



# DESCRIPTION

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## Overview and Learning Goals



# DESCRIPTION

## Coding a Greeting Card

***Students (grades 3-8) will create a greeting card.***

This activity can be modified to suit many occasions: Mothers' Day, Fathers' Day, Earth Day, etc.

We will use Mother's Day as an example.



Students will code this app using Lynx at [lynxcoding.club](https://lynxcoding.club).

Students will code the computer to:

- Create, and speak, text boxes
- Animate a heart shape
- Navigate pages with buttons
- Create backgrounds and sounds
- Write procedures
- Advanced options include:
  - ask their friends a question
  - take their answers, and
  - read them out loud.

### Success Criteria

Co-construct success criteria with your students.



# LEARNING GOALS

Students will learn, and use, these...

## BIG IDEAS IN CODING

	MAIN IDEAS	
CODE & CONCEPTS	<i>say, sayas</i> Produce text-to-speech	<i>setshape, setsize, freeze, unfreeze</i> Manage object characteristics
	<i>forever</i> Loops	<i>page commands, buttons, procedures</i> Objects for controlling program
	<i>sounds</i> Adding	<i>launch</i> Controlling sounds



# GETTING STARTED

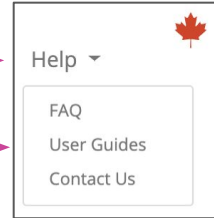
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Get a LYNX Account and Understand the Layout



# Get a Lynx Account

Details at [lynxcoding.club](https://lynxcoding.club)



We suggest:

- teacher gets a **School Administrator Account**
- students get **permanent Individual Accounts**
- teacher creates a **'club'** and invites all students

## NO Account

You can try Lynx for free without an account, by clicking on **Create a Lynx Project** on the home page at [lynxcoding.club](https://lynxcoding.club).

## FREE TRIAL Account

For full access, register (click **Login/Register** located at the top, right side of the Lynx web page).

## INDIVIDUAL Account

Convert your trial account to a permanent individual account before end of trial period.

## SCHOOL ADMINISTRATOR Account

Convert your trial account to a School Administrator account before end of trial period.

Accounts are free for Canadians thanks to a subsidy by the Government of Canada.



# Layout

Share

Save

Add Objects

Files

Procedures

Clipart

Project Tree

Settings

My Projects

Commands

Help

My project - page1

Procedures

```
1 ; This is an example of a procedure. Type the  
   word DrawSquare in the Command Centre (the  
   area below the white Work Area)  
2  
3 to DrawSquare  
4 pendown  
5 repeat 4 [  
6   forward 100  
7   right 90  
8 ]  
9 end  
10
```

Procedure  
Pane

Clipart  
Pane

Name your  
Project

Turtle

Work Area  
(Page)

Command  
Centre

HELP!

# STEPS FOR STUDENTS

## The BIG Picture! (Table of Contents)

1. **Log in** and open **Mother's Day** from the **Templates Folder**.

2. Create a **background**.

3. Create a **text box**.

4. Add **New Page**

SAVE  
often!

5. Create an **interactive button**.

6. Add **sound** and a '**beating heart**',  
**animation!**

7. Add **procedures, voice, and clipart**.

7. Make public and **share**.





# Log in and Get Started!

Log in, Open Mother's Day App from Templates Folder  
NAME it and SAVE it.



# START IN THE RIGHT PLACE!

## Go to the Templates Folder

1. **Log in.**

4. **Name** it something personal  
e.g., *Mary's Mother's Day App*

2. Go to **All Projects**  
and open the  
**Templates Folder.**



Templates

5. **Save**  
Click this icon.



3. Open the **Mother's Day**  
project. Click on **Edit.**

Clipart



If you open the Clipart Pane, you can see that we have provided images for you to use. You may add more!



# CREATE A BACKGROUND

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Using a Turtle to Create a Background



# CREATING A BACKGROUND

## Using 'setshape' & 'setsize' & 'freeze'

1. Click the **+** and choose **Turtle** to add a Turtle.



2. Open the Clipart Pane and find an image you like. Remember the shape number.



3. In the Command Centre type:

**setshape 7** Use the shape number.  
Press Enter. The turtle is now wearing that shape.

4. Use **setsize** to make it bigger or smaller. Type:  
**setsize 55**

This will make it bigger. The default size is 40.

5. In the Command Centre type:

**freeze "t1** Press Enter.

This freezes the turtle (background) in place so it can't be moved.

To unfreeze the turtle, type: **unfreeze "t1**

This assumes that the turtle's name is t1. To see the turtle's name, right-click on the turtle and check the top of the dialog box.



