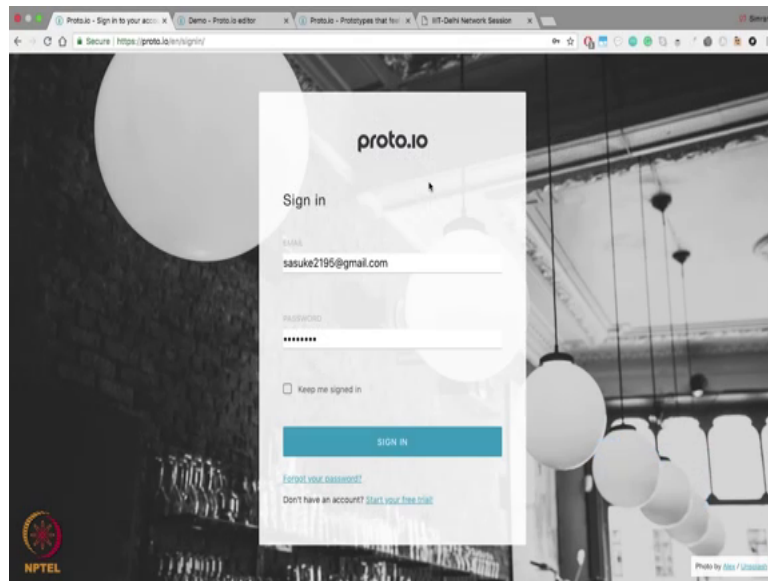**Introduction to Human Computer Interaction**
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Department of Computer Science and Engineering
Indian Institute of Technology, Madras

**Lecture – 09**
Tutorial on Proto.io

(Refer Slide Time: 00:16)

Hello everyone, today we will be learning about a proto typing tool called proto dot io. Proto types play a very important role in the design process. Prototyping is basically building simplified versions of the system before you actually get to making them. It is a good way to get feedback on your design and fix problems before a line of code is written. It saves a lot of time and money. So, today I will show you how to build a basic prototype for the system that you want to design.

So, you go to the website if you have not if you do not have an account already so start your free trial that is where you can go. And you need to enter some basic details and you would be able to sign up for the website.

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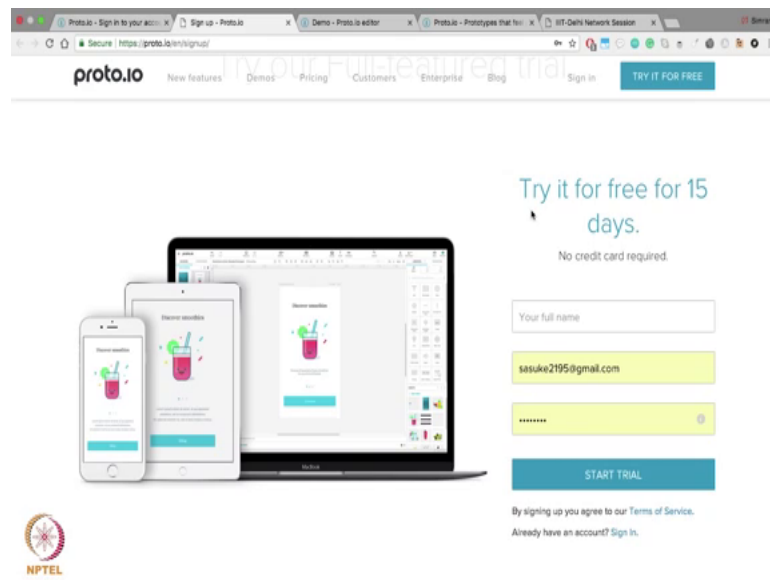
And you get a free trial for 15 days which you could use for now. So, I already have an account setup so I will just sign in you guides me to enter all these details and go ahead with it.
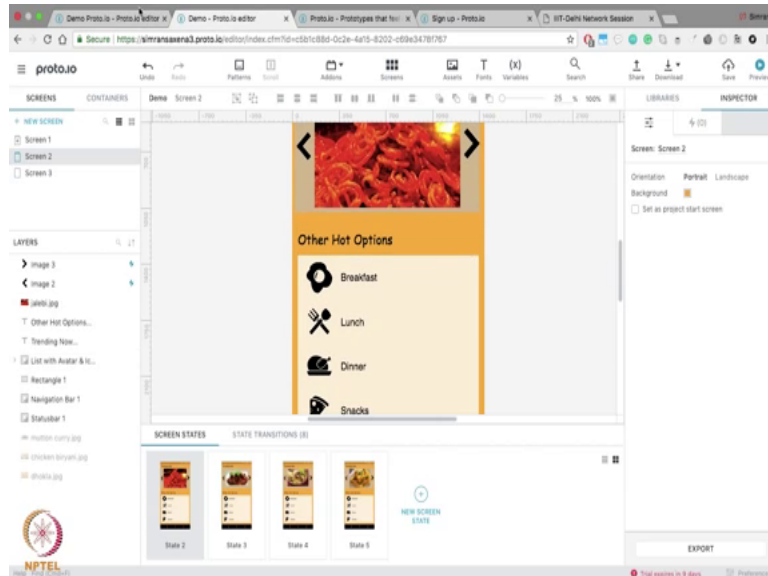
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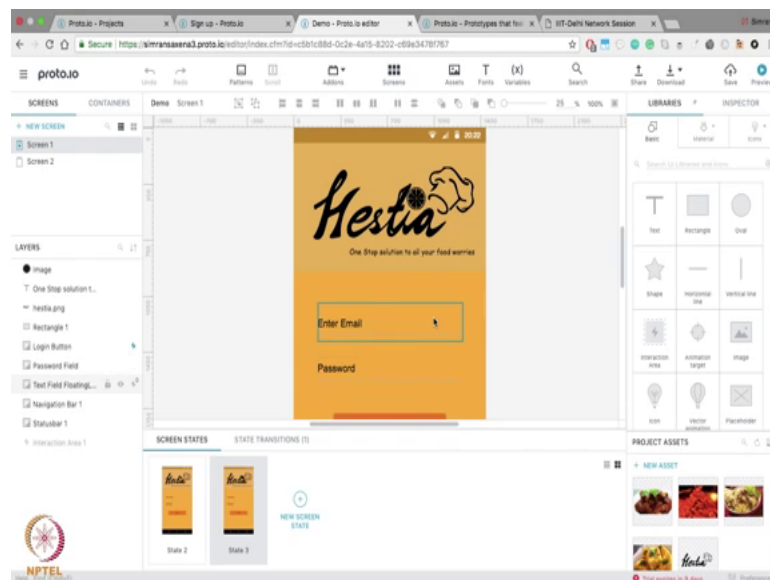
So, I already have a sample here which we would be building today. So, this is basically your food ordering app and we as you know a login screen is fundamental to almost all systems that we design these days.

