CodeClub activity checklist 22/06/2015

In this project, you will be making your own paint program!

Preparation

1. Take your laptop
2. Log in
3. Check the battery. If remaining time is lower than 1 hour, change laptop.
4. Start Scratch (go to Computer->Student Share folder->Code Club and double click on the link to Scratch website)
5. If you don't find your saved project, go to **scratch.mit.edu/users/fpferrarese/** and download **Paint_WIP** project.
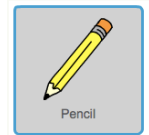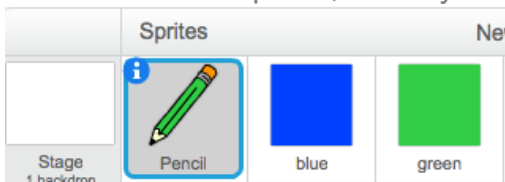
Paint

Step 1: Making a pencil

1. Start a new Scratch project, and delete the cat sprite so that your project is empty.
2. Add the pencil sprite to your project.
   o Click 'Costumes', and delete the 'pencil-b' costume.
   o Rename your costume 'pencil-blue', and use the 'Color a shape' tool to make the pencil blue.
3. As you'll be using the mouse to draw, you'll want the pencil to follow the mouse forever. Add this code to your pencil sprite:
4. Next, let's make your pencil draw **if** the mouse has been clicked.
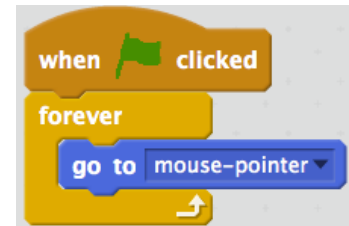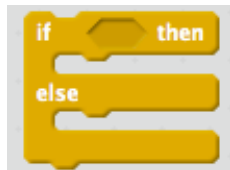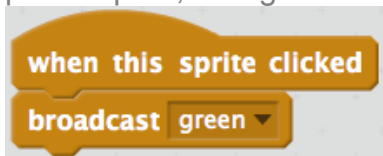
Step 2: Coloured pens

1. Click on your pencil sprite, click 'Costumes' and duplicate your 'pencil-blue' costume.
2. Create two new sprites, which you will use to select the blue or green pencil.
3. When the green selector icon is clicked, you need to broadcast a message to the pencil sprite, telling it to change its costume and pencil colour.
4. You now need to tell your pencil sprite what to do when it receives the message.
5. You can now do the same for the blue pencil icon

6. Finally, you need to tell your pencil sprite what costume and pencil colour to choose, as well as clearing the screen, when your project is started.

Step 3: Making mistakes
1. Let's add a button to clear the stage.
2. You can also create an eraser.

Step 4: Changing the pencil width
1. First, add a new variable called 'width'.
2. Add this line inside the forever loop of your pencil's code:

Step 5: Stamps
1. Add a new sprite that you will use a stamp. When clicked this sprite should broadcast the message "stamp"
2. Add the same sprite as costume for your pencil
3. Create a new **Boolean** variable (a Boolean variable has only two conditions, true or false) called "pencil mode". We will use this variable to switch between drawing and stamping.
4. Add a new script that receives the "stamp" message, changes the costume and sets "pencil mode" to false.

Step 6: Rainbow pencil
1. Click on your pencil sprite, click 'Costumes' and duplicate your 'pencil-blue' costume.
2. Create a new sprite, which you will use to select the rainbow pencil.
3. When the rainbow selector icon is clicked, you need to broadcast a message to the pencil sprite, telling it to change its costume. This time the pencil colour is managed by the Boolean variable rainbowPencil.
4. You now need to tell your pencil sprite what to do when it receives the message.

Can you create keyboard shortcuts for your commands? For example:
b = Switch to blue pen
g = switch to green pen
e = switch to eraser
c = clear screen