To change your turtle back to its original shape, type this in the Command Centre: **setsh 0**

0 is the turtle's shape number.



# TEXT BOXES

Creating, Moving, Resizing, Showing, Hiding, Deleting



# CREATING TEXT BOXES

## Create and Name your Text Box

1. Click the **+** sign and select **Text**.

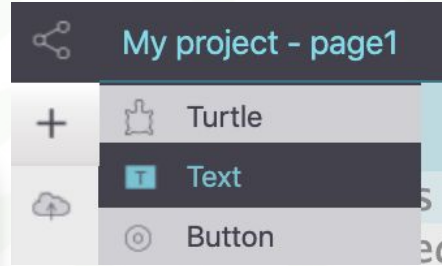
A new text box with the name **text1** appears on your screen.

2. Right-click on it.

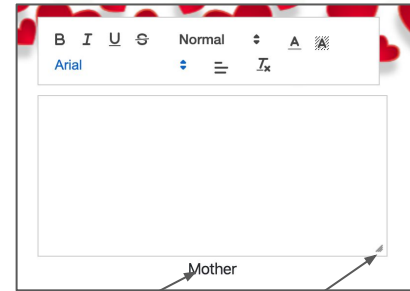
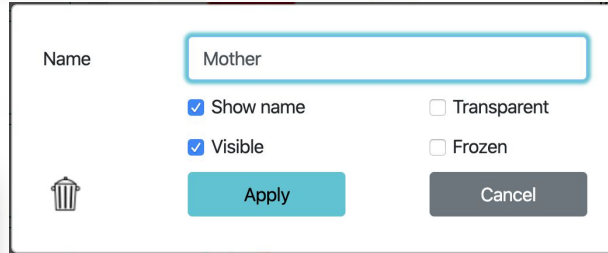
A dialog box appears.

3. Type the name **Mother**.

4. Click **Apply**.



Save your project!



**Move the text box:** Grab it by the name and drag it.

**Resize it:** Drag on the small triangle in lower right that appears when you hover over it.

**Format:** Click inside the text box—or select text—and use the formatting commands above the text box.

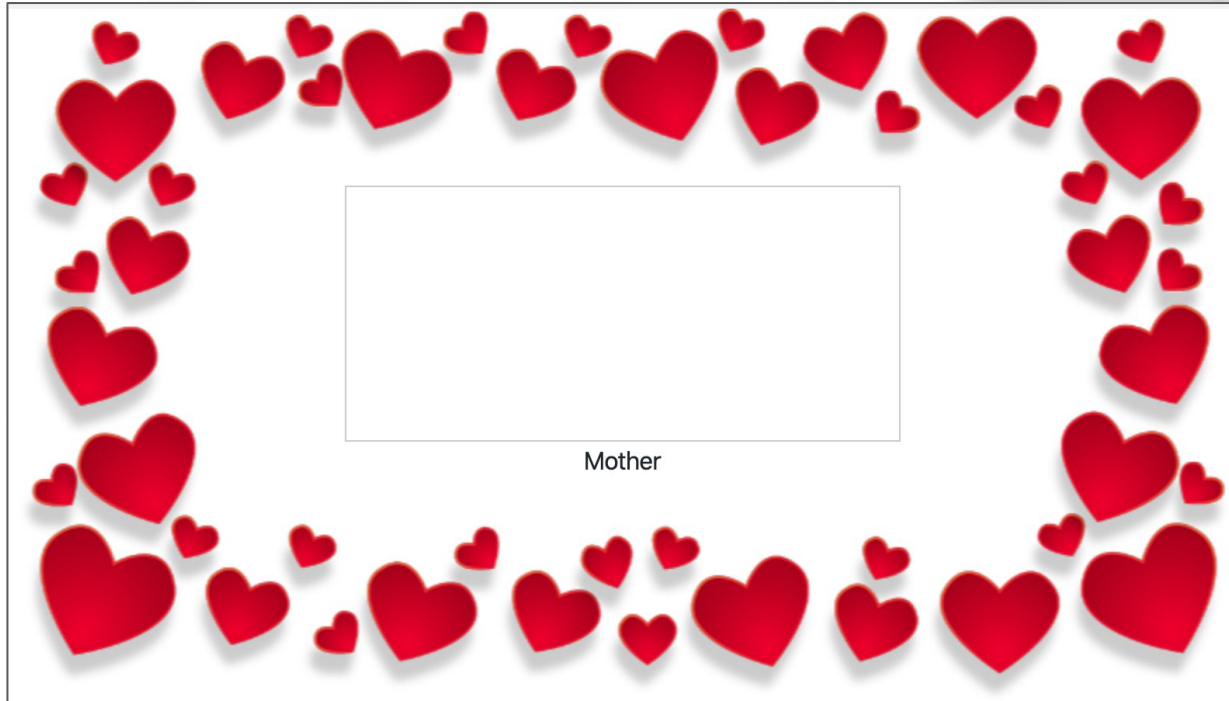




# MAYBE YOUR PAGE LOOKS LIKE THIS!

You Will Be Ready For the Next Step!

