CMU EMS 60210 Spring 2021

Bitsy Game Maker

~ a little editor for little games or worlds ~ by Adam Le Doux.

Inspiration

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Vitreous by Breogan Hackett

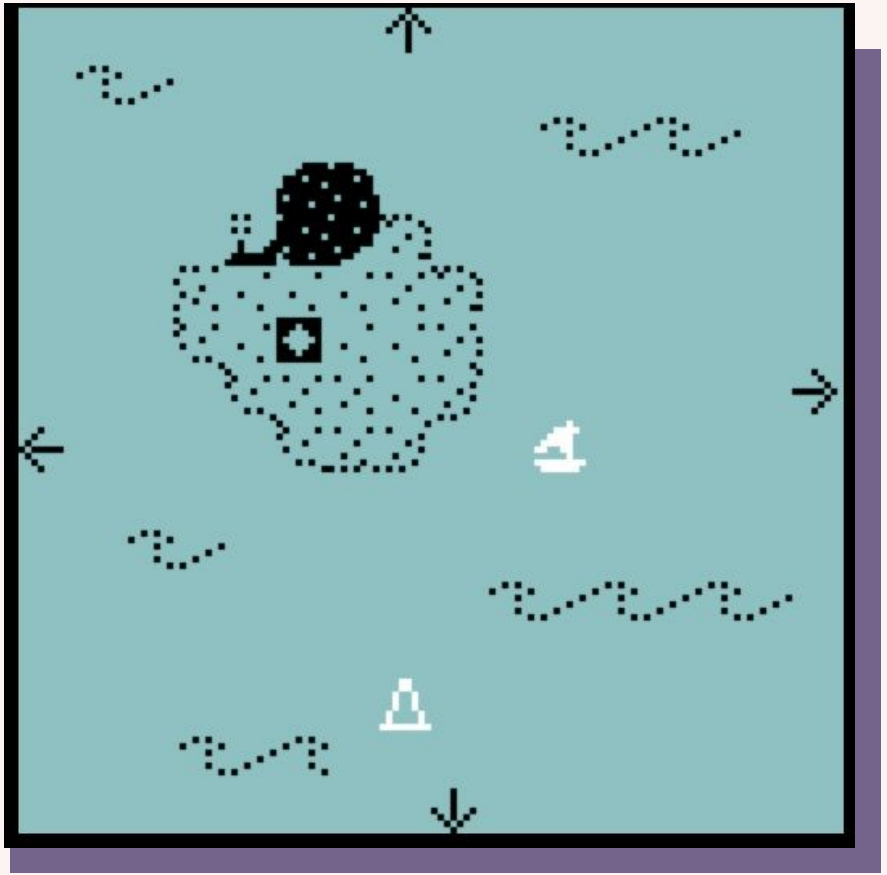
boaheck.itch.io/vitreous

Novena by Cecile Richard

haraiva.itch.io/novena

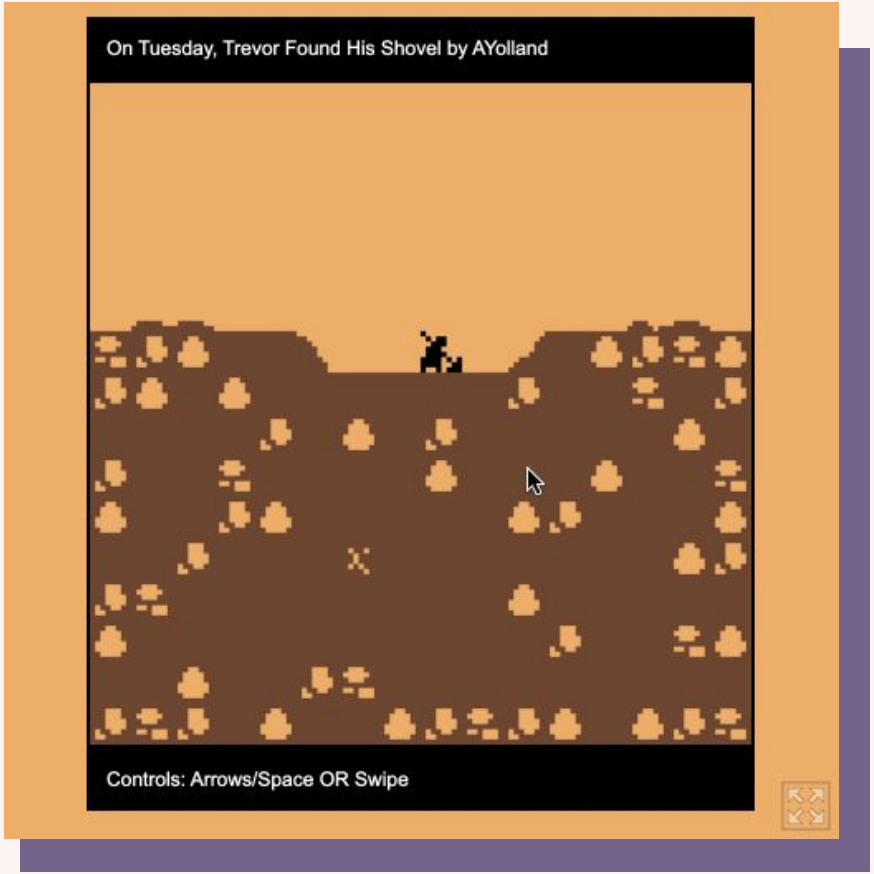
Four Corners by ACGodliman

