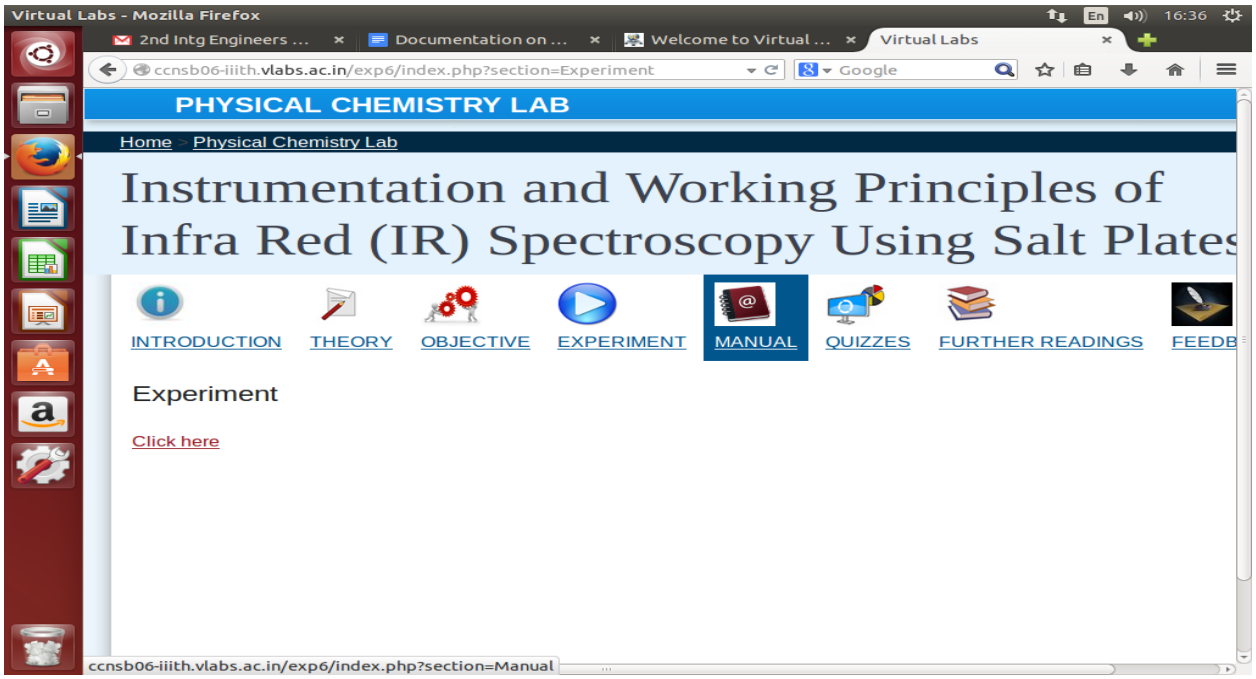
Experiment Home Page

(iv) Click on the Manual tab to read the given instructions to perform the experiment:



