Document Name: User Manual v1.1	
Document ID: ImmersiveLabz/User Manual	
Product/Project Name: Simulab	

Simulab

User Manual - Windows

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1. Getting Started with SimuLab

1.1 Product Overview:

Simulab is a product dedicated to providing advanced interactive 3D virtual lab simulations for students in schools and colleges. The product uses simulation software, immersive e-learning concepts and gamification to enrich the teaching and student's learning processes. It is currently finding numerous successes and wide application in education, and is used for digital simulation of lab experiments, teaching, training and testing.

The simulated science experiments have the important characteristics to provide a highly immersive gamified learning experience to science students.

1.2 Supported Hardware Configurations:

Below is the Supported Hardware and Device Configurations:

- **Windows PC Platform:**

  Minimum Hardware Requirements:
  - OS - Windows 10
  - Inteli5/Ryzen3(3300X)/Intel Core i3 (sixth generation or newer) or equivalent
  - 4GB DDR3 RAM
  - 80 GB/256GB HARD Drive
  - Intel Video Card (Mandatory) orNvidia 2GB Video Card (Recommended)

  Recommended Hardware Requirements:
  - OS - Windows 10
  - Intel Core i5 (sixth generation or newer) or equivalent
  - 16 GB RAM
  - 512 GB HARD Drive
  - Intel Video Card (Mandatory) or Nvidia 2GB Video Card (Recommended)

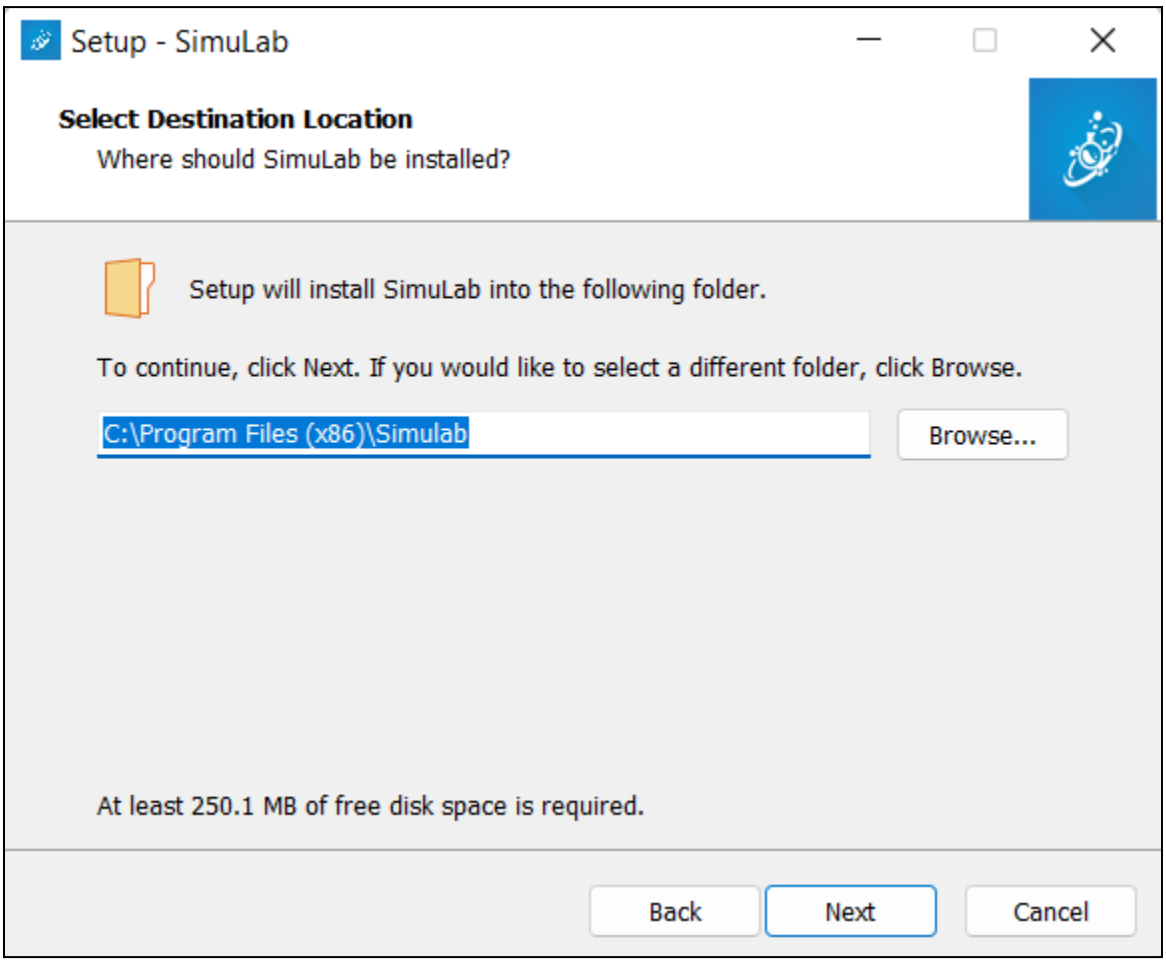
1.3 Installation and Setup Instruction:

SimuLab application is available on the Windows Platform. The application can be installed on Windows PC.

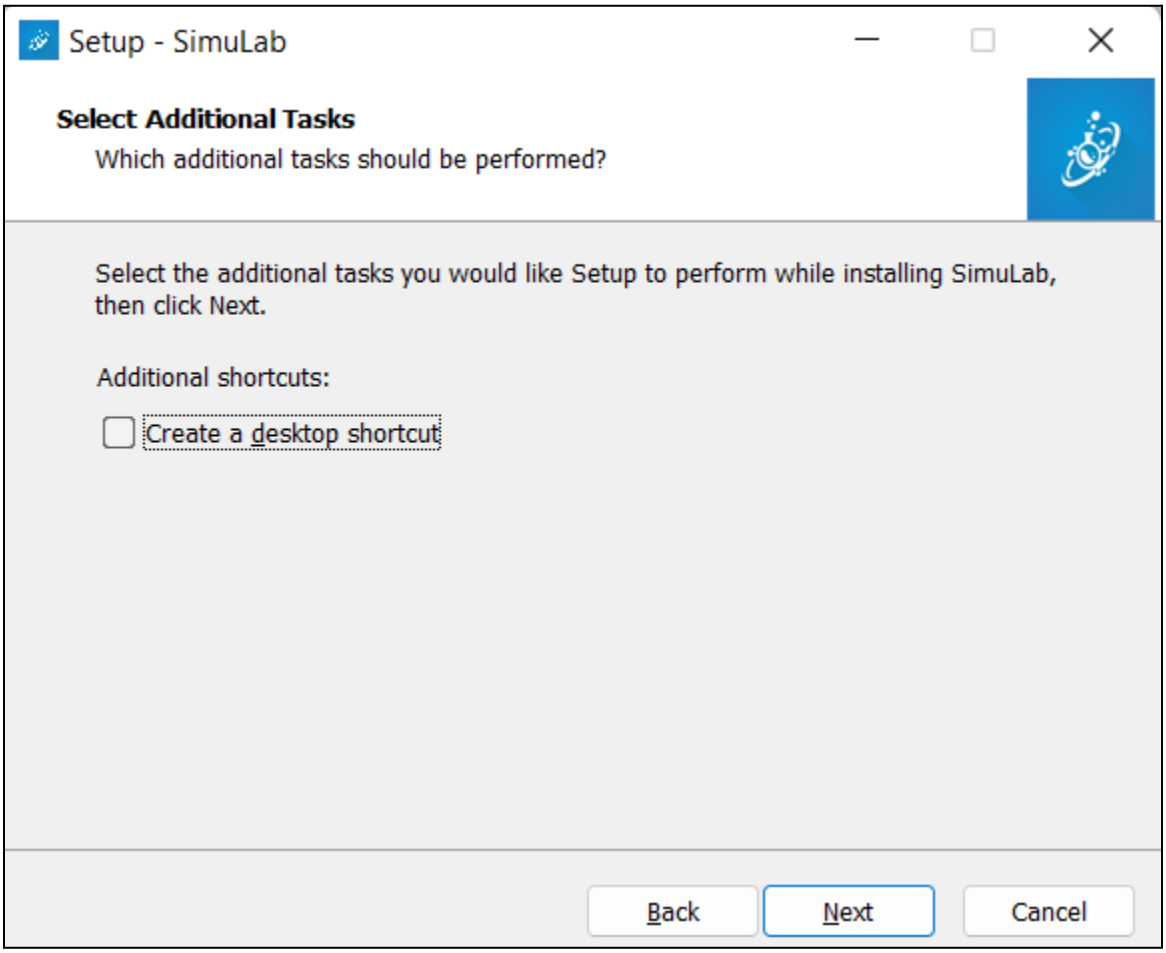
Please follow the below procedure in order to install the Simulab Application.

1. Copy the executable setup (Simulab.exe) from the installation media on your PC.
2. Double-clicking the setup file will start the installation process.
3. You can also directly run the setup from the installation media.
4. The below Setup Wizard will appear once the installation process is started:

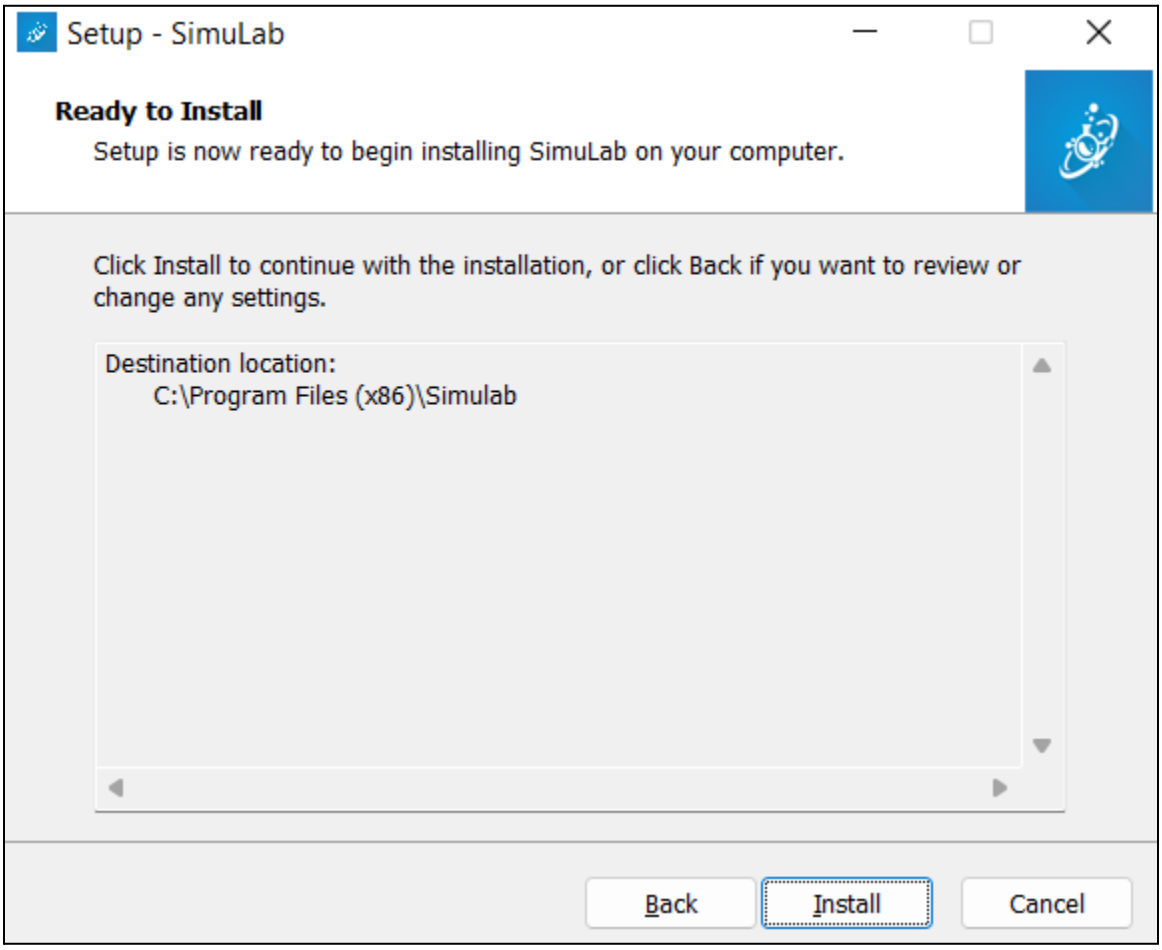
5. Read all the instructions on the Setup Wizard and Click Next button.
6. Select the Destination Location where you want to install the Simulab. Ensure that you have at least 216.5 MB of free disk space in the specified location.