acgodliman.itch.io/four-corners



Trevor Found His Shovel by AYolland

ayolland.itch.io/trevor



Cake Climb by AYolland

ayolland.itch.io/cake-climb

More inspiration

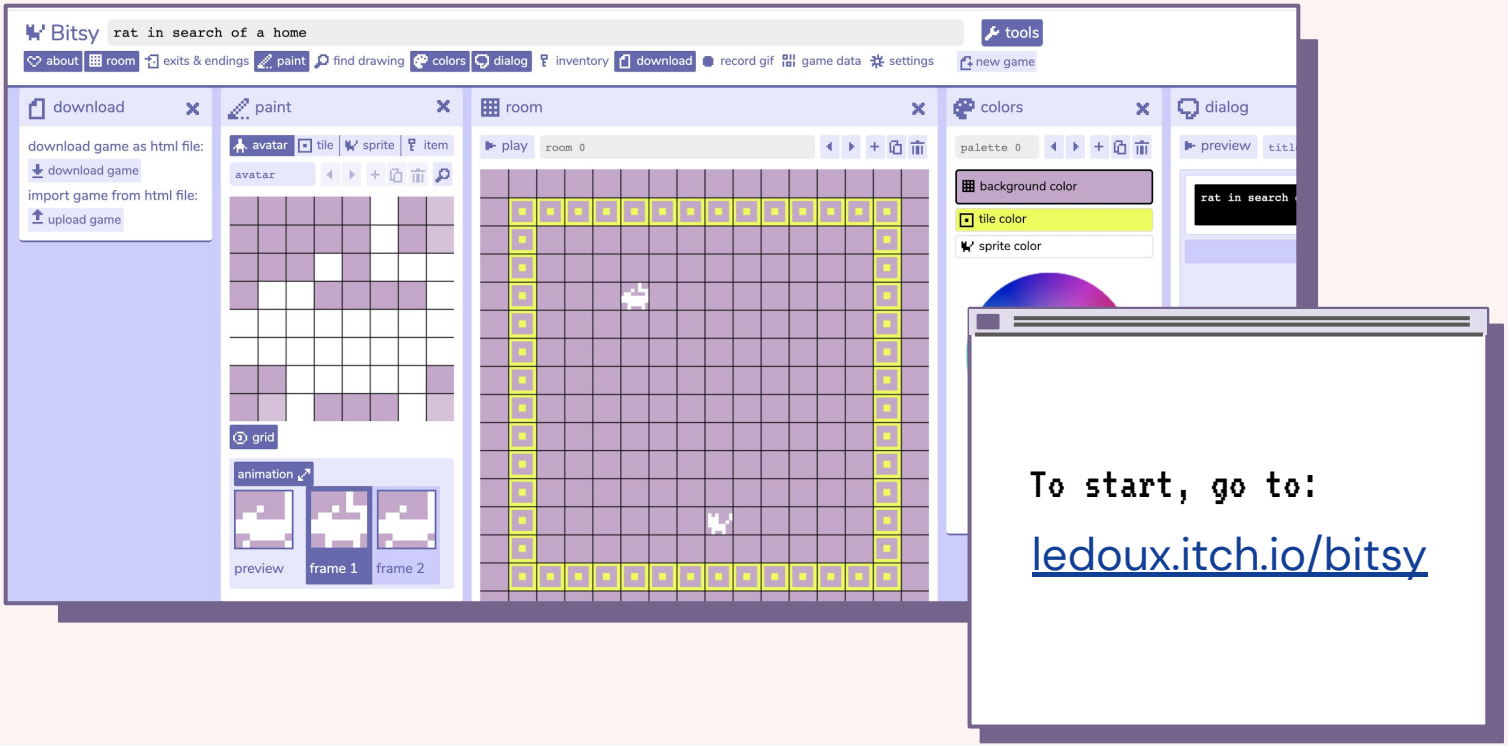
itch.io/c/201121/bitsy-faves-pt1-20172018

How to use Bitsy

Acknowledgement

The language in these tutorial slides is adapted from this tutorial and this one too.