So, I will help I will show you how to make a login screen and then basically a welcome page.

(Refer Slide Time: 01:34)

And where you could see different options; so, let me familiarize you with different components of the system so here you could view different screens and if you intend. So, this is my screen one and this is screen 2. So, and if you want to add a new screen you need to click here.

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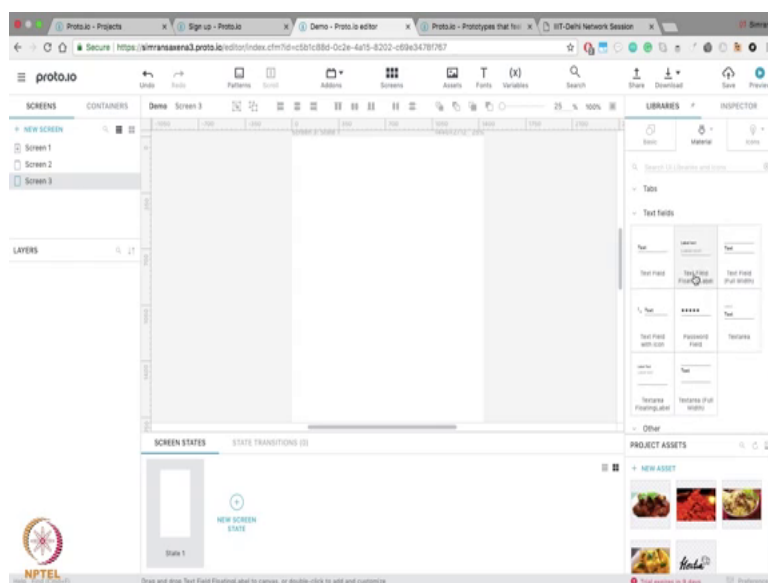
And a new screen would be added, which would be an empty canvas where you could add things from the library. So, you have a lot of u I components here which is a textbox, if you want to write a text box you can use this rectangle oval whatever shapes you want to make.

So, these are the things then this also has a very good support of the material design library as well as iOS and windows 8 design components which are there. So, for now we will be making a prototype for an android phone. So, I have chosen material design, which is the latest design specification which has given by Google's for now.

So, these are the few components that you have here which you can see in a phone like the home micron then different lists which are there. So, I have a look at all these options that you have the before you make the prototype. So, that you are aware what are the options are there and what you can add in your prototype password views are there.

So, this is similar to what I had on my login screen.

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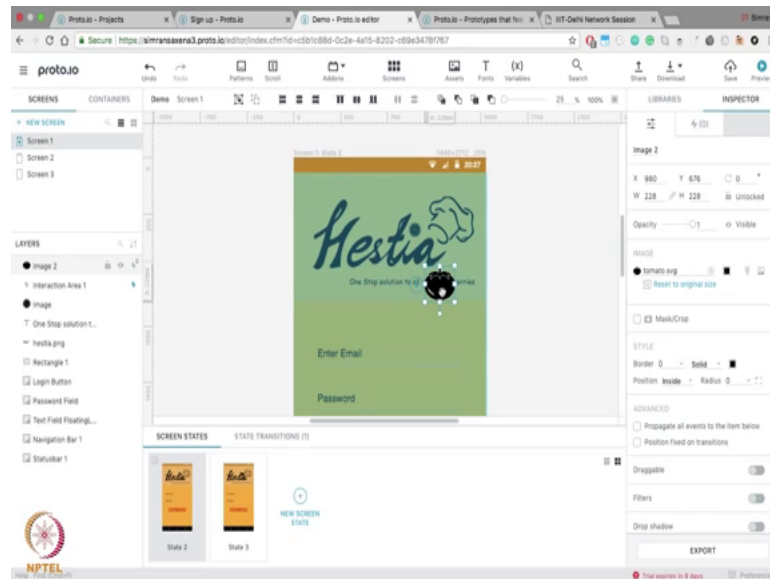
So, so now you know about different components, which are there after this you can you have access to a lot of icons. And this is a very this has a very good search functionality see this is a food we are taking gap cycle search for food over here. And I will be shown different food options which I could use. So, I just need to drag and drop here and added

to the prototype and I could resize as per my needs. So, yeah once it with a hang of it this is a very nice prototyping tool and it is a super easy to use.

Then about assets so this is a asset panel have you can add picture so other is also is whatever you might have like this is the logo for the system. So, I had it made and then I just simply drag them drop that you to have it. So, I will just show you how to drag it when I will show you the tutorial. So, let us start a new project.

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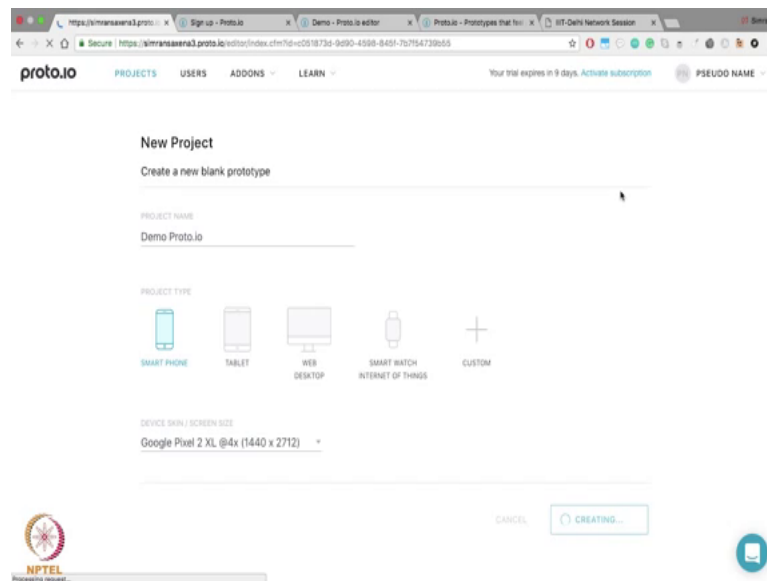
So, this is how we need to go ahead when you create a new prototype. So, give it to a name. And as you have an array of devices that you can choose for the video for the prototype sorry; so, for now you will be developing for a smartphone and then you could choose different modules from here. So, since it is an android so I would like to go with pixel 2 xl for now.