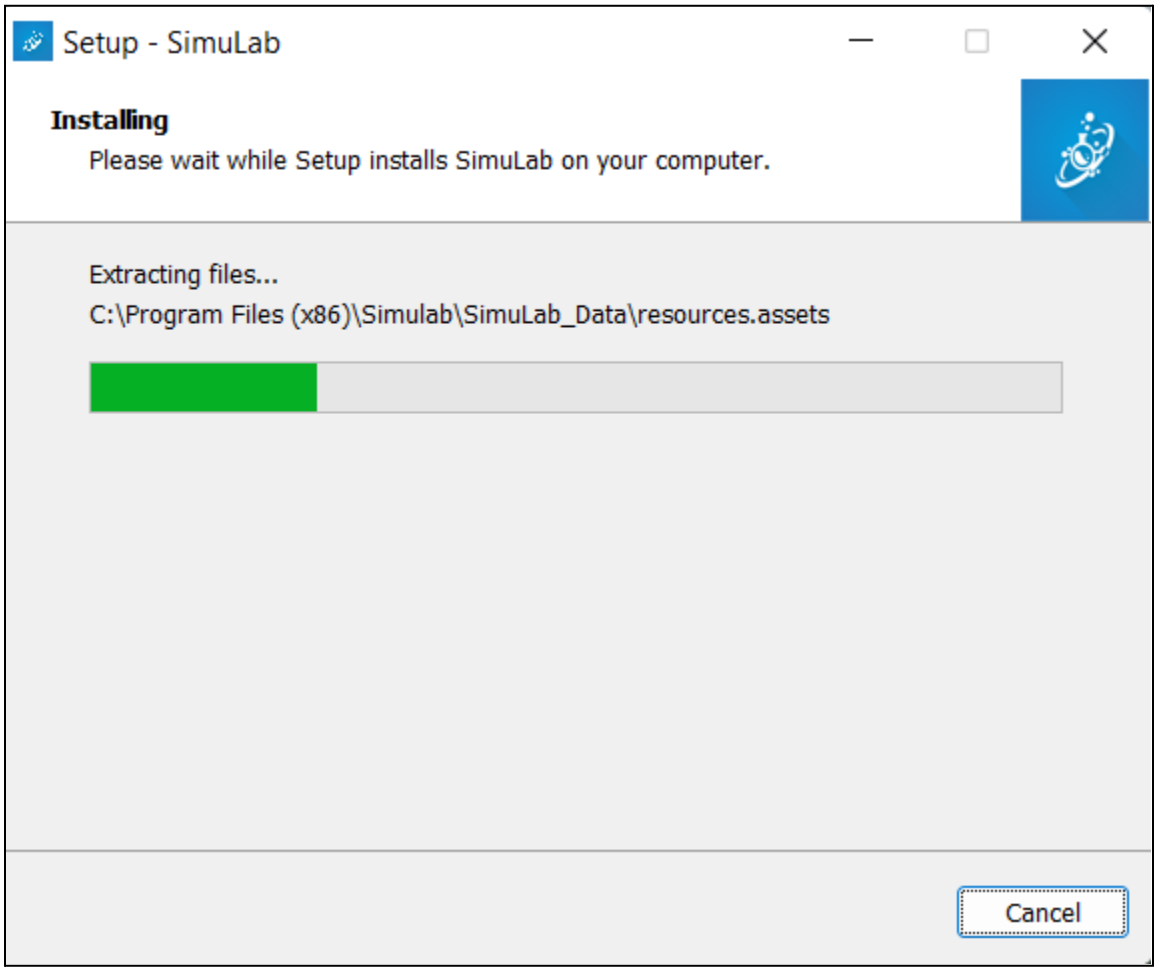


7. The next step will allow you to create a desktop shortcut if you want to create it. Click the square box to create a desktop shortcut.



8. Click Install to begin installing Simulab on your computer. At any point of time if you want to review or change any settings, you can always return to the previous screen by selecting the 'Back' button on the dialogue box. You also have an option to cancel the set up by clicking on the 'Cancel' button.


Setup - SimuLab
Ready to Install
Setup is now ready to begin installing SimuLab on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Program Files (x86)\Simulab
Back
Install
Cancel



9. Once the installation is finished, the below final set up screen will be displayed.

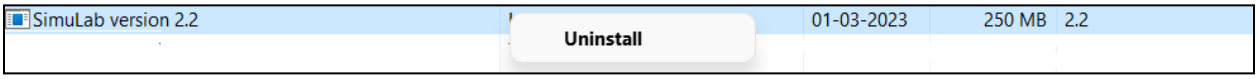
10. You have an option to Launch Simulab as soon as the installation process is completed. Select the checkbox present near to the 'Launch Simulab' and click on 'Finish' button.
11. New Simulab App icon will be created in your system after the installation is finished. If you opt to create a desktop shortcut, the shortcut will be created on your desktop.
12. You can access the Simulab App icon to access the application.

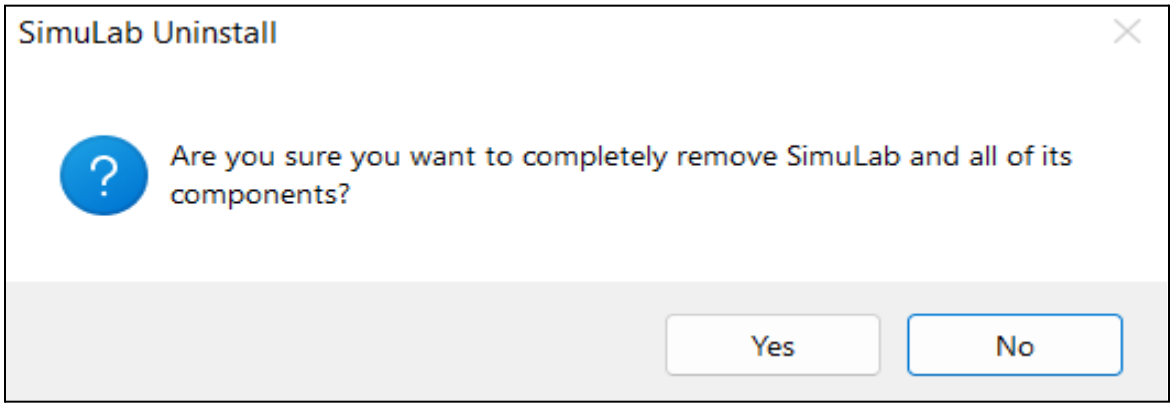
1.4 Uninstalling the application:

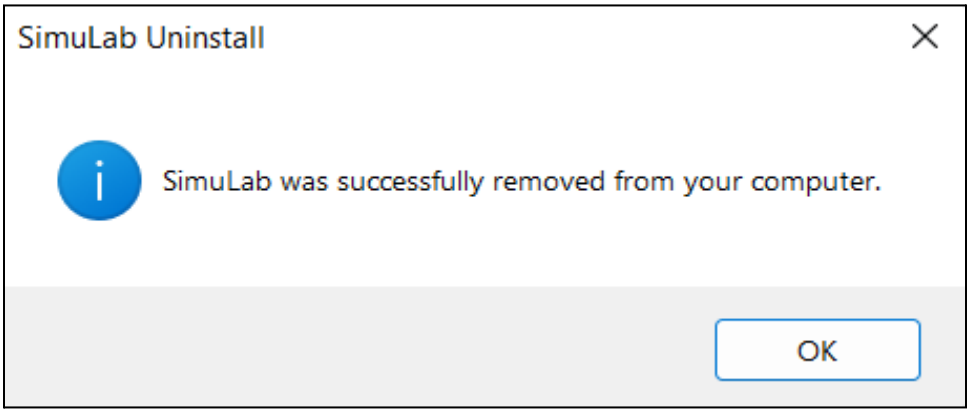
If you want to uninstall the Simulab application from your PC, you can uninstall it through App settings on your PC.

Uninstalling the Simulab application removes all of the application's components. You can re-download and reinstall at any time directly through the executable setup on installation media.

1. Open the Settings option on your PC and choose Apps.
2. Click on Apps & Features and scroll to the Simulab application.
3. Select the Simulab application. Choose Uninstall to uninstall the app and its related info.
4. Click Yes as needed to complete the process.







2. How to use the application

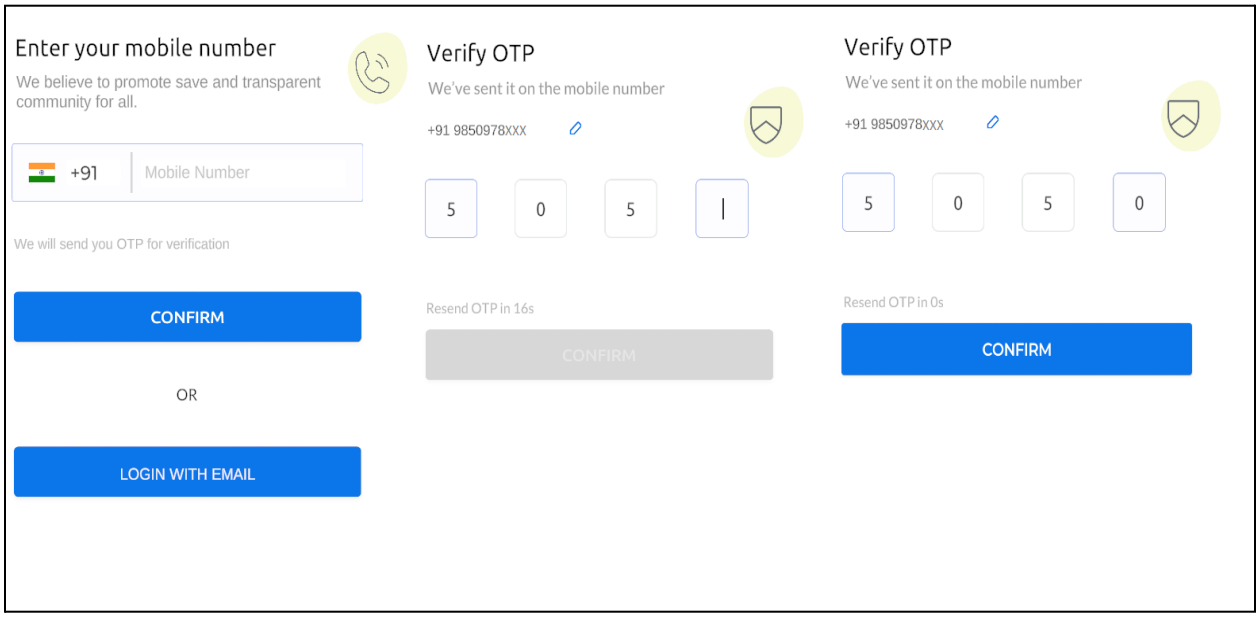
Before you start using the application, you need to register your account on the Android application to access the Simulations.

After your account is registered, you can log in to the Simulab application via two methods.

- Login using the registered Mobile Number
- Login using the registered Email Address

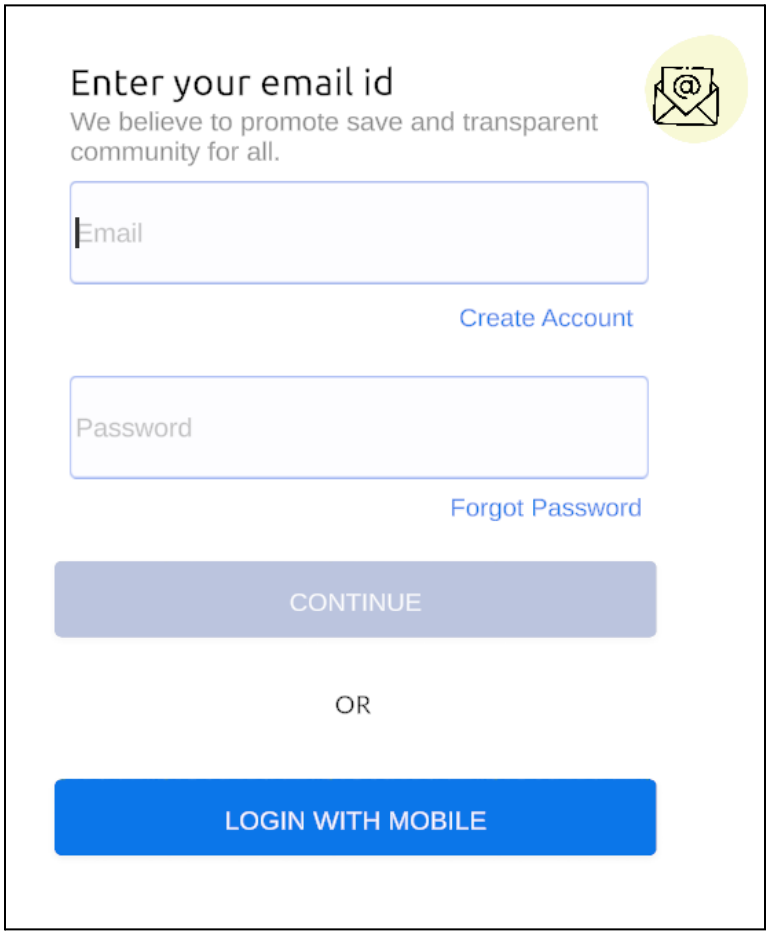
2.1 Login using the registered mobile number:

1. Enter the registered mobile number.
2. Enter the OTP received on the mobile number.
   If the OTP is expired, you can always Resend OTP after 60 seconds.
3. After login using the valid mobile number, you will be directed to the Home Page.