Thank you Claire Morewood and Cecile Richards!


Bitsy
rat in search of a home
tools
about
room
exits & endings
paint
find drawing
colors
dialog
inventory
download
record gif
game data
settings
new game
download
download game as html file:
download game
import game from html file:
upload game
paint
avatar
tile
sprite
item
avatar
grid
animation
preview
frame 1
frame 2
room
play
room 0
colors
palette 0
background color
tile color
sprite color
dialog
preview
rat in search
To start, go to:
ledoux.itch.io/bitsy

The main elements of the game are:

An avatar - your playable character. They can walk around with the arrow keys.

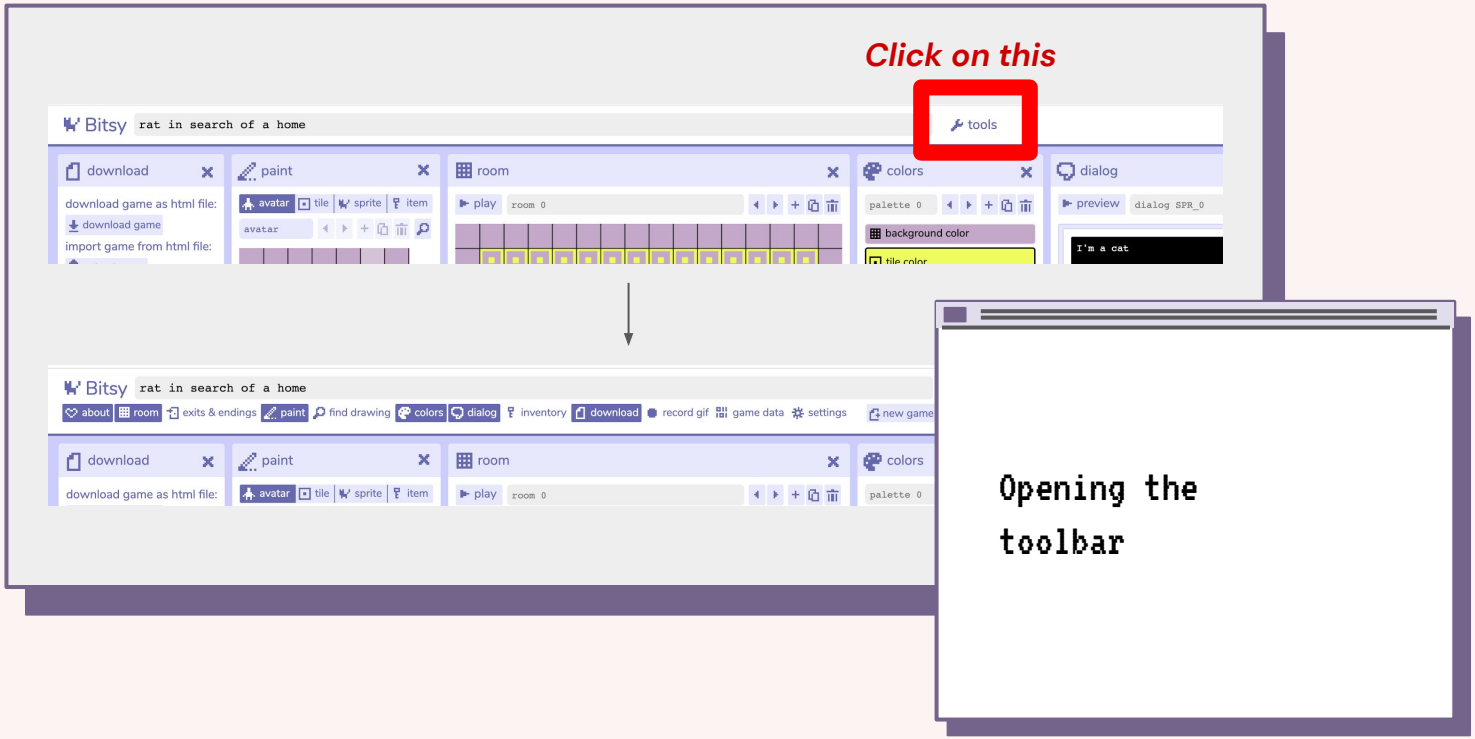
Tiles - non-interactive scenery, which can be set as walls that you can't walk through

Sprites - interactive scenery and non-player characters that can have dialogue

Rooms - a place in your game. You can make multiple rooms that you connect using exits.

