MAKE A DRAG AND DROP GAME WITH TARGETS

In this tutorial, you will learn how to create a drag and drop style game in Flash where the object being dragged will return to it’s original location if not dropped in the correct place.

LET’S MAKE A LABEL MATCHING GAME
This tutorial will focus on making a simple label matching game where the user has to drag a word box (label) into it’s matching position (silhouette). Once you have mastered this tutorial, you will have the skills to create more intricate displays and games.

STEPS
1. To begin, open a new Flash file and save it as partsmatch.fla.
2. Select a background colour for your game by ensuring the black arrow tool is selected and in the Properties Panel changing the Background colour.
3. Import a clip art picture of a computer system to the Library and drag it onto the stage.
4. In the Colors menu on the left hand side of the screen, change the Stroke Colour to Black and Fill Colour to White.
5. On the stage, use your draw and shape tools to draw a
a rectangle. Use the lasoo and copy tools to add another 4 rectangles.

6. On the stage, use your draw tools to join the five different rectangles with a line to a part of the computer system.

7. On the stage, add the heading “Parts of a Computer”.

8. Name the layer that they are on **targets** by double clicking on Layer 1.

9. Create a new layer above the targets layer by clicking on the **add new layer button** underneath the timeline. (This button is circled here) Name this layer **labels**. Your timeline should look the same as the one shown on the right.

10. **Lasso and Copy** a rectangle and paste 5 copies of it on the bottom half of the stage on the new **labels Layer**. Make sure that the labels are mixed up, so that they are not all under their silhouette. Ensure the silhouettes and label are on their right layers. If not, when you drag your label onto the silhouette, you may find it hides behind it.

11. Add the text to the labels. Once added lasso the rectangle and text and convert it to a movie clip symbol. At this stage of the tutorial, your stage should look very similar to the above image.

**TIME TO ADD THE INTERACTIVITY**
We are now going to apply the actionscript which will make the picture interactive.

In this game, the white rectangles or silhouettes are the targets. These shapes need to be converted to movie symbols so that through actionscript we can make them targets where the other shapes can be dropped. When doing this we need to ensure we give them a different name from the other shapes. The name should make the symbol clearly recognizable as a target. I use the following naming convention when creating this type of game. I name the object to be dragged something simple e.g. **label3**. I name the target that the object is to be dropped on **target3**. I encourage you to use similar naming conventions when working on this type of game—otherwise it can get confusing.

**OK—Let’s Keep Going.**
14. Select each of the white boxes one by one and convert them to movieclip symbols by selecting Insert>Convert to Symbol, giving them a name and selecting the Movie Clip behaviour. Remember when naming them to follow the advice above.

15. We will be referring to these movie clip symbols as targets in the actionscript that we write. Therefore, we will need to enter instance names for each target shape. To do this, select the shape on the stage and in the Properties panel, enter an instance name in the textbox as below. Note that I have followed the naming conventions outlined above when naming this instance.
Once you have converted every label to movie clip symbols and given the silhouette shapes instance names, you are ready to add the actionscript that will make your game work. Note the red and blue code needs to be modified for each label box. This script is explained below.

This script tells Flash to allow the user to drag the shape on press of the mouse and to drop it on release. It also tells Flash that if it is dropped over the target (in this case the target3) to leave it there. If not, to return it to the original location (identified by the x and y coordinates).

To add your script to the shapes, open your **Actions Panel** by selecting **Window > Actions** or by pressing F9. Select the label shape movie clip symbol on the stage and copy the following code into the Actions panel.

**ADDING THE ACTIONSCRIPT**

To make the game work, you need to add the following script to each of the label movieclip symbols.

This script tells Flash to allow the user to drag the shape on press of the mouse and to drop it on release. It also tells Flash that if it is dropped over the target (in this case the target3) to leave it there. If not, to return it to the original location (identified by the x and y coordinates).

To add your script to the labels, open your **Actions Panel** by selecting **Window > Actions** or by pressing F9. Select the label movie clip symbol on the stage and copy the following code into the Actions panel.

```actionscript
on(press) {
    startDrag(this);
}
on(release){
    stopDrag();
    if(this._droptarget=="/target3"){
        this._x = _root.target3._x;
        this._y = _root.target3._y;
    }
    else{
        this._x = 177.9;
        this._y = 323.4;
    }
}
```
EDITING THE ABOVE SCRIPT FOR YOUR GAME
The parts of the script that are in **red** and **blue bold** are the parts you need to change to suit your game.
For example, target3 is the instance name for the label3 silhouette I have included in my game. If your target is a star shape you have given the name startarget, you will need to replace the target3 text in the script with startarget.
You also need to change the x and y coordinates for the shape. To get these coordinates, click on your shape and look in the x and y boxes in the bottom left-hand corner of the **Properties Panel**.

![Properties Panel](image)

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