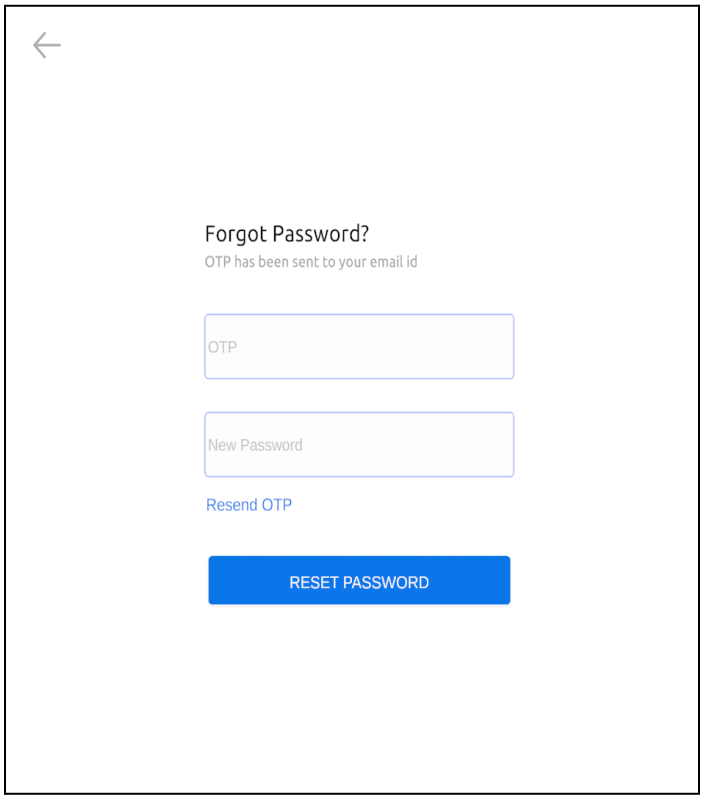


2.2 Login using the registered Email Address:

1. There is also an option to login using a registered email address.
2. Enter the registered email ID and Password.
3. After login using the valid email address, you will be directed to the Home Page.

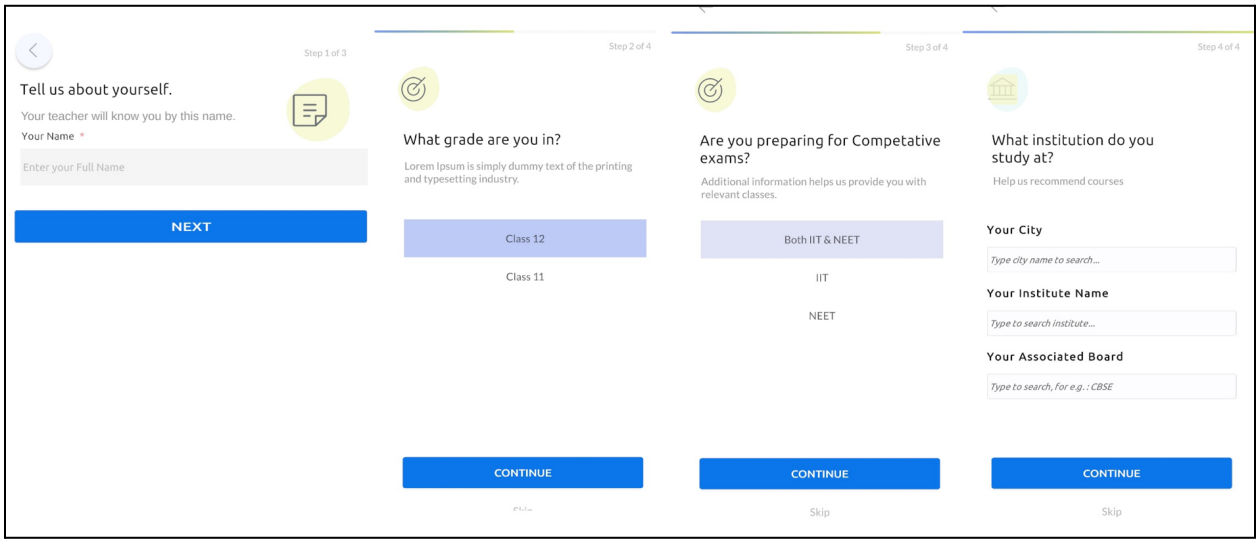


4. If you ever forgot your password, you have an option to create a new password.
5. Click on Forgot Password.
6. Enter the OTP received on your email address.
7. Set the New Password.
8. Click on Reset Password.
9. You will be directed to the Home Page.

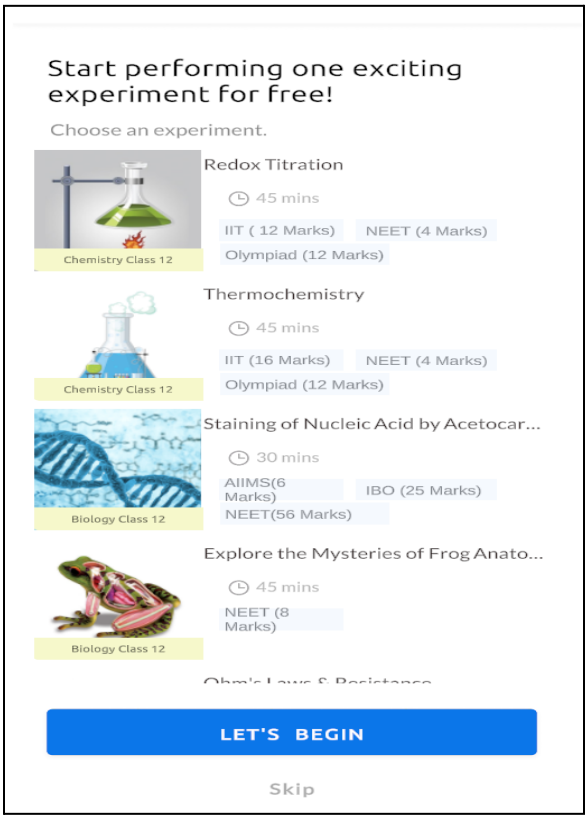


Account Creation Flow:

1. You can create the new account using the Mobile number or email address.
2. Enter your either mobile number or email address.
3. If the user is a new user, then the account creation flow will start.
4. Enter your full name (Student Name)
5. Choose the Grade, competitive exams you are preparing for and institution details.
6. If the required City Name, Institute Name and Board is not available in the dropdown list, you can always select the 'Other' option. 'Other' option provides you a text box of 'Type Here' to enter the respective fields.
7. Click on Add button to add the desired City Name, Institute Name and Board.
8. Click on Continue Button.
9. You can also click on the 'Skip' button if you don't want to add the competitive exam and institution details such as City Name, Institute Name and Associated Board (You can add those details later from the Profile Menu).

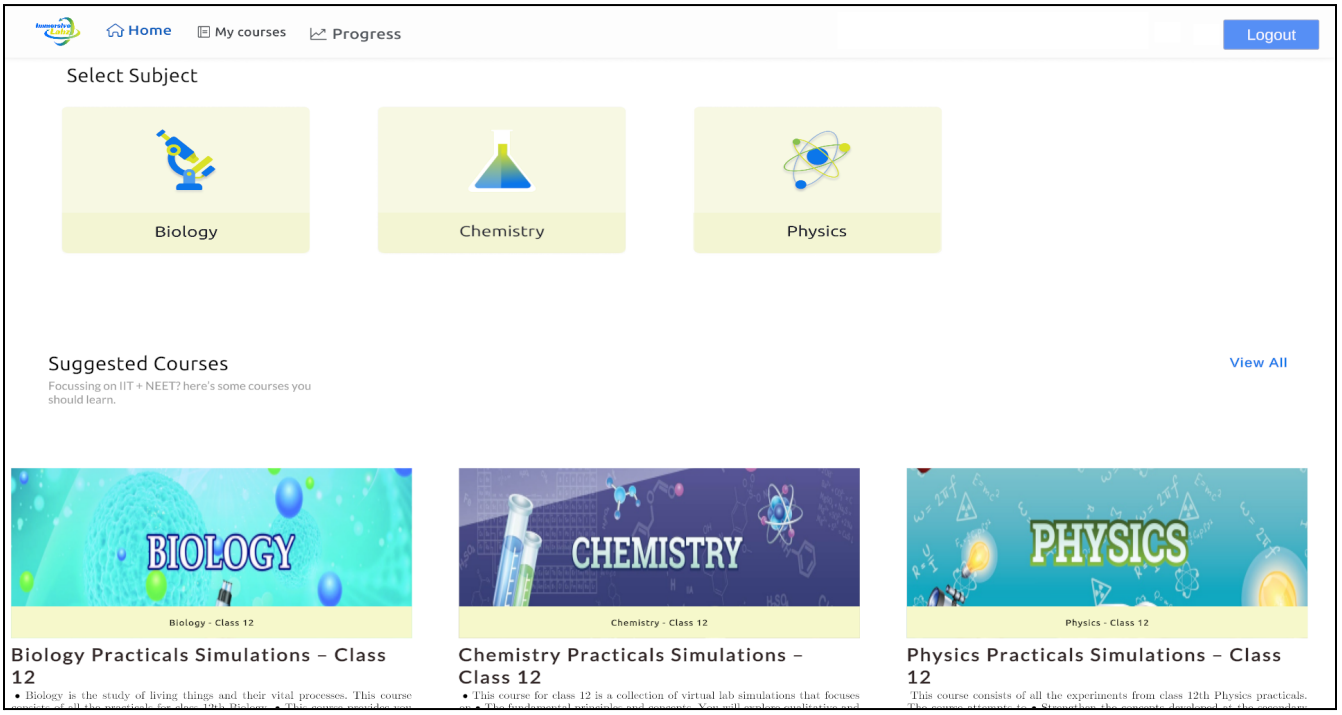


Trial Experiments List:



2.3 Home Menu Tab Contents :

Home page :



Home Page consists of three different tabs (Home, My courses and Progress)

- **Home**: Home tab displays the student info, the class and institute/school with which the student is associated and the Course details subject wise.
- **My Courses**: All the courses you enrolled in will be visible under the My Courses tab.
- **Progress**: Progress tab shows your Overall Progress, Experiments Completed, Quiz Performance and Badges Earned. [Will be seen in the upcoming releases]

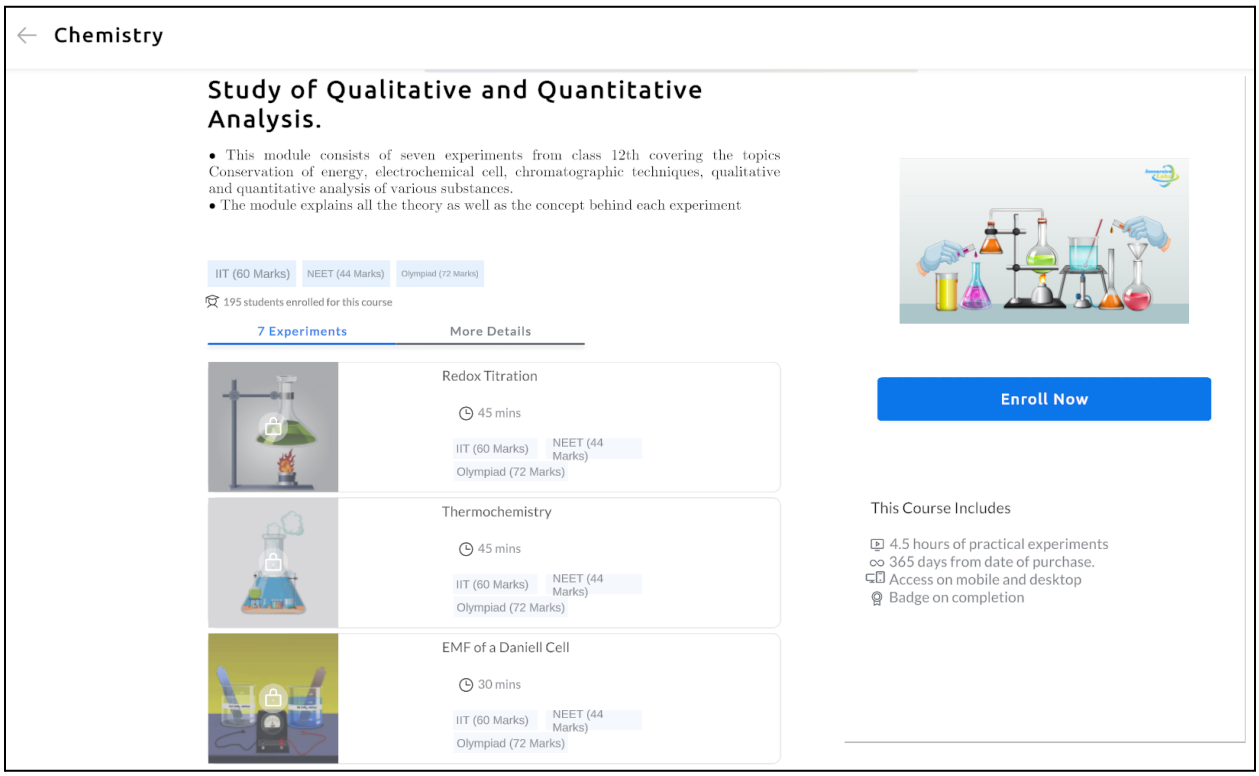
Also, there are three subject thumbnails - Biology, Chemistry and Physics. You can select the desired subject to view the courses of the respective subject.