Items - sprites that you can pick up. You can assign variables to your items if you want.

Ending - an exit that ends the game. You can have multiple endings.


Click on this
Bitsy
rat in search of a home
tools
download
download game as html file:
download game
import game from html file:
paint
avatar
tile
sprite
item
room
play
room 0
colors
palette 0
background color
dialog
preview
dialog SPR_0
I'm a cat
Bitsy
rat in search of a home
about
room
exits & endings
paint
find drawing
colors
dialog
inventory
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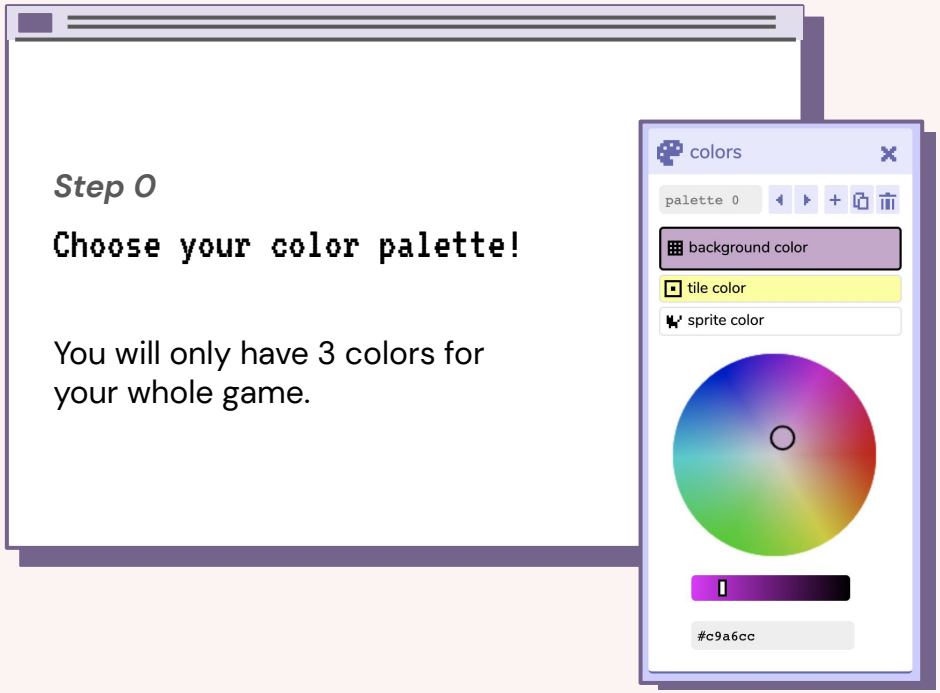
colors
palette 0
Opening the
toolbar


Step 0
Choose your color palette!
You will only have 3 colors for your whole game.
colors
palette 0
background color
tile color
sprite color
#c9a6cc