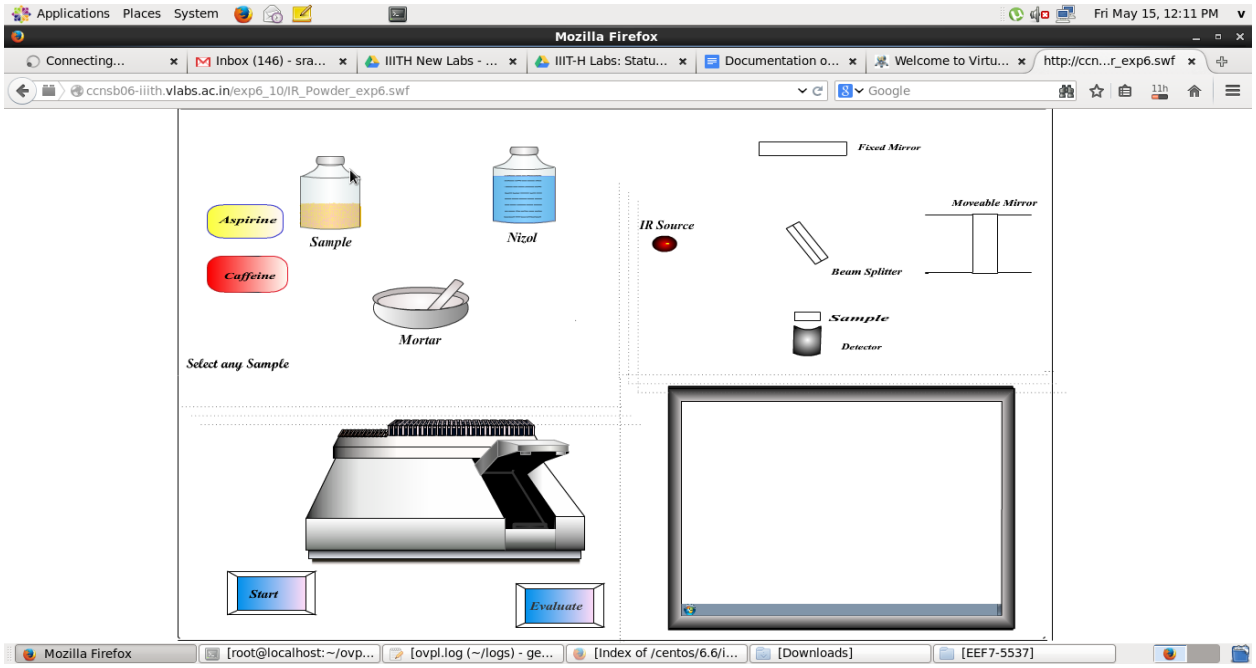
Manual page of the Experiment

(v) Click on the Experiment tab to perform the experiment, then click on **click here** option to get the simulation.



Simulator page of the Experiment

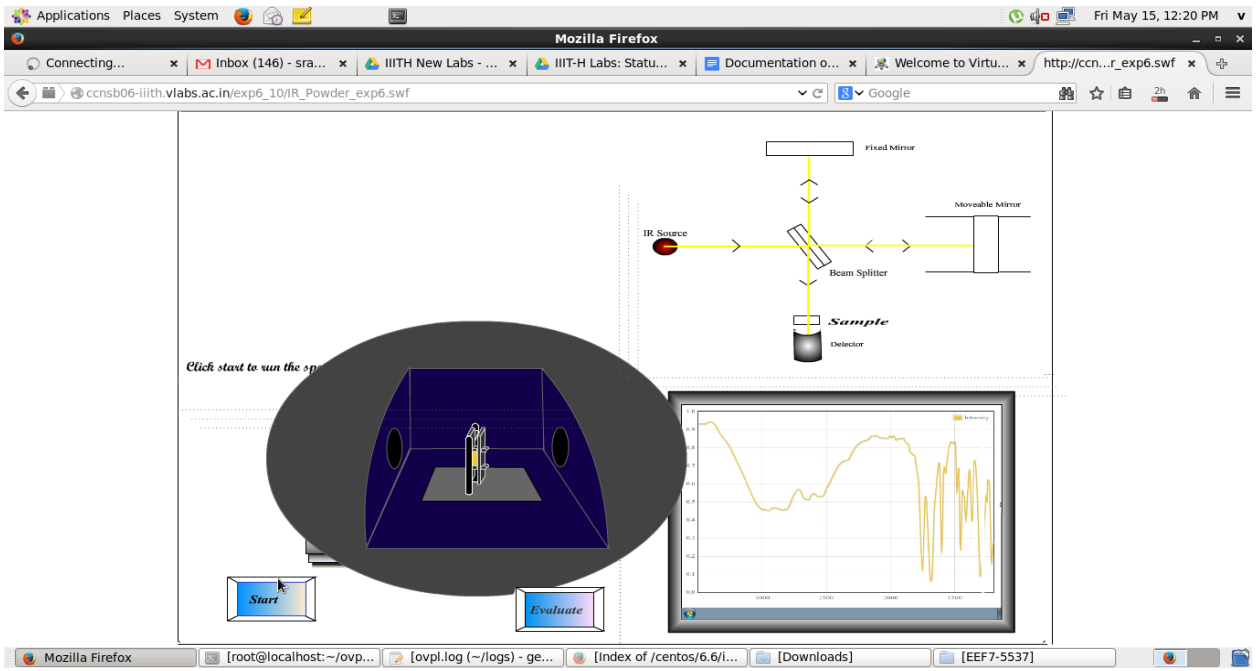
(vi) The following screen shows the starting page of the experiment.