In the **Suggested Courses** section, you will find all the courses available for purchase.

There is a **View All** button available on the page which takes you to the Courses screen. Here, the app also allows you to filter the courses based on the subjects. You can select the desired course by filtering subject wise.

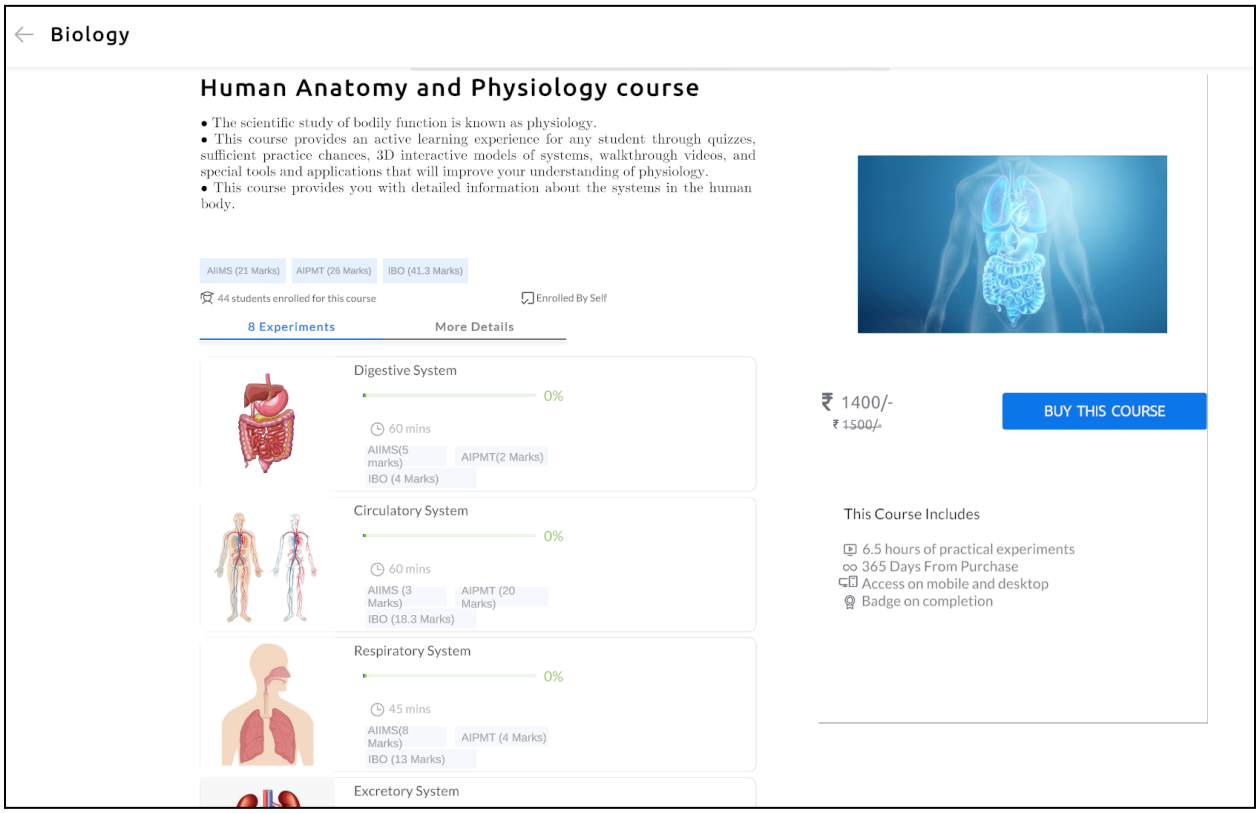
2.4 Course Enrollment Process:

1. All the courses are listed under the **Suggested Courses** section in the Home menu. This list includes both the free trial courses as well as the paid courses.
2. You can select the course you want to enroll yourself in.
3. Click on **'Enroll Now'** to enroll yourself into the respective course.



4. Once you enroll into the course, the enrolled course is accessible under **My Courses** tab.
5. With course enrollment, you can access experiment theory and quizzes in the respective course. Enrollment is completely free.
6. If you enroll in a Trial Course, the course is seen as the **Course is subscribed.**

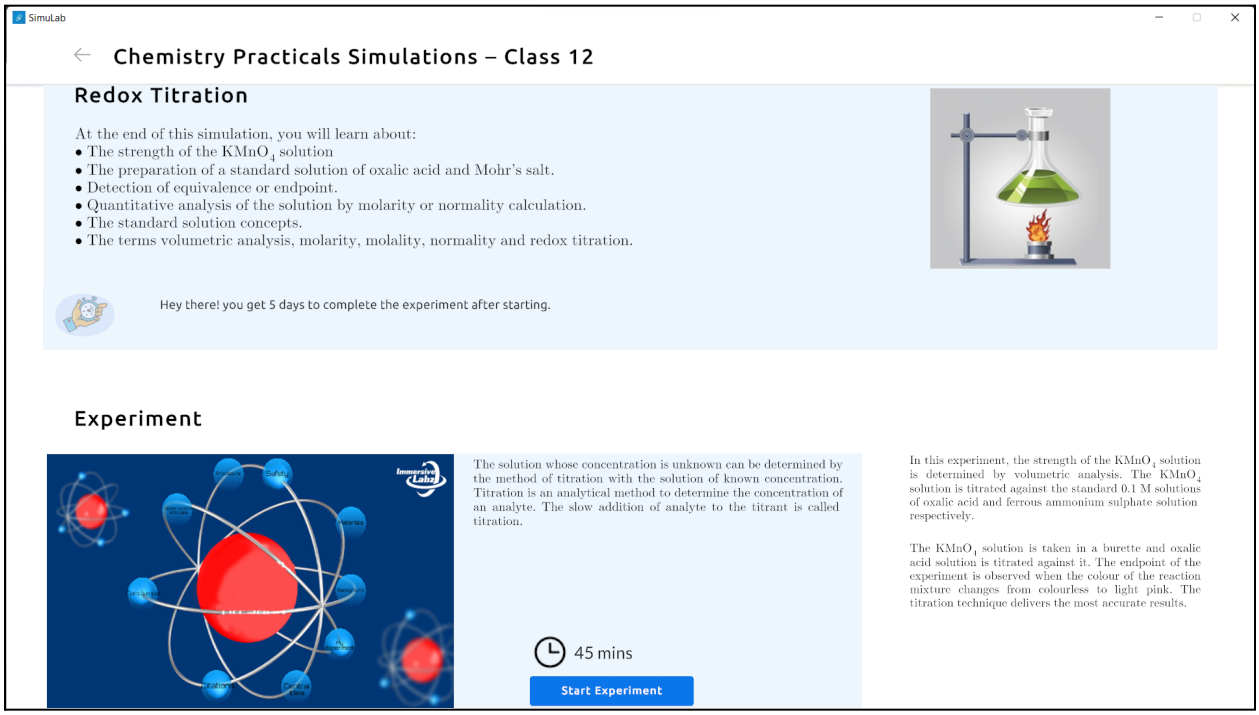
7. If you enroll in a Paid Course and have not purchased that course, the status for that course is seen as **Course not subscribed**.
8. Simulab Android application provides an ability to purchase the desired course. The purchased courses using your login on Android will be visible under the My Courses tab on PC platform. The status for the purchased courses will be seen as **Course is purchased.**



2.5 Course Purchase Process (On Android Application):

1. Once you enroll in any paid course, you can buy the desired course with the price shown.
2. You can buy the course by clicking on the 'Buy this course' button.
3. You can select the desired payment method to buy the required course.

4. Once the course is purchased, the courses will be visible in the **My courses** tab with the status **Course is purchased** and you will get access to all the experiments listed in that course.
5. Select the experiment you want to perform.
6. Select **'Start Experiment'** to perform the Simulation Experiments.



2.6 My Courses Tab:

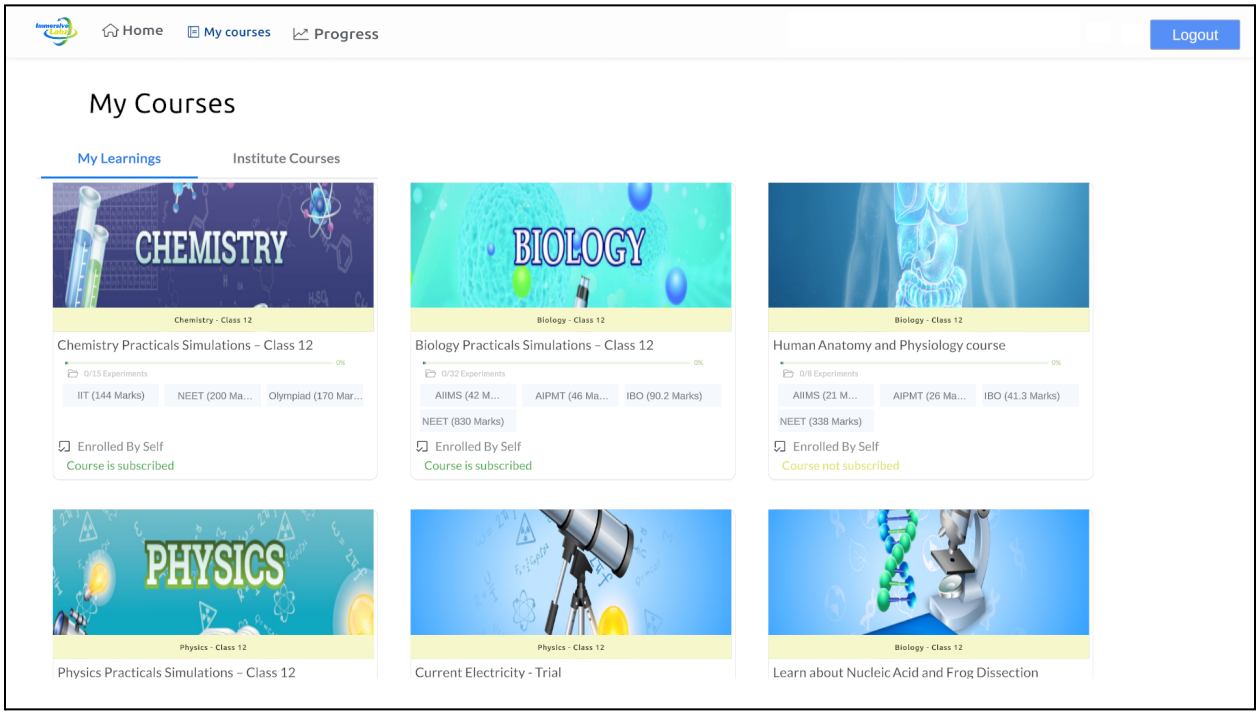
There are two tabs in the My Courses tab, My Learnings and Institute Courses.

My Learnings: Once you enroll into any course, the enrolled course will be visible in My Learnings tab. You can purchase the courses on the Simulab Android application after the enrollment. (Course Purchase process is described in the above section)

Institute Courses: If any of the courses is enrolled or purchased by your school and you are added into that school, the courses purchased by your school will be visible in this section.

Course Details: Each course has the following information:

- Progress bar to reflect the number of experiments completed in the course
- How many weightages of mark this course has brought earlier in different Competitive Exams
- Enrolled By Self (Course available in My Learnings tab) and Enrolled By School (Course available in Institute Courses)
- Status of Course Enrollment or Purchase.
- How many students are enrolled into the course till now.