1. Make adjustments that suit your graphic!



You can see that I:

- made my text box a bit larger
- centred it on my graphic



# MANAGING TEXT BOXES

## Show, Hide, and Delete Text Boxes

### 1. Right-click on the Text Box again.

The dialog box appears.

You can see other characteristics here too. Try them out by selecting the check boxes and clicking **Apply**.

**Note:** if you make the box **invisible**, no worries! Type this in the Command Centre: **showtext**

The Text Box reappears. If you have more than one text box, you will have to call it by its name like this: **Mother, showtext**

Use its name, followed by a comma. This is why it is important to use a single word (no spaces) for naming things. Now, this text box will listen to your commands.

**hidetext** does the opposite.


### 2. Check the Transparent box.

### 3. Click Apply.

Name

Show name  Transparent

Visible  Frozen



**Delete** a text box by clicking the trash can.

Save your project!



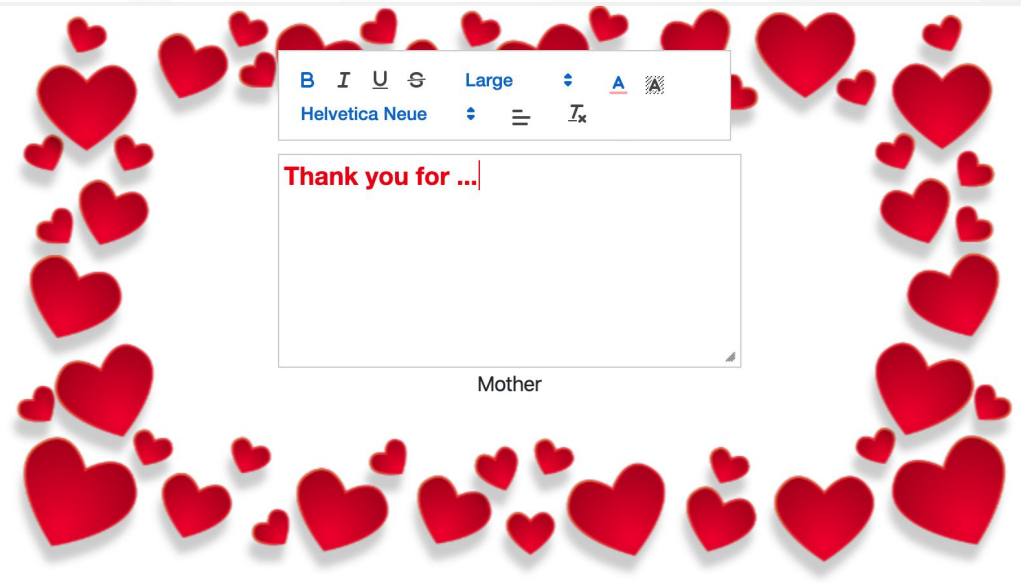


# ADD YOUR MESSAGE!

## Enter Text and Format It.

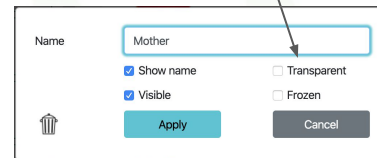
1. Type your Mother's Day message in the text box.

2. Format it using the formatting tools.



**Note:** My textbox is not transparent because I want you to be able to see it for this tutorial! :-)

I right-clicked the textbox and unchecked **Transparent**.



# PAGES

Add & Navigate Your Pages



# ADD A SECOND PAGE

## ...and a New Background

1. Click the **+** sign and select **Page**.

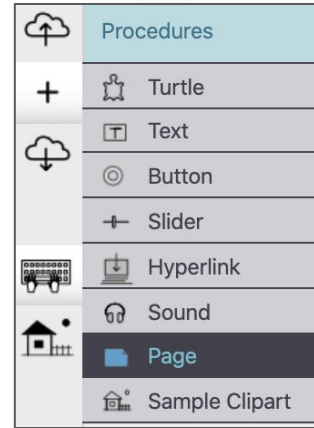
A new page called **page2** appears.