Experiment Page

(vii) Then follow the instructions which are displayed on the experiment page

(viii) After performing the experiment the experiment's result page can be seen as below



Result page of the Experiment

Step 4: What do you expect from a lab ?

4.1 Check for the instructions given to perform the experiment is clear or ambiguous.

4.2 See whether the description about the experiment is clear and meets the expectations of the users.

4.3 Click on any lab. Make sure to have the content and simulations of the lab been added.

4.4 In simulations, if there are any client side dependencies to perform the experiment, firstly you need to install the required packages/softwares on your machine and then perform the experiment, if not directly go ahead with the process.

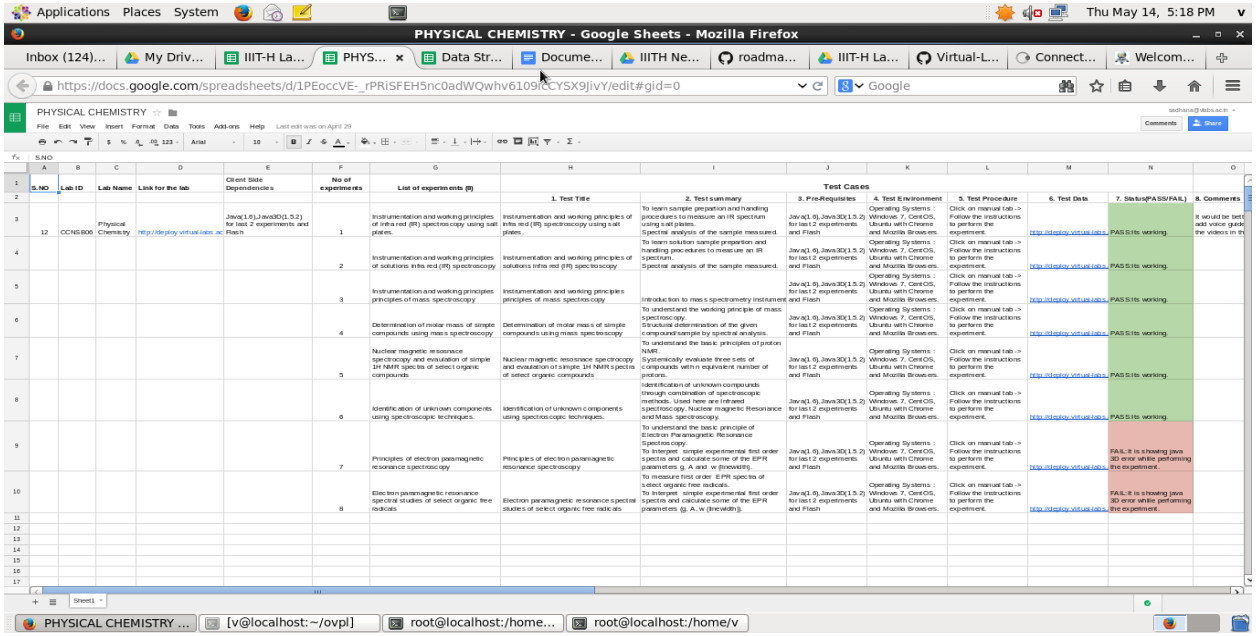
4.5 Its QA engineer's responsibility to test whether the simulations are running or not in different environments. (Different environments means on which operating systems and browsers the lab is been tested.) If you are a domain expert you can also verify the output of the simulations.