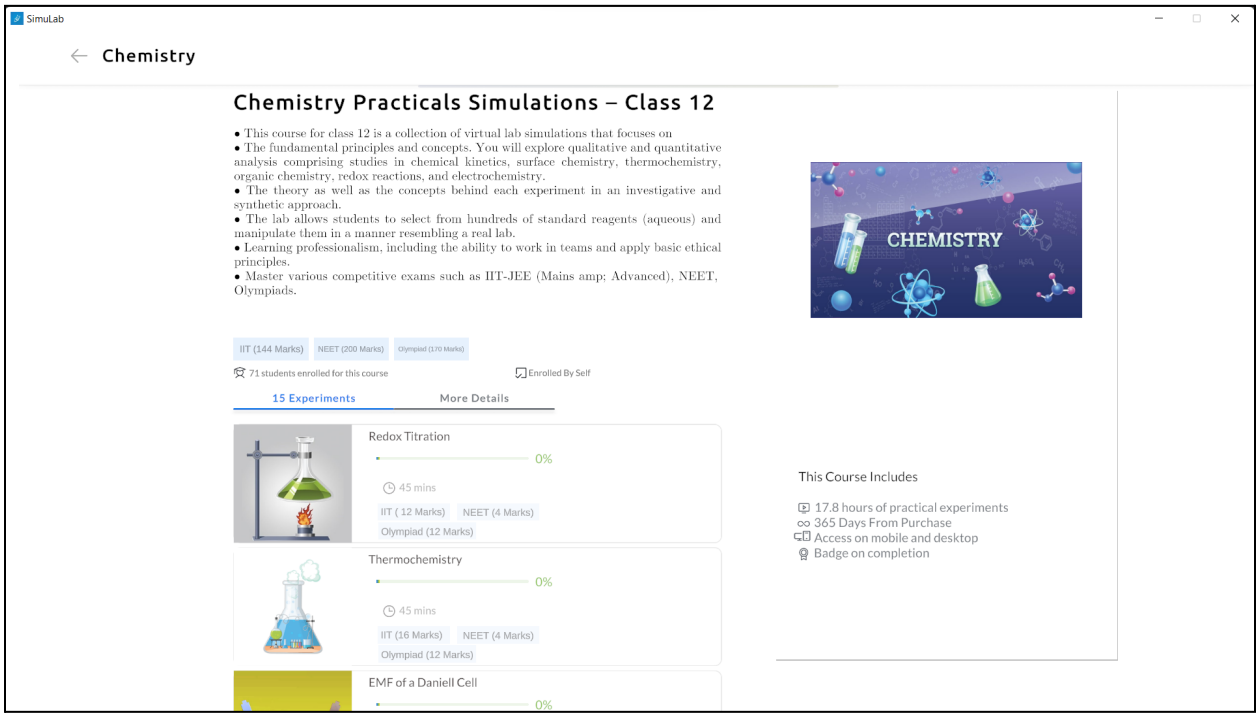


You can select the desired courses on the My Courses Page.

Detailed Course view has the following information:

- Course Contents and inclusions
- **Experiments tab** : Number of experiments covered in the course
- **More Details tab :** What you will learn in the course.
- Progress bar to reflect how much progress is made in the experiment.

- How many weightages of mark this experiment has brought earlier in different Competitive Exams
- Enrolled By Self or Enrolled By School
- How many students are enrolled into the course till now.
- Time required to complete the experiment



2.7 Experiment Page Contents:

In the Experiment Page contents, you will find the Experiment objective, Preview, What you will learn (Summary) and the Study Materials.

The Study Materials contains the following Information:

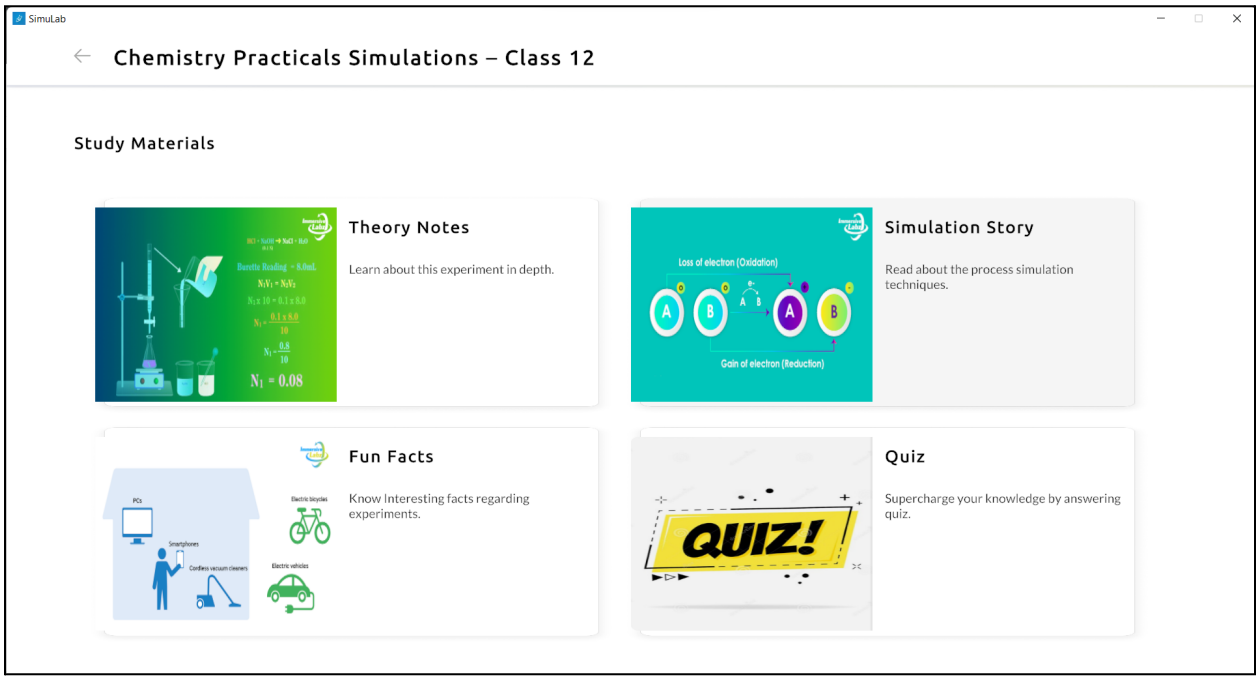
Theory Notes: You can learn about the experiment in depth in this section. It includes Techniques as well as the Related articles.

Simulation Story: Read about the process simulation techniques in this section.

Fun Facts: Know Interesting facts regarding the experiments. You will find the different topics related to the experiment.

Quiz: You will find the different levels of Quizzes here. [You will find it in the upcoming releases]

- There are 3 different levels of Quizzes - Beginner, Intermediate and Advanced.
- You will find the number of questions, number of students attempted and completed the quiz, Instruction details.
- You get adequate time (as mentioned on Quiz UI) to select the desired answer from the options provided.
- You have to click on the desired option to select the correct answer.
- The **Start Quiz** button is provided below to start answering the Quizzes.



2.8 Logging out of the application:

Once you login to the application, you can always log out of the application. You have an option on the Home Page to log out from your profile.

3. Simulab Arena

3.1 Navigation components inside the Simulab Arena:

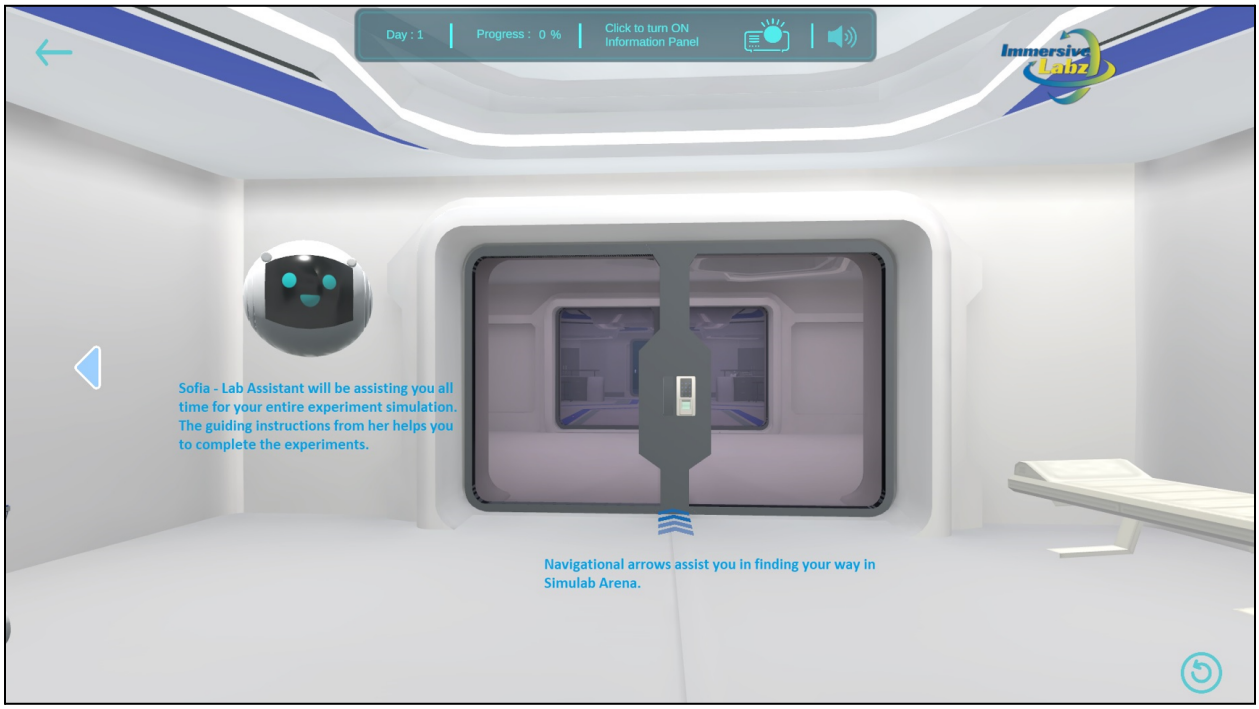
The left arrow (back arrow), up arrow, down arrow, and the right arrow (forward arrow) - You can navigate inside the lab room using the arrow keys of Keyboard on PC.

You can also use WASD keys on the computer keyboard in place of the arrow keys for the navigation inside the lab.

There are the marking points with three arrow points to specify the hotspots and items to which needs to be interactive. This will help you where to interact or needs to be teleported to that target position.

There is also a single left, right & front arrow. The arrow helps you to view the scene when the camera is off from the viewport. This will be used during the time of conducting the experiment. Also, it will help you where to move the camera.

Navigation Arrows present in the simulab arena assist you in finding your way in Simulab Arena.



3.2 Information Panel (Holographic Screen):

Holographic screen is the most effective way to get useful information about the simulation. You can access the Information Panel at any time during the simulation.

This holographic screen has the following information:

- **Home**: It gives the info about the experiment setup.
- **Experiment:**
  - ➢ **AIM** : This section has the information of the experiments to be conducted in the current module.
  - ➢ **REQUIRED MATERIAL**: This section has the list of apparatus to be used during the entire experiment.
  - ➢ **THEORY**: This section holds the entire information about the module in detail.
  - ➢ **PROCEDURES**: Procedures are the steps for Experiments
  - ➢ **OBSERVATION**: This tab helps you to understand the calculation to be done throughout the experiment
  - ➢ **RESULT**: It displays the experiment's final result.
- **Precautions**: It has the information about the experiment safety guidelines and the precautions to be taken during the experiment.
- **Achievements:** This includes the information about the progress and scores achieved in the experiment.

- **Quizzes:** It includes the final experiment related quizzes just to understand & implement the concept in a quiz form. Quizzes can also be of various forms, like MCQ's, True or false, correct statements, Calculations, Diagram based quizzes.