2. Click the **+** sign and select **Turtle**.

A turtle appears.

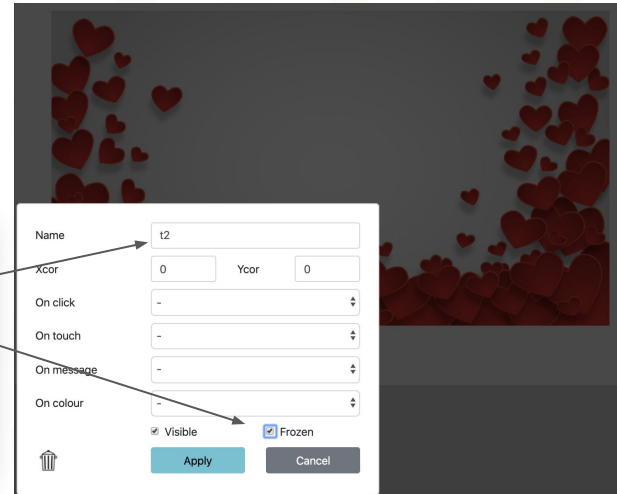
3. Create a background (as on card 12).

**Remember:** When you want to **freeze** a turtle, you need to know its name (as on Card 12). Likely **t2** this time. Right-click on the turtle and check its name at the top of the dialog box. (Or simply check the **Frozen** box to freeze the turtle in place.)



**Tip:** Remove a page with the command **remove "page2"**

...where **page2** is the name of the page. Don't put a space in the name!

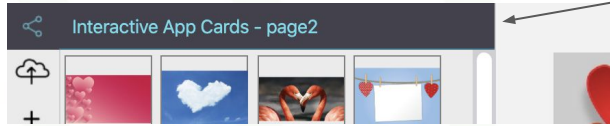


Save your project!



# NAVIGATE YOUR PAGES

## Write Procedures



There are four ways to move from page to page:

1. Click to the right of the page number.
2. Type **page#** in the Command Centre (# is the page number)
3. Write a procedure.
4. Create a button.

1. Click to the right of the page number to go to **page1**.

You are now on Page 1.

2. Type **page2** in the Command Centre.

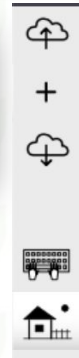
You are now on Page 2.

3. Click on the Procedures Pane icon.

Type:

```
to gopage1
page1
end
```

```
1 to gopage1
2 page1
3 end
```



### TIPS:

- The procedure name must be **one** word.
- A procedure adds a new command that Lynx will understand IN THIS PROJECT
- A procedure starts with the command: **to** and ends with the command: **end** on a line by itself.

Save your project!



# NAVIGATE YOUR PAGES (continued)

## Make Buttons

1. Click the **+** and choose **Button**.

A button named 'nothing' appears

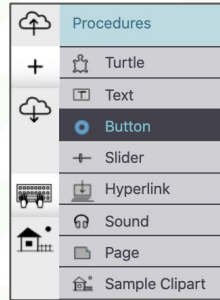
2. Right-click the **Button**.

3. In the **Label** field, type something meaningful like **Go to Page 1**

4. Click the **On click** drop down menu.

5. Choose **gopage1** (procedure name).

6. Click **Apply**.



Go to Page 1 

7. Resize your button by dragging the **bottom right corner**.

8. Move the button where you like.

9. Repeat these steps, from start of Card 20, to navigate to Page 2.



# ANIMATION & SOUND

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Add a 'Beating Heart' & Sound





# ADD A BEATING HEART!

## Use setsize, forever, and wait

1. Go to Page 2.

Click the **+** sign and choose **Turtle**.

2. Right-click the turtle and name it **heart**.  
Click Apply.

3. Open the **Clipart Pane**.



4. Hover over the heart shape to see its number.

5. Type in the Command Centre:  
**heart, setsh 14** (or whatever the number is)



**Note:** Square brackets must be used. [ ]

Near your Enter (Return) key.

6. Type in the Command Centre:

**forever [setsize 10 wait 4 setsize 20 wait 4]**

Change the size and wait times to suit you!

**Stop everything!**



Click this icon between the Procedure Pane and the Command Centre or type **stopall** in the Command Centre.