I will just need to create.

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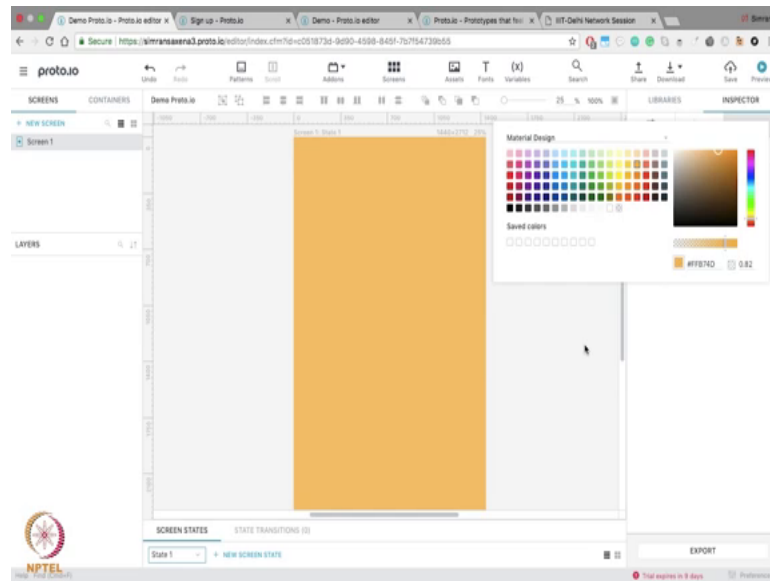
So, this is an empty canvas that I have right now and you could so this is a screen. So, I want to if you are going to the back ground of the screen this is what you do you select the screen. You go here to the property section and then you click on background. So, here also you have a choice of color. So, you would like for this so I am taking the material design. And it is food related so I am trying to keep it close to orange. So, if you here you could choose the opacity of the color and from here you could choose the color. So, this is like a basic color palette that you have ok.

So now I am say done with this I would go to the library and yeah material components. So, in android phones you see there is some notification tab on the top and then there is a navigation at the status where the navigation.
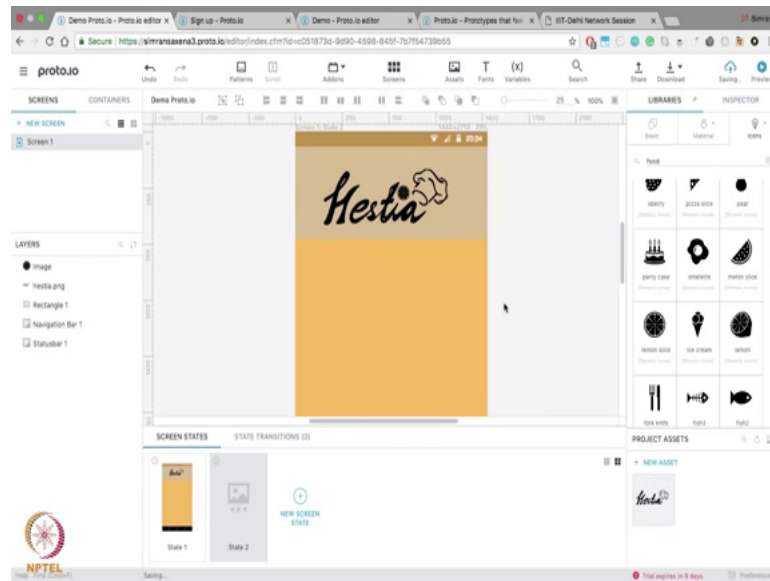
So, you just need to drop drag and drop the components here. So, move this I would a like to get the navigation bar as well. So, you are done with this next I will show you.

So, next step we had the logo here so I will tell you how to import different resources that you need to put here. So, you need to have the resources in the folder or wherever in your computer and you just need to drag it from here, and then drop it here though the project assets. So, it is getting uploaded and from here again you need to drag and drop ok. So, I am sits here I can easily resize it by pulling it from here and ones and I can also align it. So, here you have different aligning options.

So, right now I want to align it horizontally so now, it is roughly to the centre of the screen. So, here as you can see I have other UI component here which is a slight background slightly different shade of orange and delete this just to enhance the visibility of the blue it is just a design choice that I made. So, how I did that one's go to libraries basic. So, I will just pull out at a rectangle from here inside it and then I will click on it. So this component are selected then and I am going to the background section and I slightly reduce the opacity. So, that it serves the purpose of a banner and then I can put it here and then I will and I will put horizontally ok.

So now you can see that this is this component that I what is behind this screen, but I wanted to move the front. So, I can easily selected do a right click to arrange and bring to front yeah. So now, it is visible over here. So, there is another important component of

the UI system which is layers. So, all the component cycle idea they will show up here as layers, so this logo is here is rectangle is all shown as a layer and when you click on each of them you would be able to access their properties towards the right side. And you would be able to change different things you will change the aspect ratio you could change the color scheme and all this things ok.

So now I have the clear next step I will show you how to get an icon from displays. So, I will just search for food from here I will pick up a (Refer Time: 09:07) slice ok. I will just look it because. So, it they can easily you just drag and drop and adjust it. So, it mix with your ok.

So, next step I will show you how to do state transitions and get some animation in a system. So, I need create a new state screen, which would simply duplicate the first state that I had and to in order create an animation I need to go to the second state. And I will just to creates the size of this level a bit and when I do a transition from this to that page.

So, this size the increased size would be able to you would be able to see ok. So, next I will tell you how to so we are done with these parts yeah next I will show you how to add a text component.