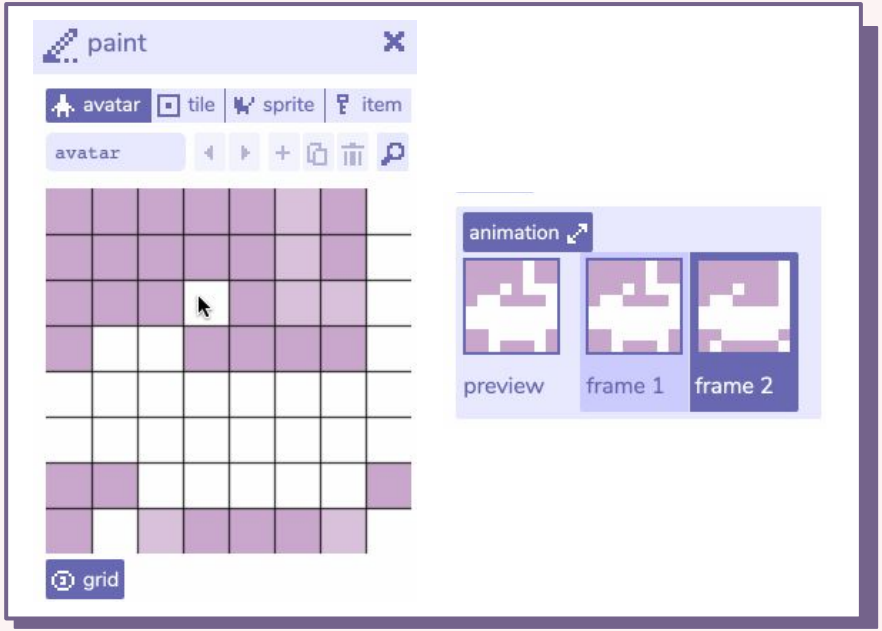
Step 1

Make your avatar

With the Avatar section of the paint tool, you can edit the default character by clicking each square to toggle it on and off.

Now click on “animation”, and you can make a 2-frame Bitsy animation to animate your avatar.

“i generally roughly plan out my rooms on paper, then create them, adding placeholder tiles where i want my walls and exits to be. there are some bitsy pieces that take place only in one room, but you can add as many rooms as you want, so you can go wild with them as well” - Cecile Richards



Step 2

Make tiles

Tiles make up the most of your game scenery. They can be animated or not, and you can toggle the “wall” button to make your tile impassable, which means your avatar can’t go through it.

You can make as many tiles as you want.

Place your tiles in your room by clicking on the square you want them to show up in. Click and drag if you want to place a tile multiple times quickly.

“don’t forget to name your tiles and sprites! it’s helpful when you end up having a lot of them and you can easily search them using the find button.” - Cecile Richards

Step 3

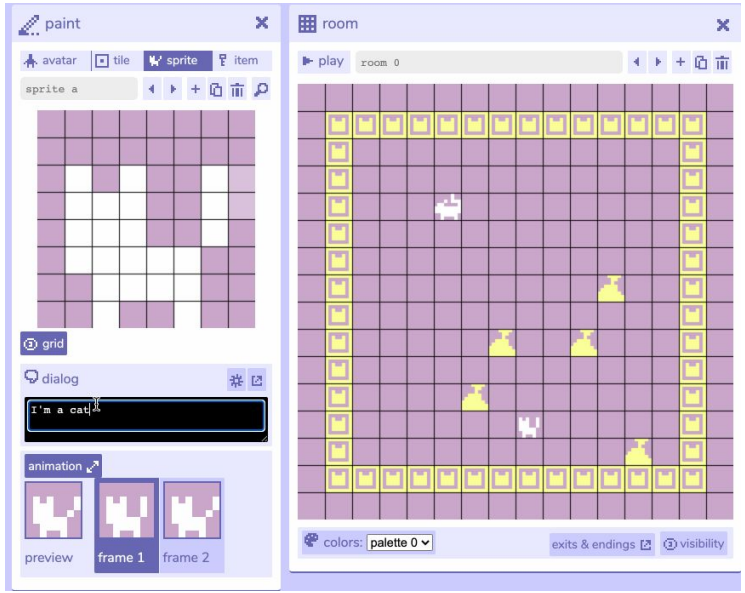
Make sprites

Sprites are interactive objects. When you go near them, you'll see dialog and can trigger certain events (more on that later).

You can only have one version of a non-item sprite in a game, so if you want multiples of the same sprite, you have to duplicate them.

When editing sprites, you can give them dialogue to say when your player character walks to them. This is the core game mechanic.

"dialog is usually one of the last things i add to my game. what i do is write down all of my dialog in a text editor and then copy/paste and edit that dialog in bitsy for each of my sprites." - Cecile Richards



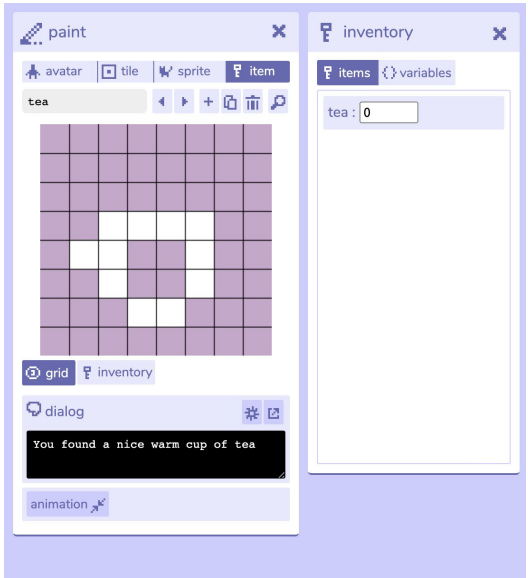
Step 4

Items and inventory

Items are sprites that you can place multiple of, and "collect." They get added to your inventory, and you can use this information to control the dialogue in the game (more on that later).