3.3 Object Accessibility and identification:

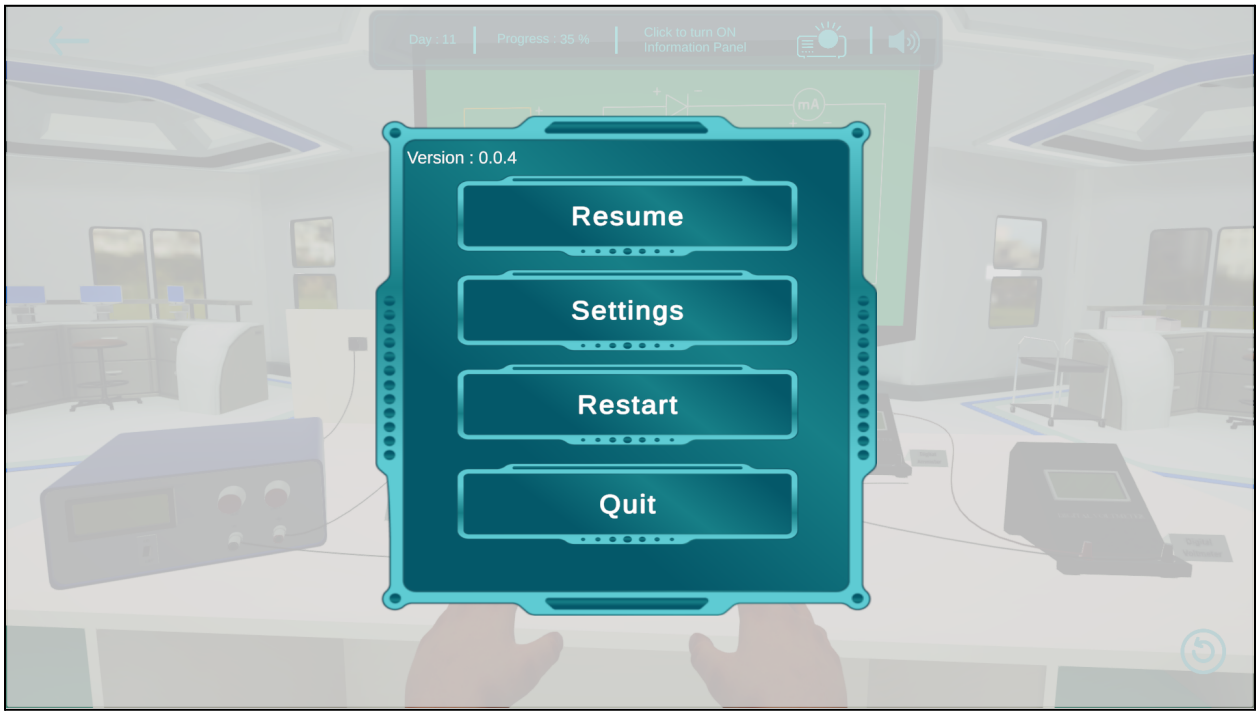
You can know about the specific apparatus in the lab by moving your mouse on it or clicking on the apparatus. Also, the apparatus gets automatically highlighted while performing the simulation to guide the next step. In some of the experiments, labels have been kept on the table to identify the required materials.

3.4 Simulation User Interface:

3.4.1 Pause Menu:

You can invoke the Pause Menu during the simulations by clicking on Back button. Three options are available in the Pause Menu.

- Resume: You can resume into the Simulation from the Paused state.
- Settings: You can change the settings of Window Mode to Fullscreen or Windowed.
- Restart : You have the ability to restart the Simulations at any point of time.
- Quit: This button allows you to quit the Simulation.



3.4.2 Reset Tool:

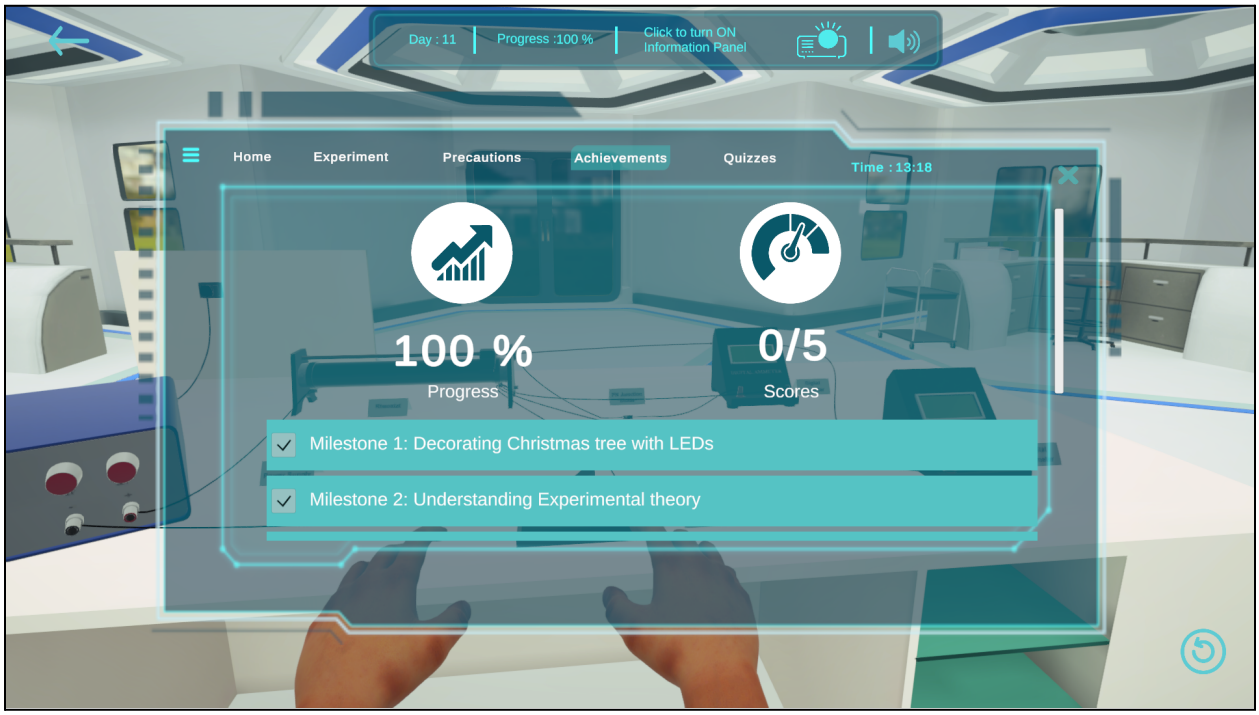
The reset button reset the user position to the last visited hotspot. If you move away from the table setup to any other location inside the Simulab arena, clicking Reset will take you to the table setup.

3.5 Progress and Milestone Tracking in the Experiment:

You can track your progress and milestones completed in the experiment at any point of time in the **Achievements** tab.

You can keep the track of following things in the Progress tab:

Progress : This section describes how many % of coverage is made in the experiment.
Scores: This section describes the scores earned by answering the Quizzes.
Milestones: This section describes how many milestones have been completed in the experiments.


Day : 11
Progress :100 %
Click to turn ON
Information Panel
Home
Experiment
Precautions
Achievements
Quizzes
Time : 13:18
100 %
Progress
0/5
Scores
Milestone 1: Decorating Christmas tree with LEDs
Milestone 2: Understanding Experimental theory

4. Accessing the Dissection Experiments:

4.1 Introduction

In the dissection experiments, you can learn how to dissect the specimen, how to use the dissection tools, Internal and external organs of different specimens (anatomy and morphology).

4.2 Navigation Components and Interactive Buttons

Navigation Buttons - You can use the directional pad to move the model in Up, Down, Left and Right direction. Also, you can zoom in/out the model using + and - Buttons.

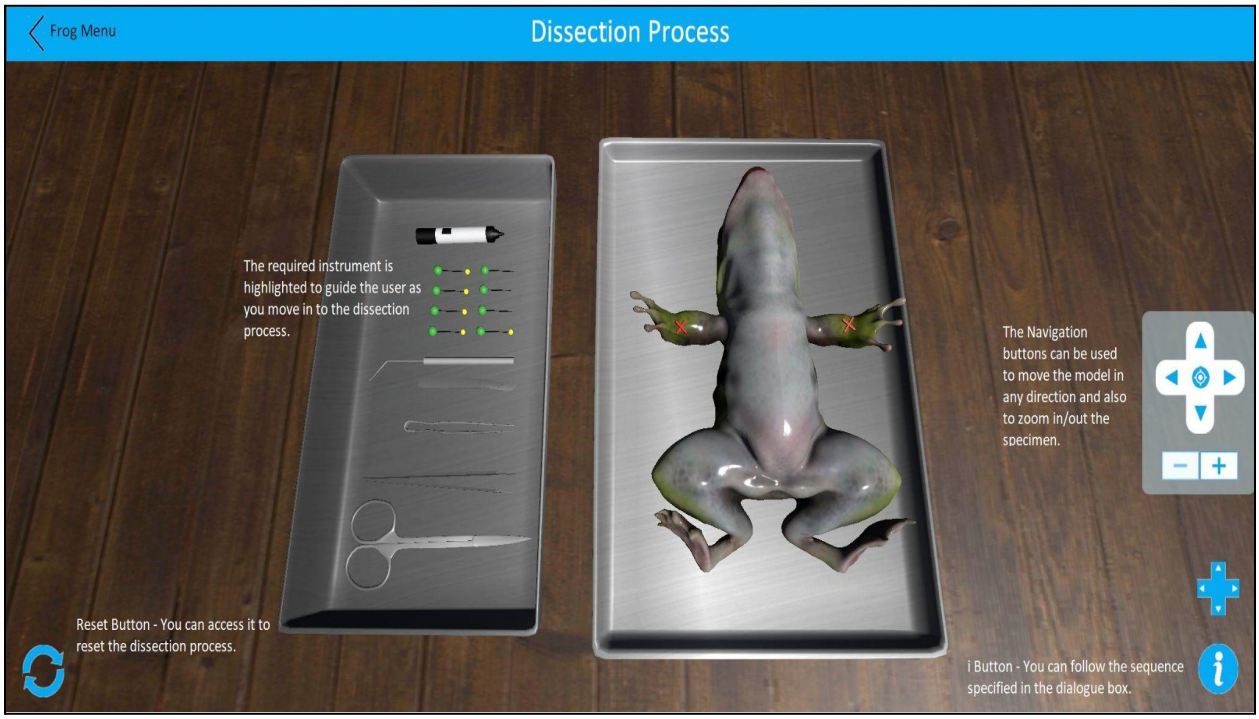
There are the marking points with yellow color to specify the items to which needs to be interactive.

You can use the Left Click and select the highlighted item using a cursor to drag it. Also, you have to click on the highlighted item to pick it.

Reset Button: You can always reset the dissection process by accessing it.

i Button : You can view the dialog box at any moment during the experiment by tapping on i Button. It will guide you about the next step to be performed in the experiment.

Toggle Button - Tap on toggle button for labeling the model.



4.3 Dissection Tools Usage

As you start the dissection process, there are certain marking points with yellow color to specify the items to which needs to be interactive. This will help you where to interact during the dissection process.

Various instruments are placed on the table which are required for the dissection process.

You can click and drag the highlighted instrument to start the dissection. The required tool / Instrument is highlighted which to pick during the experiment and also the guiding instructions are played which next steps to be performed which ease the dissection process. Some of the examples include:

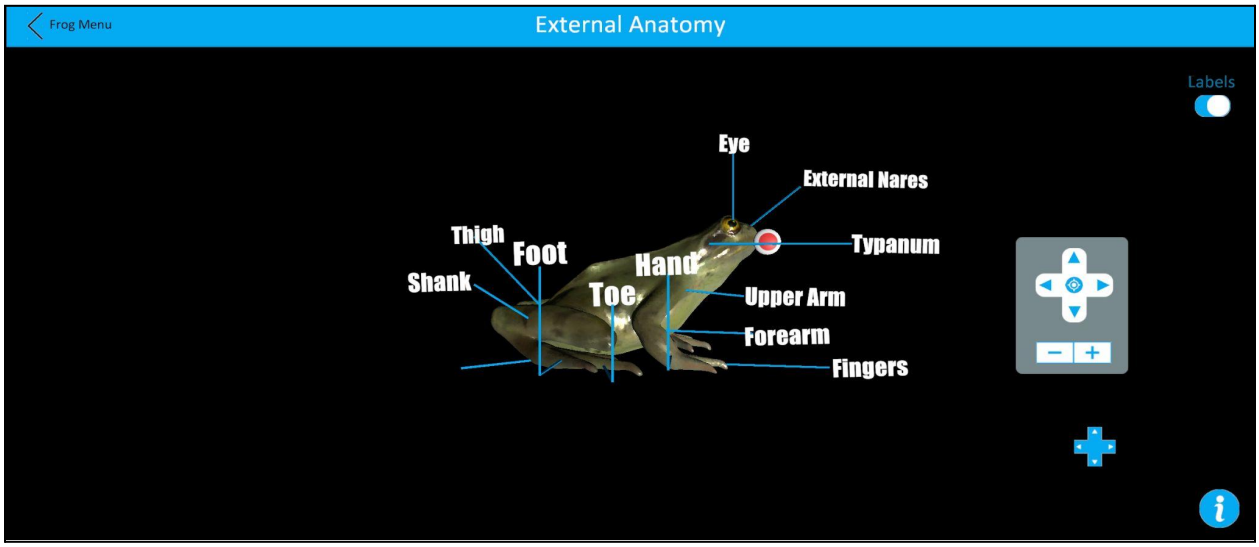
- Place the pins to secure the specimen parts to the Pan.
- Pick up the marker and mark the skin for the incision.
- Use the Scalpel to make a cut along the direction shown.
- Use the Picker to move the skin aside.
- Use the Scissor to make incisions in the shown direction.