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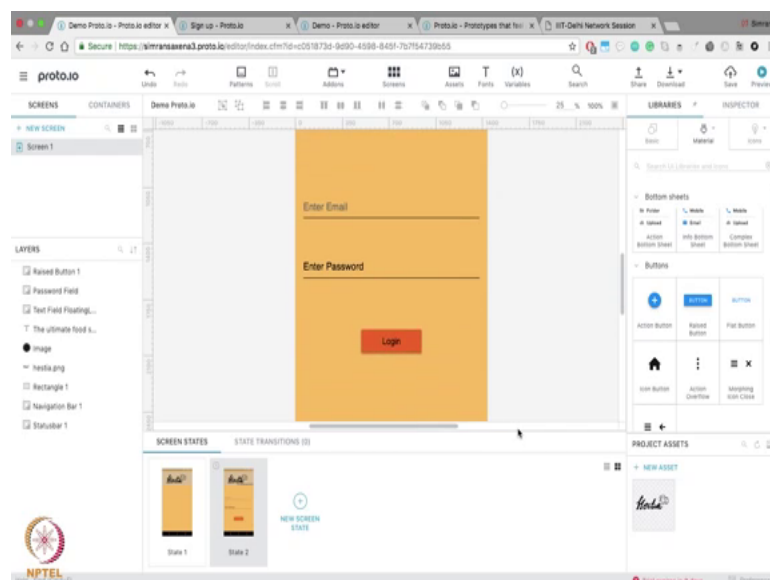
Again, you need to simply drag and drop it here and if you type and enter. And then again you can position it wherever you want. So, this is basically how UI components are

(Refer Time: 10:39) then and simply at then you know that text boxes are very crucial in the sign in process. So, I will add a text box here, apart from these text boxes in the material design library section, you have these options you have these components already made.

So, you could easily used to this we will use this text field floating label and then again, we will align it horizontally. So, then you selected and you could chose properties for it like whatever you want. So, I want to write at the label text for now. So, I want to write here enter email ok. And after once I am done with this field I will add the password field and again I will align it horizontally and make it in sink with the enter email alignment.

So, and say have the place holder here you can you can edit properties for it, like whatever color scheme you are following for your app and this made these black color. And again, the text can be changed here. And you could chose the color as well and even in the since this is black or I want to make the color of this line black yeah.

So, this is from where you could do it. So, you have a lot of flexibility in proto dot io to make things look whatever way you want them to. So, next crucial part of login screen of a login screen is the login background. So, there is another very good such functionality which we have in this tool. So, which is search you could either click here and get this or you could press control f or command f for mac users and you would be able to search for different components here.

So, next I want a button so, which is raised button in the material design. So, I just stated here I would (Refer Time: 13:00) horizontally align it. Then I want to change the background of the button. So, I can do it from here choose whatever color you want and from here you can change the text color for it, let us look in black color. And to I already change the text here you need to click here double click and the text would be selected and then you can reenter whatever you want let us just say login. So, we are done with the u I component of this next. So, next I had to show you how the animation feature of this would work if you want to show a slide transition from one thing to another.

So, in this state I will reduce the size of this (Refer Time: 14:03) a bit. So whenever you click any component this icons shows up which is like a lightning element click on that and just drag and drop with next state; so, once I did a news once I did newly create news still screen state over here. So, and exact replica of this state was created. And so, I

can simply pointed from there to here and this is how the animation looks. So, as you can see in this we have a small (Refer Time: 14:35) bar and the (Refer Time: 14:37). So, you have different triggers which would trigger this animation. So, I will tell you about them as well ok. So now, what we will do is we will create a larger screen which would serve the purpose of the welcome screen that I showed you.

So, you have done with this portion now I will tell you how to move ahead to the next screen and then have interaction. So, that you could move through with different screens. So, come here; so, here once you override this portion you would be showed different options duplicate the screen, delete the screen or select screen to view I did interactions. So, for now since I have the color screen fixed over here. So, I will just duplicate my screen and make changes on this. So, I have different components on the screen this is the (Refer Time: 15:49) where different images will being shown like it is the trending now screen then other option there is a screens for other options.

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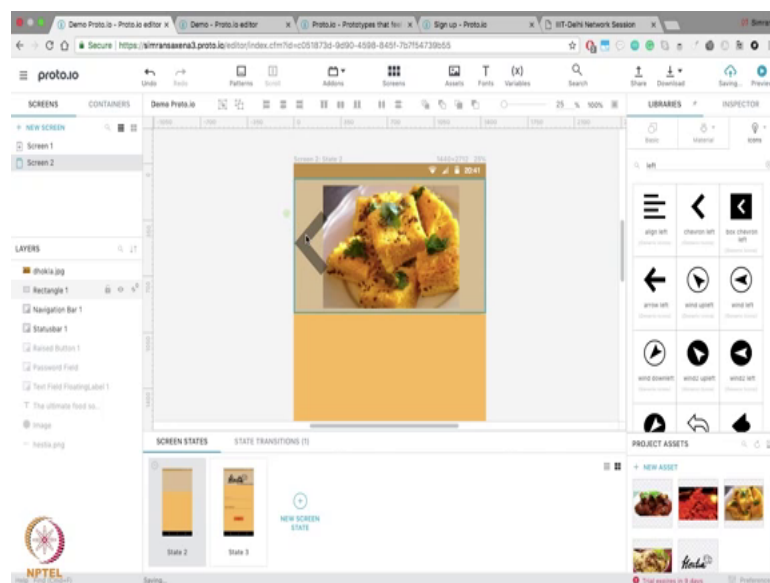
So, I would just extend this view a bit. So, that (Refer Time: 16:02) images can fit in. Ok then again, I need to import some resources for this page. So, I will go with and right select whatever images I need simply drag and drop them over here. So, I have all of them over here so, pick an image and just drop it here. So, alignment will alignment in whatever we want ok. So, basically how a corrosion works with you have a images here and then you have left and right buttons. So, I will you how on clicking those buttons and

using street state transitions you can have different images. So, I will go to icons and then I will search for the arrows. So, I will search for the left arrow this is what I want for this. So, I just drag it and drop it over here and align it. And I want to I want an arrow for the right side and then this (Refer Time: 17:47) So, I am just drag and drop it here.

Then so, what I want is once I click on these buttons next to which is shown also we had another component here quit list. So, that is what we are going to add next now.

