

Maze Game: Tutorial for Part 4

This document will show you how to:

- 1) Place a text label (static/unchanging text) on the screen.
- 2) Place changing text (dynamic) on the screen and associate a value with it.
- 3) Create variables to represent time and score in memory so they can be updated as the game progresses.
- 4) Place code to update the text showing time.
- 5) Place code to update the score.
- 6) Place code to display different text based on what happens at the end of game.

1) Place a text label (static/unchanging text) on the screen.

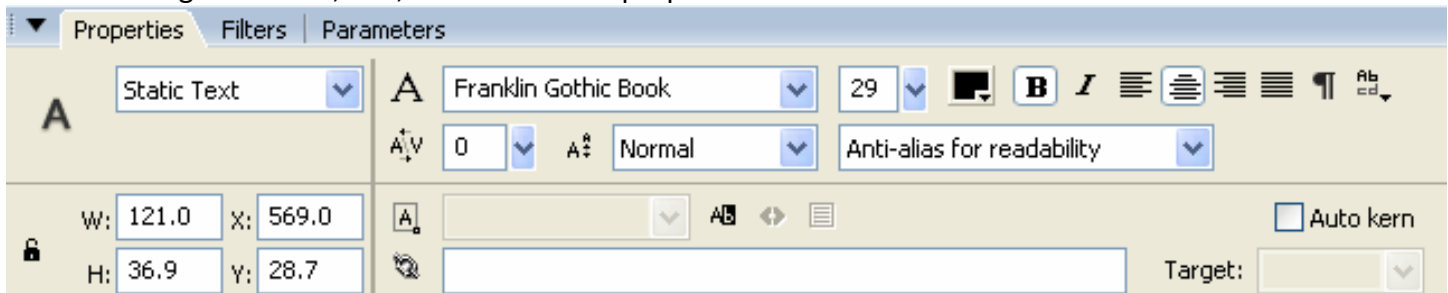
These steps are used to place a piece of text on screen that will NOT change while the program is running.

Select the Text tool from the toolbar. The icon is shown here:



Click on screen and type the text of your label.

You can change the color, size, and font on the properties tab.



Additionally, make sure the ComboBox farthest to the left says "Static Text."

2) Place changing text (dynamic) on the screen and associate a value with it.

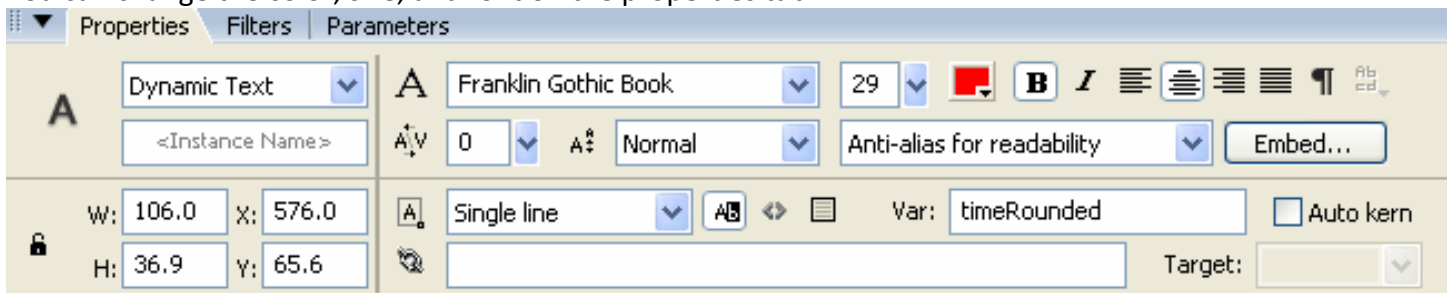
These steps are used to place a piece of text on screen that WILL change while the program is running.

Select the Text tool from the toolbar. The icon is shown here:



Click on screen and type the text of your label.

You can change the color, size, and font on the properties tab.



Make sure the ComboBox farthest to the left says "Dynamic Text." Place the name of the variable you want to use to save the value while the game runs in the box labeled "Var." In the picture here, the variable is named "timeRounded." If you plan on displaying multiple lines of text, you may want to change the ComboBox that says Single line to Multiline. (To work with the code I provide next, the text for display of the current score should have score in the Var box, and the text for display of the updating time should have timeRounded in it.

3) Create variables to represent time and score in memory so they can be updated as the game progresses.

Go to Scene 1 of the main timeline. If you have a layer called ACTIONS from part 3, click once on frame 1 of that layer.

If you do NOT have a layer called ACTIONS already, add a new blank layer. Click once on frame 1 of that layer.

Open the Actions Panel. Paste the following code:

```
_root.time=0;  
_root.score=0;
```

This will start the time and the score with a value of 0 when the game begins.

4) Place code to update the text showing time.

These steps are used to update the display of the time on screen each second.

We will place this code on your hero, because he will remain on screen through the entire game.

Click once on your hero. Open the Actions panel. Scroll to the bottom of any code that is already in the panel. The code provided will increase the value of `_root.time` by $1/12^{\text{th}}$ of a second and then calculate a rounded version of it to place in the text for time without any decimal places. Paste the following:

```
onClipEvent(enterFrame)  
{  
    _root.time=_root.time+0.0833;  
    _root.timeRounded=Math.round(_root.time);  
}
```

5) Place code to update the score.

Code for the wall:

Click into the code area of your wall. Find the `hitTest` for the hero. Place the cursor somewhere inside the curly brackets after the `if(this.hitTest(_root.hero))` line and place the following code:

```
_root.score-=3;
```

Code for the Villains:

Click once on the villain. Open the Actions panel. Find the `hitTest` for the hero. Place the cursor somewhere inside the curly brackets after the `if(this.hitTest(_root.hero))` line and place the following code:

```
_root.score-=10;
```

Code for the Food:

Double click to get into the MovieClip timeline for your food item. If you have a layer called ACTIONS, click on that layer. If you do not already have a layer called actions, create a blank layer and select it. Click once on the last frame of the MovieClip. If it is not already a keyframe, make it one now by pressing F7. Open the Actions panel and paste the following code:

```
_root.score+=5;
```

6) Place code to display different text based on what happens at the end of game.

This code will be placed on a MovieClip you create to mark the exit/end/finish line of your maze. Click once on this MovieClip in the main timeline of Scene 1. Open the Actions panel. Paste the following code. Then make changes indicated:

-You will need to change hero to the name of your hero instance on screen (green highlighting).

-You will need to change the number values to ones that are appropriate for your game – if your maze is particularly difficult, you might allow more time to be considered fast, etc (violet highlighting).

-You will need to change the messages to match the theme of your game (yellow highlighting).

```
onClipEvent(enterFrame)
{
    if(this.hitTest(_root.hero)&&_root.finished==false)
    {
        _root.finished=true;
        if(_root.score>25 && _root.time<30)
        {
            //do this if score was higher than value indicated AND time was faster than value indicated
            _root.msg="Fast & a Good Score!!";
        }
        if(_root.score>25 && _root.time>=30)
        {
            //do this if score was higher than value indicated but time was slower than value indicated

            _root.msg="Good job, slowsky";
        }
        if(_root.score<25)
        {
            //do this if score was lower than value indicated

            _root.msg="That score is a bit sad";
        }
    }
    else
    {
        _root.finished=false;
    }
}
```