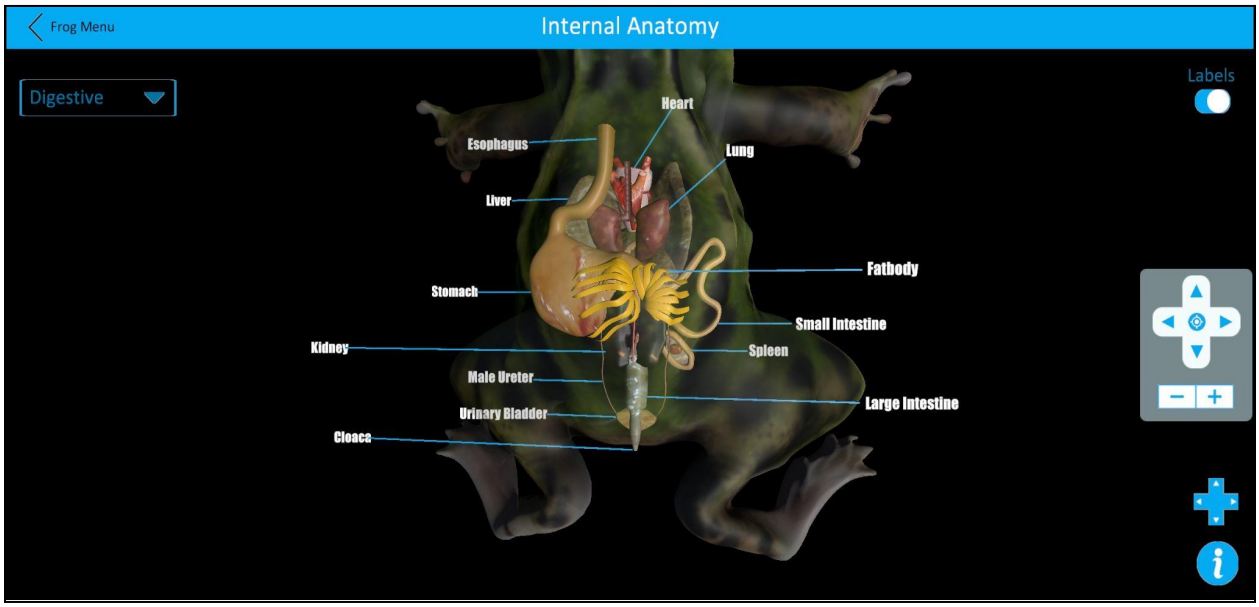
4.4 Internal and External organs of specimen

You can know about the external and internal characteristics of the specimen from the External and

Internal Anatomy menus of the specimen.

Similar buttons are being used that are mentioned in the Navigation Components and interactive buttons section which allows you to interact with the specimen in simplified manner.





4.5 About Section

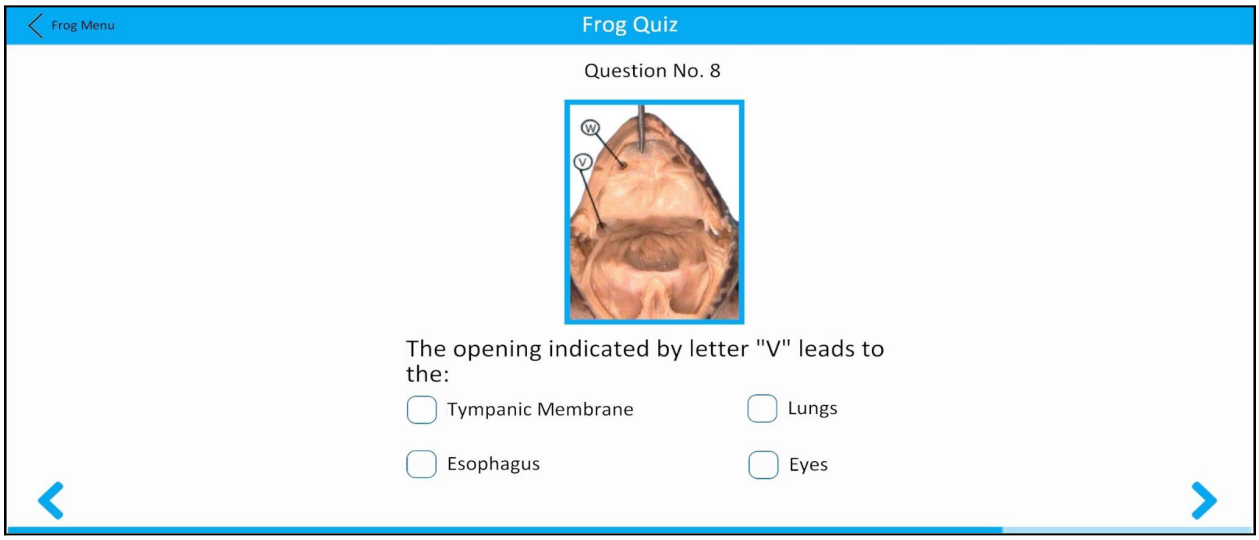
You can view more about the animal in the About section. Three different tabs are provided in this section. You can know about Scientific Classification, Habitat, Life Cycle and Habits etc.

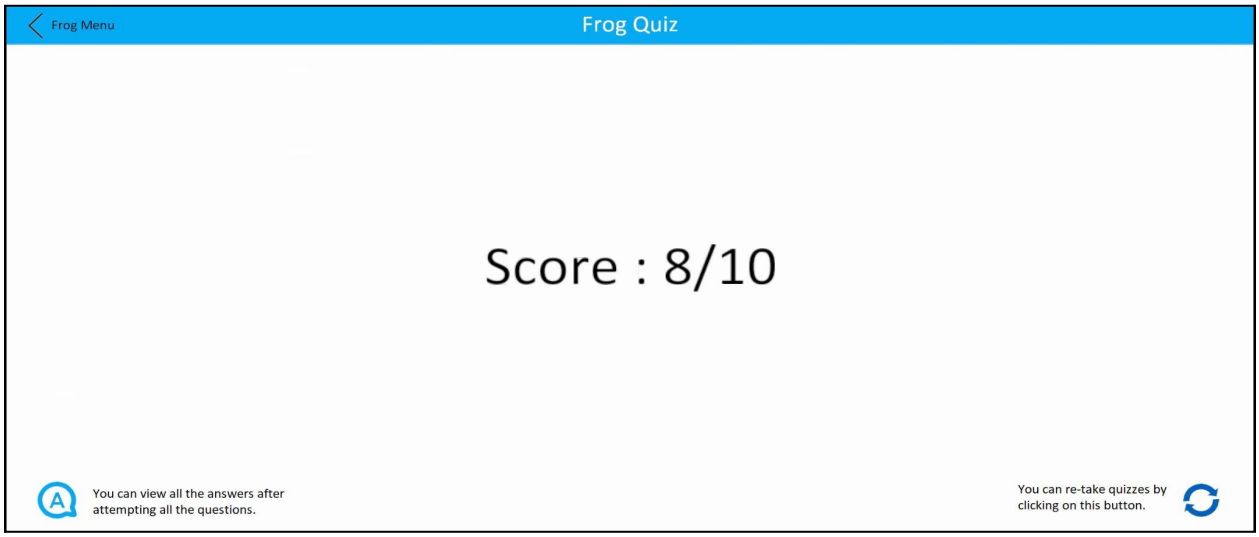
4.6 Quiz Section

You can test your knowledge about the amphibians by answering the super fun quiz questions.

At the end of the experiment, you will find the quizzes section. You can select the answer from the options provided and the final score is calculated based on the correct answers given.

You can also view the Answers at the end of the experiment and can retake the quizzes.




Frog Menu
Frog Quiz
Score : 8/10
You can view all the answers after attempting all the questions.
You can re-take quizzes by clicking on this button.

5. Human Anatomy and Physiology Experiments

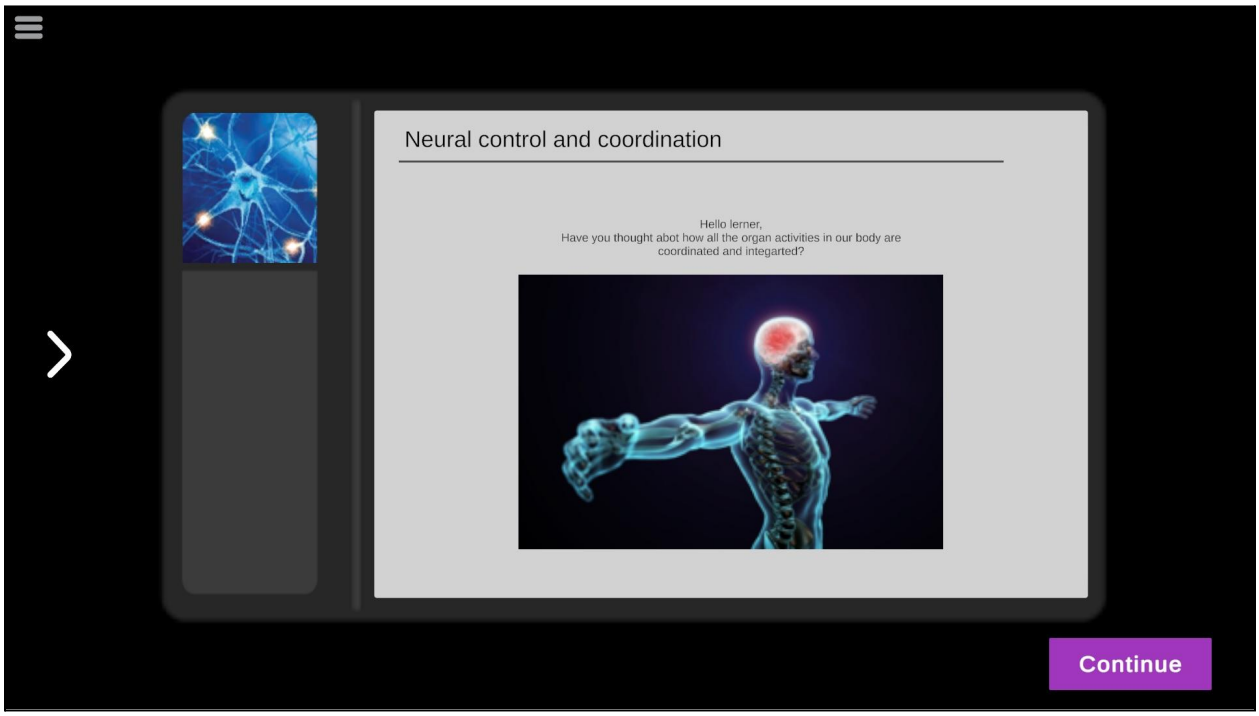
5.1 Introduction

In Human Anatomy and Physiology experiments, you learn about Digestion and Absorption, Neural Control and coordination, Breathing and respiration, Chemical coordination and regulation, Excretory products and their elimination, Body fluids and circulation, Locomotion and movement.

The experiments will have a welcome screen with the introductory sentences.

The experiment also includes an introductory video or animation explaining about the role of the system at certain points in the simulation.

You get a thorough understanding of the organ location, structure, function and the mechanism of working of each organ in the system.

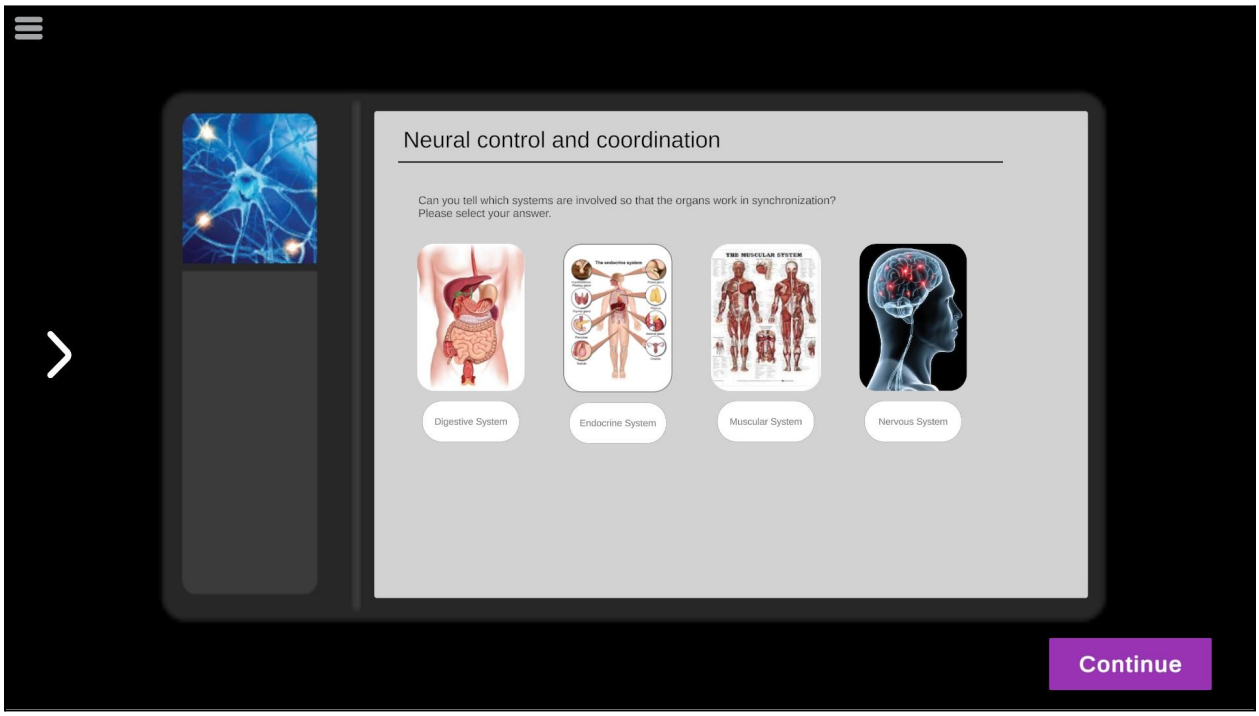


5.2 Activities

There are certain activities included in the experiment to have a clear understanding of the concepts.