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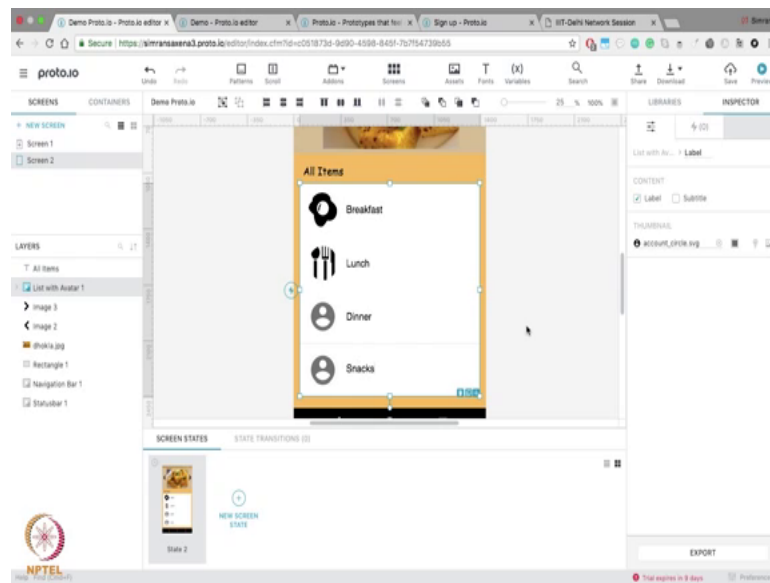
We will go to material and we would take understood and after. So, again we have the list and it can customize it whatever way you want. So, if there is also an option to have a scrollable panel and then you scroll through different lists of it. So, that is also there in prototype angle. So, that your interface whatever proto type you have a scrollable enough ok. And before this I want to add text and I will type all items. So, even when you put this text you have the option to change this font size as well as the font.

So, I will choose this one for now ok. And so, I like to had some more items to the list breakfast, lunch, dinner and then snacks. This is what want for now click on the cycle ok. So, I want to change this image over here. So, this is a thumbnail option from where you can change the images of different items that you have here. So, I go to project assets and these are all the images that I had uploaded. So, if you want some to pick something from here you could take that otherwise go to the proto dot io gallery android ok, will go to generic options and we will choose food and drink. So, pick one for breakfast. Generic

icons I you can see here that you have a lot of variety you can choose whatever you want I can move to food and drink (Refer Time: 20:43) something.

Similarly, for the other 2 icon I get it in the same way and this text is also editable so I just want to go here. And took the label you just selected and then include item breakfast, lunch, dinner, snacks. So now, you are (Refer Time: 21:16) to know (Refer Time: 21:17) in making these screens yeah. So, I will show you how the corrosion can be moved around to have different images over here. So, I have created another state of this screen and I simply go here remove this image.
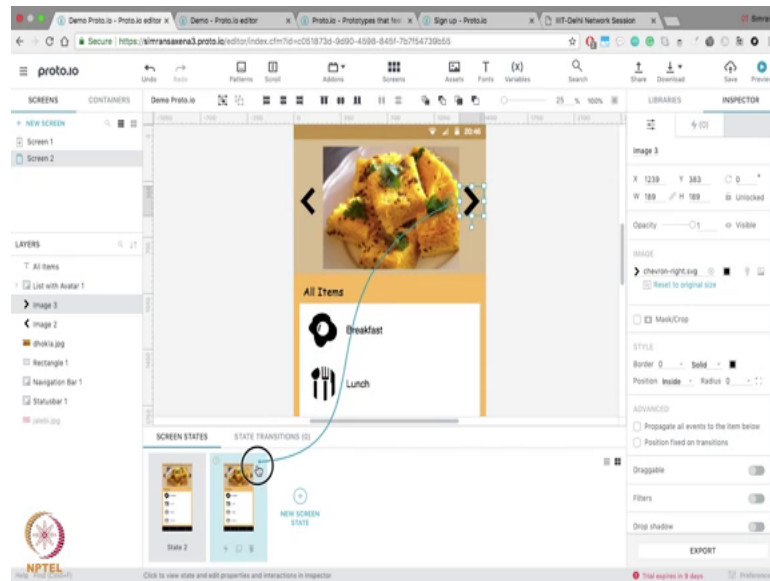
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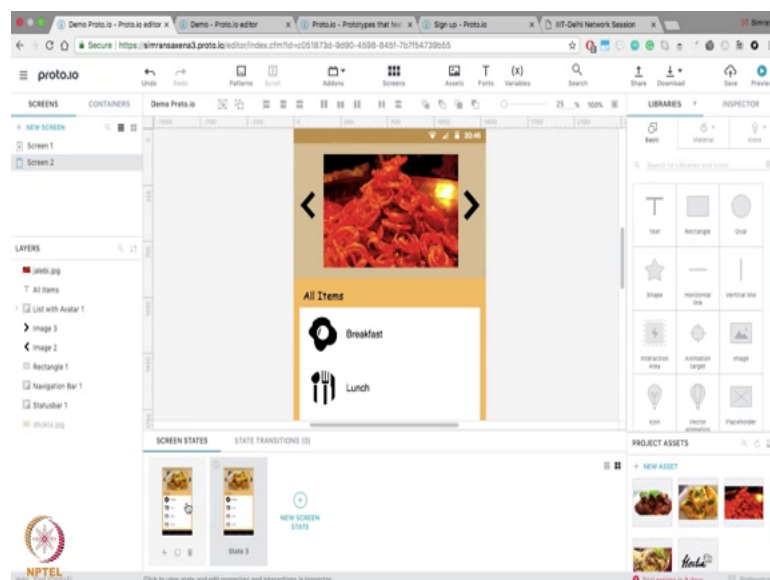
And I will put another image over here ok. So, next what we have is interactions. So, what I want is when I click on this icon I go to in the next state where we have the image of the Jalebi and then I click on this one I go back to this state. So, similarly we will have different states and upon clicking on these we will go to the next picture.
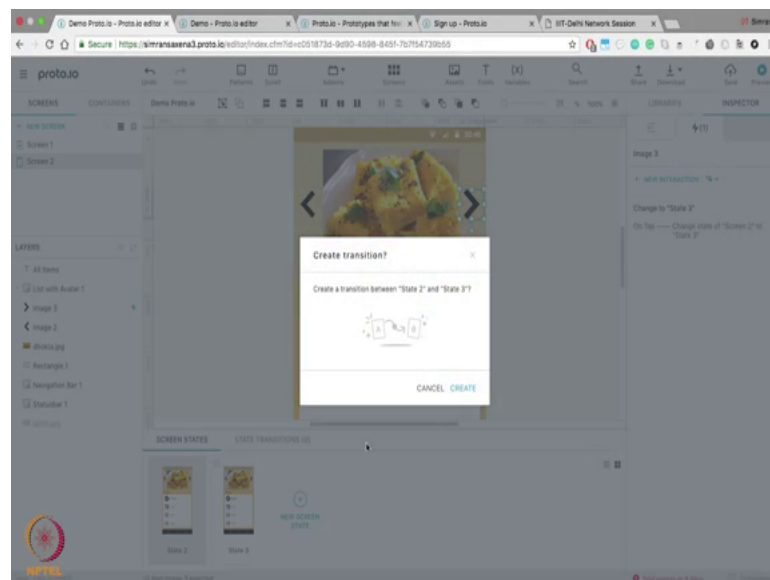
So, I will show you the how to do that.