The screenshot shows the Command Centre interface with the following fields and options:

- Name: heart
- Xcor: 0 Ycor: 0
- On click: -
- On touch: -
- On message: -
- On colour: -
- Visible:  Visible  Frozen
- Buttons: Apply, Cancel



# ADD A SOUND

## Listen to my Heart!

1. Click the **+** and choose **Sound**.

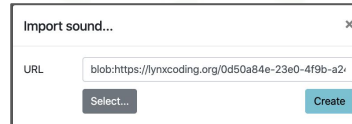
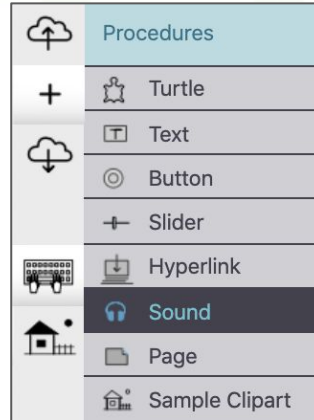
2. **Select** a **.wav** file (from your computer).

3. Click **Create**.

4. Move the sound icon anywhere.

5. In the Command Centre, type:  
**launch [heartbeat]**

Move your cursor to the **forever [setsize 10 wait 4 setsize 20 wait 4]** line and press **Enter**.



### Heartbeat .wav files

<https://www.soundjay.com/heartbeat-sound-effect.html>

**TIP:** Name your **.wav** file with a simple name before importing. I called mine **heartbeat**

**TIP:** Hide your **heartbeat** sound by right-clicking and unchecking **Visible**. Show it again by typing: **set "heartbeat" visible? "true**

Save your project!

6. Change the timing in your **wait** command (from Card 23) to make it align with the sound.





# PROCEDURES & CLIPART

---

Write Your Own Code



# ADD A PROCEDURE

## Code it!

Save your project!

1. Click on the Procedure Pane icon.

2. Type:

```
to beat
page2
heart, forever [setsize 10 wait 5 setsize 20 wait 5]
launch [heartbeat]
end
```

3. Type **beat** in the Command Centre or add a button with a label like “Click Me” and select **beat** in the **On Click**.

```
9 to beat
10 page2
11 heart, forever [setsize 10 wait 5
    setsize 20 wait 5]
12 launch [heartbeat]
13 end
```

### TIP:

- Put **page2** to force the program to go to Page 2.
- Put **heart**, before the **forever** command, to ensure that you are talking to the **heart** turtle!

If you don't, the **last** turtle you talked to would carry out that action. That might have been the turtle that you used as a background on Page 1.

**HOORAY!**

**YOU'RE A CODER! :)**



# ADD VOICE!

## Personalize Your Card using say and sayas

1. Go to Page 1.

2. Type **say Mother** in the **Command Centre**. This reads the contents of the Text Box "Mother"

3. Type **sayas Mother "moira**

4. Add a **read** procedure.

5. Add a button with a label like "Talk to Me" and select **read** in the **On Click**.

*This uses the computer system voices.*

*If you are on a Macintosh, you can go to System Preferences, click Accessibility and choose Speech. You will see the voices available to you there.*

```
to read  
page1  
sayas Mother "Moira  
end
```

Save your project!



# CLIPART (optional)

## Adding Clipart of Your Valentine

Add your own clipart to blank spaces in the Clipart Pane. Maybe, go to [Pixabay.com](https://pixabay.com) and download an image.

OR, use a photo of your Valentine!!

**1. Copy the clipart (photo).** Press Command-C on a Mac, or Ctrl-C on other computers.

**2. Click on the House icon to open the Clipart Pane.**



**3. Click on an empty box to reveal a + sign.**

**4. Paste your image into the box.** Press Command-V on a Mac, or Ctrl-V on other computers.

### TWO WAYS



**1. Click on the House icon to open the Clipart Pane.**



**2. Click on an empty box and click the + sign.**

**3. Use the dialog box to locate a clipart file on your computer.**



**4. Click the Create button.**

**Be creative! Add this shape to a new turtle on one of your pages—or as you wish!**



# Share your Project

Send it to friends or publish it!

1. Click the **Share** icon.



2. Click **Create**.

3. A URL will be generated here.

4. Click on **Copy Link** and send it to friends.

5. Add a Preview Image to give your project a Visual identifier

6. Will you allow others to modify your App? Your original will remain!

Share this project... ×

Sharing Options [Project Properties](#)

Link Sharing is OFF. [Create](#) a link to share.

URL

Embed on your site





# CODEtoLEARN

## Credits

Principal Writer..... *Peter Skillen*  
Contributors.....*Michael Quinn*  
*Brenda Sherry*  
Translator.....*Alain Tougas*



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