This includes the introductory questions related to the module.

The answers can be selected by clicking on the options provided.



5.3 Hotspots

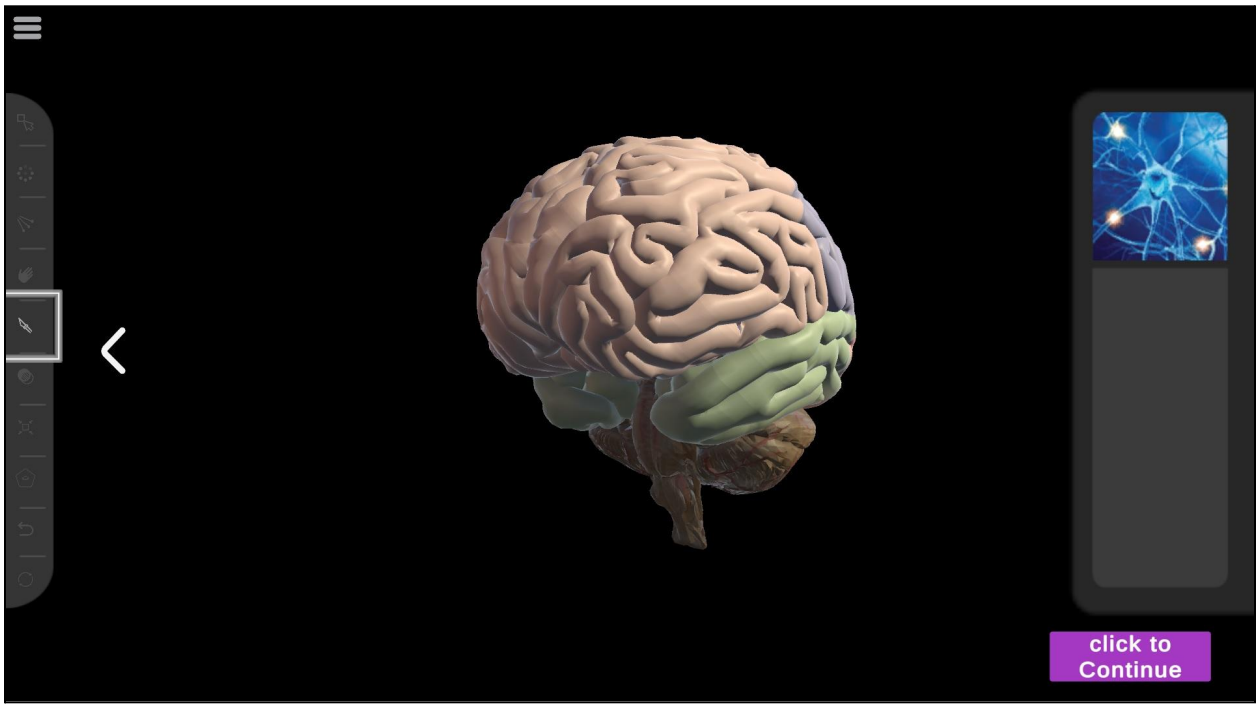
There is a Hotspot UI tab at the bottom when the 3D model is loaded. Hotspots are the labels for the uploaded model.

You can access the Hotspot to get a thorough understanding of the organ location, structure, function and the mechanism of working of each organ in the system.

5.4 Interaction Tools

Using the Side outline panel, we can perform various interactions in the experiment. Some of the interactions include Activating Hotspots, Slicing the selected part of the model etc.

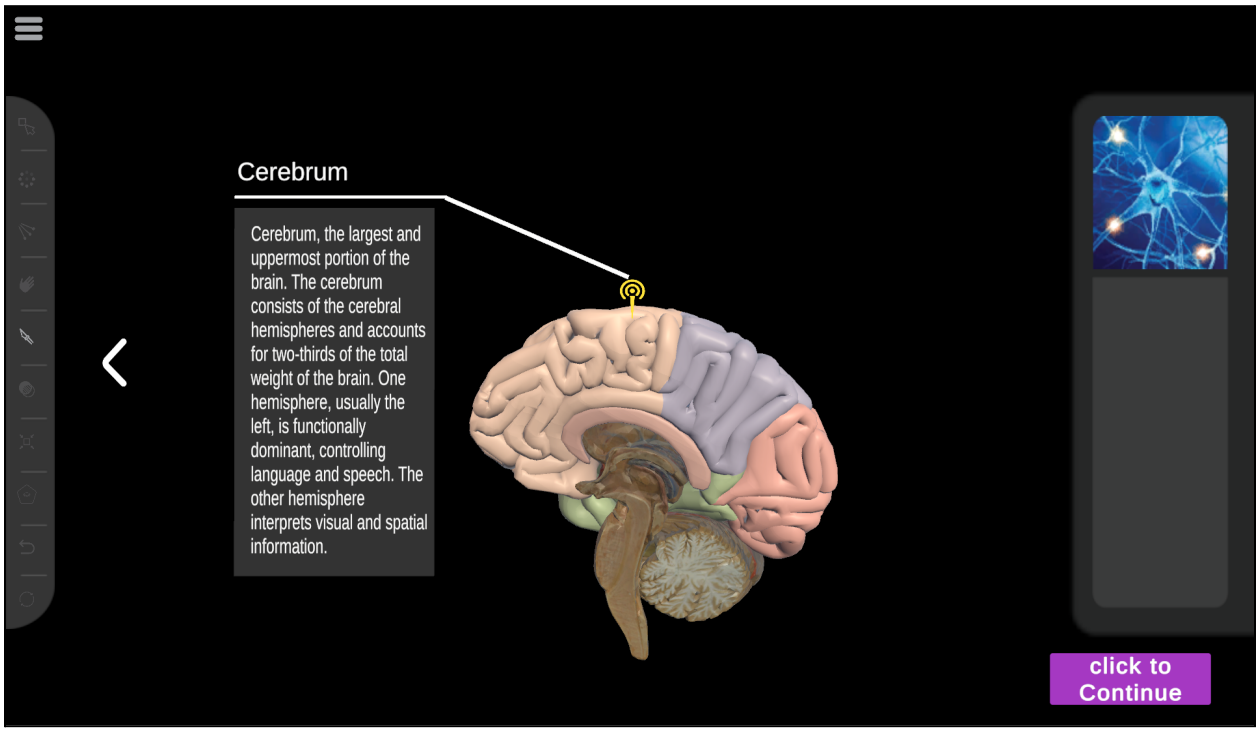
Toolbar section		
	Hotspots Tool	Activating the Hotspot
	Slice Tool	Slicing the selected part of the model



An interactive learning environment is provided for all learners through pre-tests, 3D interactive pictures, walkthrough videos and other special tools that will advance your knowledge of Anatomy and

Physiology.

In order to label the picture, you can click and drag the label to match with the correct name.



6. Troubleshooting and Frequently Asked Questions (FAQs):

Loading difficulties:

You may face issues while loading the simulations. Lack of free memory is usually the issue. The simulations may also take time to load depending on the computer and internet speed. Below are some of the considerations/ prerequisites before you load any simulations.

- You should have a minimum of free storage of 4 GB for the PC.
- You should have the Windows PC with Minimum Requirements mentioned in the Supported Hardware Configurations with decent internet speed.

Once you have adequate free memory, we recommend you to restart your system or close all browser windows to clear your computer memory, it will resolve the issue.
If the issue still persists, you can reach out to our customer support team (Contact details shared in the Contact Us section)

Unable to access the course contents in the app:

To view the course contents and run the simulation successfully, you need to have a stable internet connection. Try to access the course contents while having a stable internet connection else you will not be able to access the contents.

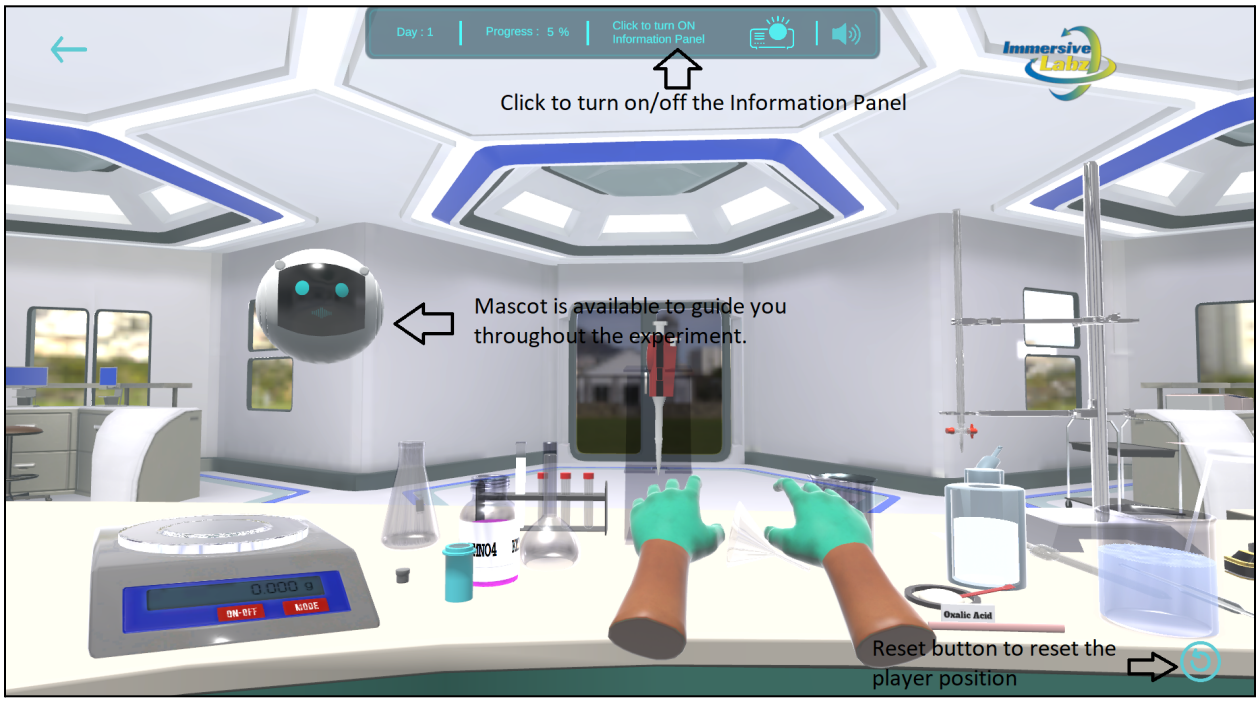
Stuck in Simulation:

If you ever lost in the Simulab Arena, the Reset button is always present at the right corner of the screen. Upon accessing it, you will be directly moved to the last hotspot position you visited.

If you ever get stuck in the Simulations, the Information Panel is always present during the simulation throughout your journey while performing the simulations. You can access it at any time throughout the simulation.

If you are not sure what to do at a certain step of the simulation, access the information panel and carefully read the description. Please ensure that you have followed all the instructions by Sofia (Mascot)

properly. Also, you can use the mouse to move around to see if any apparatus is highlighted, that will truly help!



Also, you can always restart your simulation at any point if you feel you are not clear about any step or you want to re-perform the experiment.

How can I Pause or Restart the Simulation:

You can access the Pause Menu during the simulations until the end of the experiment. You can click on the Back button to invoke the Pause Menu. The simulation will be paused while the Pause Menu is present on the screen. You can always Resume or Restart the Simulation at any point of time until the experiment is finished.

What Screen Resolution should I use to run the simulations?

Our simulations are compatible with specific screen resolutions. If you ever see the simulation zoomed in, it could be that the computer screen resolution is set incorrectly. Our application supports 9:16, 9:18 and 9:21 aspect ratio.

For your best experience, we recommend the following screen resolutions: 1920 x 1080

Application also provides an option in the Pause Menu to set the required mode such as Fullscreen or Windowed Mode.

Using the Simulab app on both PC and Android device:

It is possible to use the Simulab app on both PC and Android devices. Make sure you're using the same mobile number or email address to sign into the Simulab app and Windows app across all your devices.

How can I purchase the courses on the Simulab Window App?

At the moment, you can perform the purchase activities only on the Simulab Android application. Once the courses are purchased, they can be accessed in the Simulab Windows App as well using the same account.

7. Contact Us (Support Information):

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