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Come to the first state, click on in this button and here you will have the interact add interaction I can again, you just need to click on it this arrow will appear which you want to drag and then drop it in next state.

(Refer Slide Time: 22:33)

And it would ask if you want to create a transition between states. So, simply click on create, once the transitions created you can go and edit it like I will have a lot of options here, what could trigger this transition like a for now we will take tap, otherwise they are different gestures which are there on the android or any operating system like you want

swipe left, swipe right or mouse over. So, for now we are choosing tap and then on tap of this button your screen with go from this state to this state. So, this is how you create state transitions and then an a similarly in example that I had shown you I had 4 such screens where I had replaced this with different images.

(Refer Slide Time: 23:30)
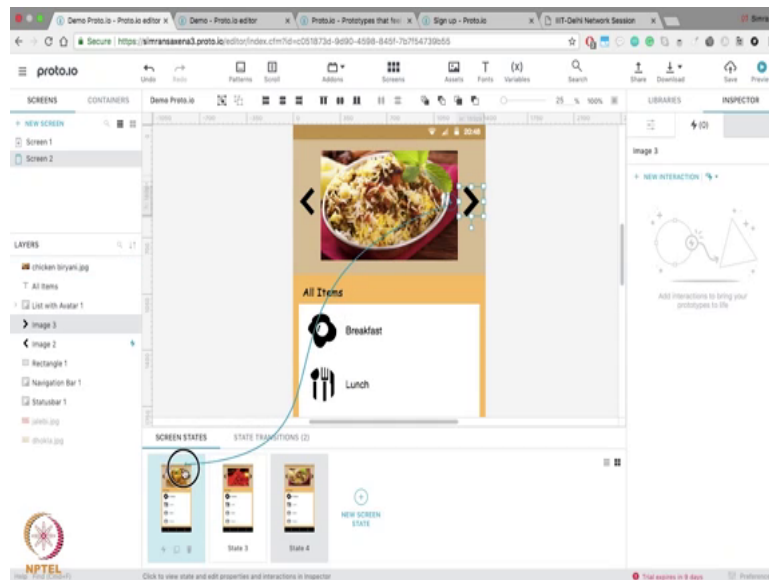
 I will you again how to do it click when I click on this. I kept the cycle I want to go back to this state create transition , and yeah you have it and for similarly for this one.

Student: (Refer Time: 23:59).

 right click on this and go back to the first stage. So, you have successfully created state transitions for this interface ok. Now there is another major component which is missing from this design which is going from this login screen to the second screen and how you would do that. So, go to this go to screen one screen states I will be very careful to choose the current the correct screen state for which you want to trigger the transition, otherwise it is always advisable to have it on all the states. So, that it is uniform across your design.
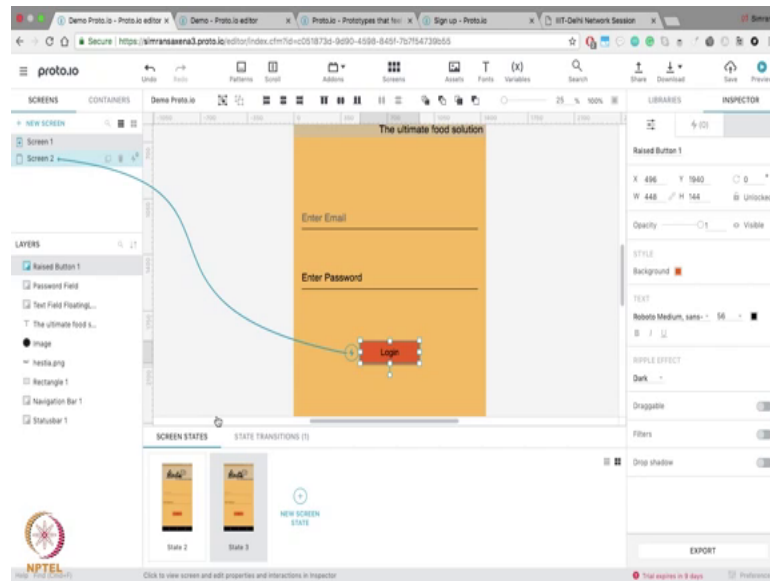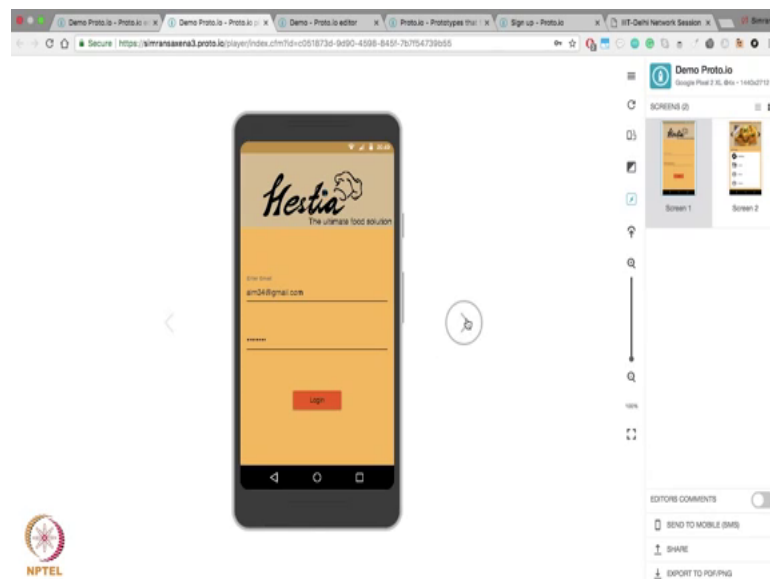
So, I will click on login and again I have the cycle and I just move to pull this arrow and put it to screen 2. And we have this interaction created. So, once I will click on the login back end I will go to the second screen. So, once I will done I will save the project and there click on the preview button.
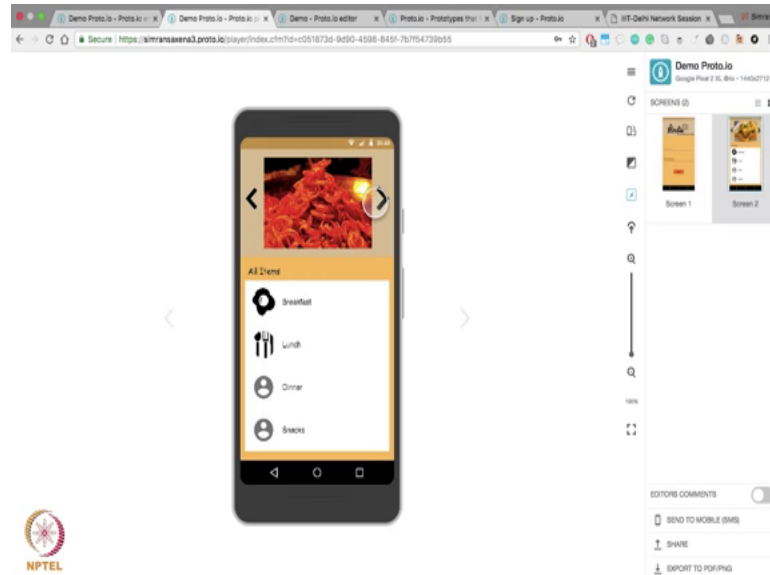
Student: (Refer Time: 25:04).