Step 5: If u come across any issue regarding the lab or experiments you need to report the issue in the spreadsheet as shown below. The issues can be of two types:

5.1 Errors that can be modified by a lab developer

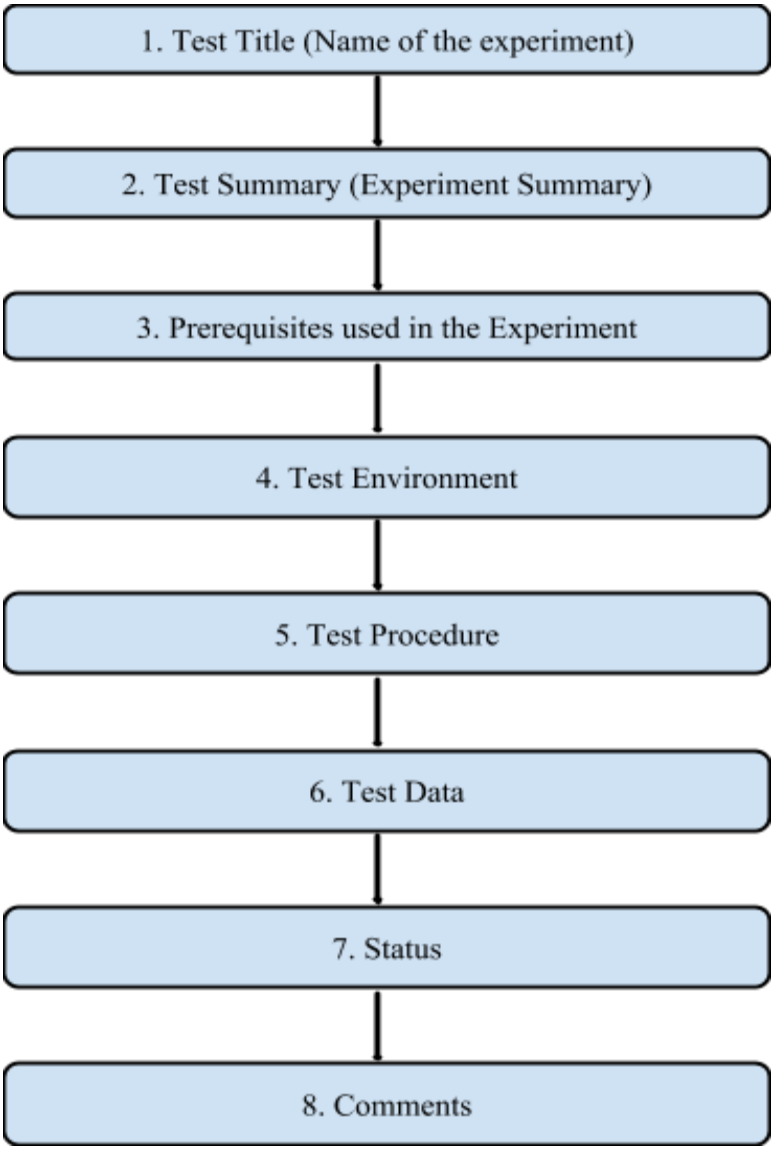
5.2 Errors that can be rectified by an integration engineer.

5.3 Ensure that the issues are reported clearly with screenshots if needed.



Spreadsheet used to report during the QA

5.4 The following diagram shows how the test cases are done while performing QA



Steps to be followed while doing the Test cases

Step 6: Share, discuss and implement the changes required:

6.1 Nobody likes to be told that their work is incorrect or incomplete. So keep in mind the following guidelines when you are providing negative feedback.

6.2 Provide constructive criticism – Remember not to be critical of the person but point out flaws in the experiment.

6.3 Give reasons to back your comments.