Code the Screen Layouts – Part I

Hello Everyone! Welcome back!

In our last video, we successfully created multiple screen layouts, added objects and behaviors to them. In this video, we will learn to code the screens and the objects or sprites associated with them to make our game functional.

If you remember, we began with the Home Screen. So let's start coding the home screen layout first. As we all know that we have a rule button and a start button sprite on the Home screen. We will use the same rule button to go to the rules screen and the start button to go to the main screen. In order to make the Game start button functional, we will have to add a touch function to it so that it performs the required function once you touch or click on it. To do this, go to the 'Home Screen' layout, right click on the screen and select Insert New Object, then insert 'Touch' from the input section. We also require keyboard in our program. For this, right click again and select Insert New Object, then insert 'Keyboard' from the input section. The touch & keyboard function automatically gets applied to all the other screen layouts so that you don't have to add these functions individually for the other screen layouts.

Now go to the 'Home Screen Code' sheet. Left click on "Add event" and scroll down to select "Touch" and click on next. Now let us add the condition that will execute the touch function if you touch the button. Select "on tap object" from Gesture Section and click on done. A new window will open for you to select the object on which this condition needs to be applied. Click on it to pick the object, then choose "GameStartButton as an object and click on done. This will make your button respond to a click.

Now to make this click look more realistic we have to add an effect called the button effect. This will make the size of the button look small when it is pressed and will soon after seem to regain its original size. To do this, left click on "Add Action" and double click on the "GameStartButton". An Action window opens, scroll down to select "Set Scale" from size and position section. Set the scale as per your desire. In this case we will set it as 0.2.

Now, let's add another action in the 1st condition of GameStartButton to give a slight delay effect to it. To do this, left click on "Add Action" and double click on the "System" option. An action window opens, scroll down to select "Wait" from Time section. Set time as 0.1 seconds. To make the button effect complete, we have to increase the size of the button as well. To do this, left click on "Add Action" and double click on the "GameStartButton". An action window opens again, scroll down to select "Set Scale" from size and position section. Set scale as you desire but it should be a bit different from the previously chosen scale. Earlier, we had selected 0.2 scale for pressing the button and now we change it to 0.3 for releasing the button. This action creates the "Button Effect". Now we have to again add a slight delay to make the effect visible. To do so, left click on "Add Action" once again and double click on the "System". An action window opens, scroll down to select "Wait" from Time section. Set the time to 0.1 seconds.

Now we have reached the final part of programming the GameStartButton which will take you to the Main Screen layout once you click on the button. To do this, left click on "Add Action" to open the action window. Next double click on the "System" and then select "Go to layout" from the general section and click on next. Layout selection window will open. Select "Main Screen layout" from the drop down and click on done. We have added 5 actions to the GameStartButton i.e. when we click on the GameStartButton, the button will show a click effect and will take us to the main screen. Are you happy with the progress made so far?

Next, we will use the rule button to go to the rules screen. To make the Rules button functional, we have to add an event which can perform the required action. To do this, left click on the "Add event", scroll down to select "RulesButton" and select "on clicked" condition. We have added an event for the rules button, now we need to add an action to it. To do so, left click on "Add Action" and select "System" and click on next. Select "Go to layout" from the general section of the system and click on next. A new window will pop-up and choose the layout "Rule Screen layout" from the drop down. This event has coded the RulesButton such that when we press it, it takes us to the rule screen.

Let's run this layout to check if the events and actions added to the buttons are working fine. Great! The program is working successfully. That's all for the Home screen now. Let's start coding the main screen which will cover 60% of the game coding as it includes the main logic.

First, we will visit the 'Main Screen Code' event sheet by clicking on it in the Projects section. A blank Main screen code sheet will open. Let's start coding the main screen now. We will take global variables for timer, score and health that we have included as text box in our Main Screen layout. To do this, go to main screen event sheet and right click on the coding area and select 'Add global variable' from the sub-menu. Click on it to open a new global variable window. Name the first variable as 'Timer'. Set the initial value as 120 and click OK. The timer variable is set now. Similarly, add 2 more global variables named 'Score' and 'Health' in the same manner as Timer and add the values 0 & 6 to them respectively. These variables will act as a storing space for the values which will be updated in the game.

Now we have to map the keyboard keys to shoot different antibody capsules from the medicine box. To do this, click on 'Add event' and then choose keyboard as the event and click next. Then select "on key pressed" from the keyboard section. A new window will open, click on choose and press 'A' key on your keyboard to show A appearing on the pop-up window. Press ok and then done to assign the key. Now click on add action and choose 'MedicineBox' object and click next. Select 'Spawn another object' from the Misc section and click next. On the popped-up window, choose 'Antivirus' as an object, change the layer value from 0 to 1 and let the image point be 0.

Next, shift the image point of the medicine box so as to give an impression that the capsules are coming out of the box and not from the center of the box. To do that, go to the Main Screen Layout, select the medicine box sprite and on the left pane of properties section, scroll down to Properties. You'll see 'Animations' category where you will click on Edit. A new window where medicine box is present will open. You'll see a cross. Bring the cross a little above the handle of medicine box and click there to shift the image point. Please ensure that the face of the medicine box should be in the direction from where the antibodies will

be released. In Construct, the bullet behaviour works from left to right direction. Hence, it is important for our medicine box to be rotated towards right side using the rotation tool from the top bar so that the face or handle of the medicine box faces in the same direction as the behaviour of antibodies which is in our case is left to right direction. Please follow the steps as shown in the video to avoid any confusion. Now, close the window so as to save changes to image point and to the face of the medicine box.

Repeat the above steps for adding an event and actions for spawning AntiBacteria, AntiWorm & AntiProtozoa by pressing S, D & F respectively with layer 1 and image point 0 for all. Please note to use the following keys only for shooting the right antibody capsules:

- A for AntiVirus
- S for AntiBacteria
- D for AntiWorm
- F for AntiProtozoa

After having completed all our task for now, it is time for us to run the layout and see if everything is working fine. Use the A, S, D, F keys to shoot the antibodies. I hope that the game is working fine so far.

In our next video, we will continue coding the objects present in my Main Screen layout of our game.

Bye for now. See you again in the next video!