Where you would be able to see the prototypes that you just created along with the interaction so.

Student: (Refer Time: 25:19).

You can enter your email id password here. Click on login.

(Refer Slide Time: 25:37)

So, this is a (Refer Time: 25:40) that you created, this is how the prototype looks. So, a lot of confidence row are there similarly in a similar way that I showed you.

Student: (Refer Time: 26:01).

So, I showed you and this preview protoe dot I have also has a very good support to share your work. So, so here if you can simply click on the share options here, and then give the link to the way you want apart from that proto dot io has a has the map.

It is on the play store as well as the android store apple stores. So, you will simply need to download the app you have to login with the id and password with which you logged in into the laptop and when you would be able to see different projects of yours in that you simply need to download the project.

And you would be able to use your prototypes as a real act. So, just click on login so I would added another interaction where (Refer Time: 26:47) size, once I click on login I go to the welcome screen where I see this trending now, right click on these buttons. So, it take you to the options. So, another thing that I want to teach is, how I created the animation from this smaller level to the bigger level.

So, we had created the state states, but we did not create a transition for it.
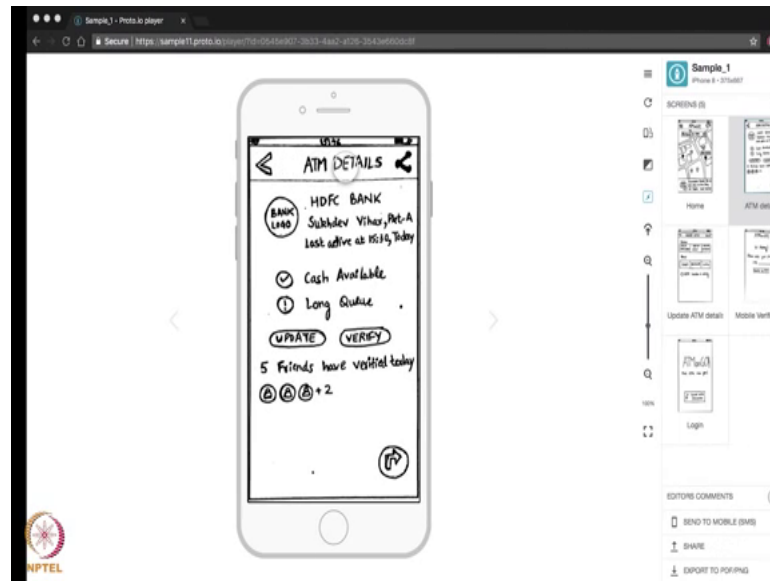
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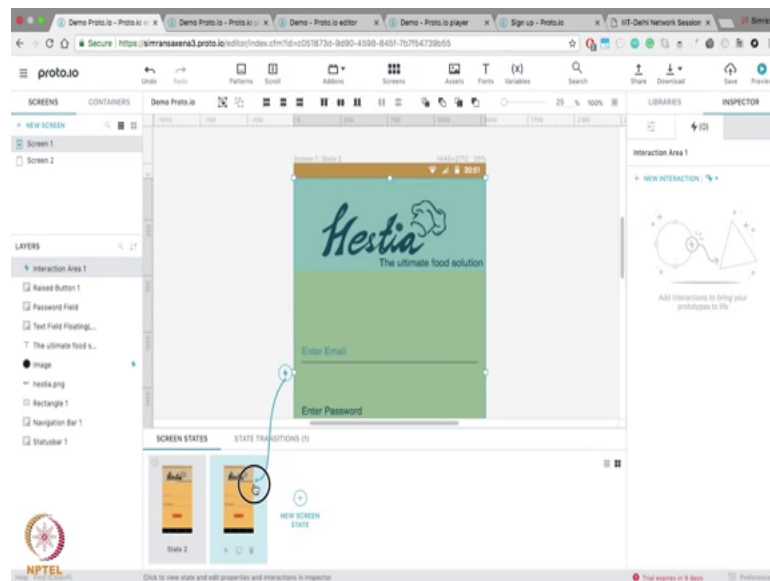
So, go to libraries there is a thing called an interaction area, like if you want to have options like swipe up swipe down or simply click anywhere which would trigger any event. So, I will simply create an interaction area here. So, what I want is whenever anyone taps on the screen this level will grow and it would appear as an animation. So, I will select this in interaction area and then I will simply drag and drop it to the second state. So, make sure that you are on the first state and from there you drag and drop to the second state. So, that state transition is there so I will from this interaction area I going to this state.

