

Design the Screen Layouts – Part I

Hi Everyone! Welcome to the intermediary course on game development.

Diseases and illnesses have plagued humanity since time immemorial. Even today they continue to be a major cause for misery and loss of lives across the world. There has been a marked rise in the scale and spread of diseases in recent times. We all know that health and well-being are of prime importance for humans but pathogens like virus, bacteria, fungi, protozoa and worms pose a major threat and cause loss of lives.

Some common infectious diseases that the world has dealt with in the past are malaria, tuberculosis, leprosy, influenza, smallpox, etc. With concerted efforts some diseases have become curable while others like smallpox have been eradicated.

However, with an ever-growing human population and rise in trade between countries, the complexities of controlling infectious diseases have also multiplied. Despite the advances in Science, controlling transmission of such diseases have at times not met with success. Humans are at constant risk of epidemics and pandemics, given the emergence of resistant strains of microorganisms. The fag end of 2019 saw the emergence of Covid – 19 that is caused by a virus belonging to coronavirus family. Did you know that this is the same family of virus that causes the harmless common cold?

Over the years it has been observed that the pathogens mutate and change its form to a dangerous strain and cause illness.

Today, many medical advances have been made to safeguard life against infection by pathogens, through the use of vaccination, antibiotics and fungicide.

The problem is grave and we all need to join hands to do our bit to bring awareness on the importance of tackling such situations.

So how about building a game which challenges us to protect ourselves and destroys these pathogens with the help of different antibodies. Our mission is to save the humans.

To begin with let me give you a brief idea about the game. Consider a city filled with humans where pathogens fall from above to infect humans when they come in contact with them. So, our mission is to destroy the pathogens with antibodies before they succeed in spreading diseases. You have a magic wand in the form of a medicine box that can shoot antibodies of your choice – antibacterial, antiviral, antiprotozoal and antiworms. The medicine box can be controlled by arrow keys on the keyboard and you can shoot the antibodies by pressing the following keys:

S for anti-bacteria

A for antiviral

F for Anti protozoa

D for anti-worm

The trick is to choose the correct antibody to kill the pathogens it is meant for. If you fail to do so before they come in contact with the humans, they will kill them. When you kill a micro-organism you will score 1 point. However, as soon as one of the pathogens hit a human being you will immediately lose 5 points. During the game you must also protect your medical box, as the game gets over after it is hit 6 times by the pathogens. You have a time limit of 2 minutes (120 seconds) to score as high as you can before your game automatically gets over. Are you excited? Let's get started with our mission of saving mankind.

Let us begin by creating these 5 layouts for the game.

Home screen

Rule screen

Main screen

Game Over screen

Restart screen

First, go to the 'Layouts' folder in the project tab of the project window and right-click on it to open the sub-menu. Select 'Add layout' option and click on it. A new pop-up opens where you click on the 'Add event sheet' option. You will see that a new Layout 2 will open. Repeat this process 3 more times to have 5 layouts in total namely Layout 1, Layout 2, Layout 3, Layout 4 & Layout 5. Rename the layouts for easy identification to 'Home Screen', 'Main Screen',

‘Game Over Screen’, ‘Restart Screen’ & ‘Rule Screen’ respectively. You can rename the layouts by right-clicking on it and selecting respective rename option.

Just like you renamed the layout, we will rename the corresponding ‘Event sheets’ where you will code the sprites present in the layout using the names ‘Home Screen Code’, ‘Main Screen Code’, ‘Game Over Screen Code’, ‘Restart Screen Code’ & ‘Rule Screen Code’ respectively.

Now, we’ll get down to designing our screens. First, we will start with ‘Home Screen’. Click on the Home screen layout tab present in the top bar. We will add background to our screen. For this, we will follow the same steps that we learned in our introduction video. Double-click on the screen, select ‘Sprite’ option from the new object type window, type name as ‘HomeBackground’ and click on ‘Insert’ button. An X sign will appear, left-click on the screen again to open the Image editor. Unlike last time, today we’ll upload an image from the system. Click on ‘Load an image from a file’ option from the top bar. For this game, I have already downloaded images like home background, main background, pathogens, antibodies, humans etc. in .png format from the internet. These images are relevant to our game. For the home screen, I have selected the background as per my choice. Once uploaded, click on close X in the corner to see the image on the layout. Grab the anchor points to fit the image to the grey-dotted screen.

Next, we will place 2 buttons on this screen – one is the ‘Start’ button & the other the ‘Rule’ button. To do this, we will go to the layer section present in projects window. We notice that we have Layer 0 on which we have placed our background image. Let’s add another layer over which we’ll place the start button. To do this, right-click on the Layer 0 and from the sub-menu click the ‘Add layer at top’ option. Rename the Layer 0 as ‘Background Layer’ and click on the Lock to lock the background layer. Select the Layer 1 and rename it to ‘Button Layer’. Go to the layout again and double-click on it to open the Insert new object window, select ‘Sprite’ option, write the name as ‘GameStartButton’ and click on insert, X sign will appear. Left-click on the screen to open the image editor and from the upload section, upload an image of Start button. You can



choose to create a button as well. Resize the button using anchor points and drag to place it at the proper place on the screen.

For adding a rule button, double-click again on the layout and instead of uploading a sprite, let us select 'OK' button under Form Controls in the insert new object window, name it 'RulesButton' and click insert. Change the text from OK to 'Rules' by using the properties window on the left side. Go to Text option under Properties to change it.

So, you see we are done with the Home screen. In our next video, we will continue making changes to the other layouts of our game.

Till then, Bye-Bye! See you in the next video!