If you want to change how this interaction is triggered you can again go here click on the pencil and you can add it click figure option which is tap touch release or whatever you want I just keep it taps a log ok. So, let us see a bit if we. So, make sure to save your work before previewing it a lot of times the people do is they just click on preview and then they think changes have not been reflected. So, take care of that, see so when I tap here this (Refer Time: 28:56) grows and it shows as an animation. So, yeah that details are already here, login you go to the screen click on these icons. So, this is how you can with prototype so your app.
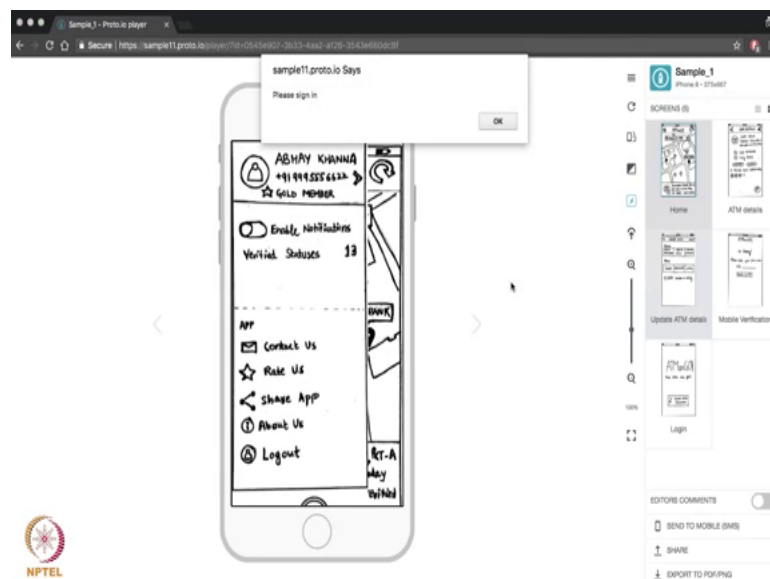
So, this is how you could design this is how you make a high-fidelity prototype.

(Refer Slide Time: 29:19)

Apart from this what you can do is if you have low fidelity paper prototypes of your app.

(Refer Slide Time: 29:22)

You can simply export them on to the on to this and you can pull them and keep them make them as pictures and add different interaction areas like I just showed you from here I will show you an example. So, this is how one of the epsilon made ok. So, I have existing if you already have existing paper prototypes take images of them and have them on the computer and then again just drag and drop them into the assets.
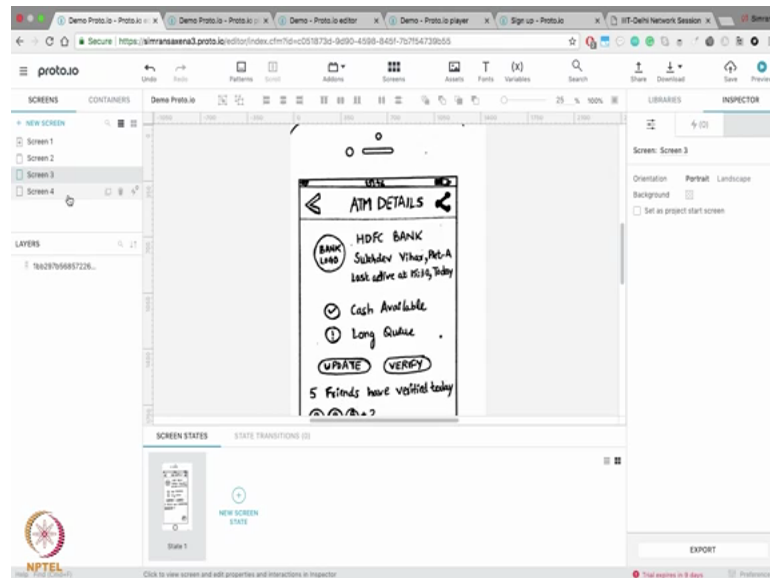
Once it is uploaded take it to your screen. For now, I am showing it to you in the same a project that I had, but this would be on different thing. So, you can adjust the size of the camera it is according to your paper prototype, had on your screen and I will get lighter screen from here and just drag it.

Student: (Refer Time: 30:52).

And drop it into the library section. So now, I have the second screen over here.

So, you can and just this size of the canvas. So, that it sets whatever paper prototype you have. I will just show how to add an interaction area and navigate from one option to another.

(Refer Slide Time: 31:39)
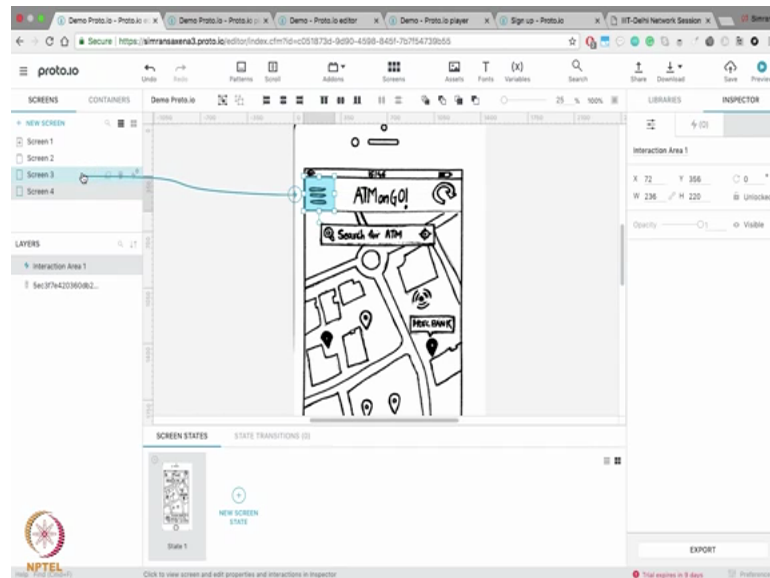
So, what I want is when I click on this, this menu I should be able to see some options. So, I will go to the screen libraries I will pick an interaction area.

Student: (Refer Time: 32:06).

And put it over this and then I again take the; I this arrow and just drop it to the state to the screen whatever I want. So, yeah, this animation is also been created. So, the these were the basics of proto dot io can explode different options and see how, which components you want in your prototype, what colors you want and yeah you would be ready to go.