Similar to sprites, you can also trigger dialogue when you collect items.

"exits are commonly used as doors between rooms, but i've seen them being used to make animations, show the passing of time, or making sprites appear out of nowhere."
- Cecile Richards



Step 5

Exits and endings

Exits help you move between rooms. Endings can be placed to “end” the game.

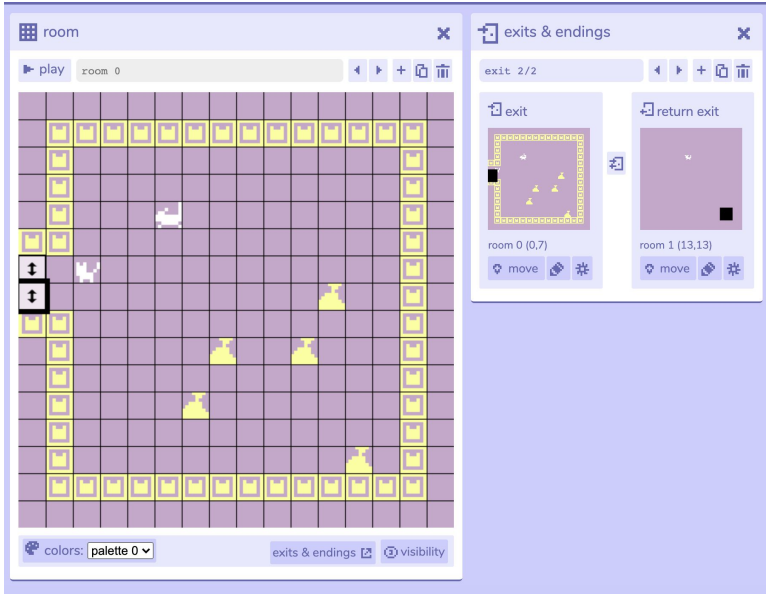
To make an exit, open the exits panel, and click the place new exit button.

Considerations:

- It’s important to keep continuity in mind. For example, it makes sense for the character to exit at the right-side and enter a new room from its left side.

- Make it obvious where the exits are.

“exits are commonly used as doors between rooms, but i’ve seen them being used to make animations, show the passing of time, or making sprites appear out of nowhere.”
- Cecile Richards



Advanced Features

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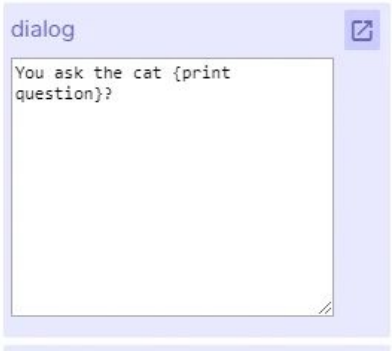
Variables

- ★ You can define a variable from the ‘inventory’ window of the Bitsy editor.
- ★ Very similar to items except they’re “invisible,” which means that picking up items will increment the item count in Bitsy while variables can only be changed behind the scenes using dialog actions.
- ★ Variables can be used and changed from the dialog window of the Bitsy editor.

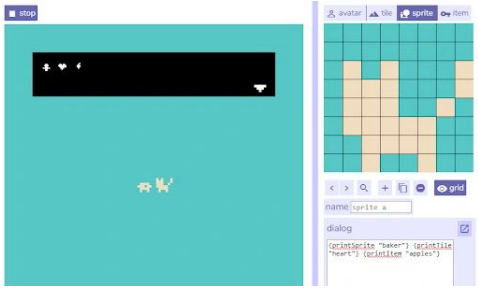
Advanced dialog

'{}' in Bitsy dialog represent a code block. Bitsy knows that when it encounters an open curly brace, that means that everything between that and the corresponding close curly brace are code it needs to process, rather than simply text it needs to display.

Inventory can be used in the dialogue like this!



Variables can be used in the dialogue like this!



You can also print sprites as part of dialogue.

Advanced dialog pt 2.

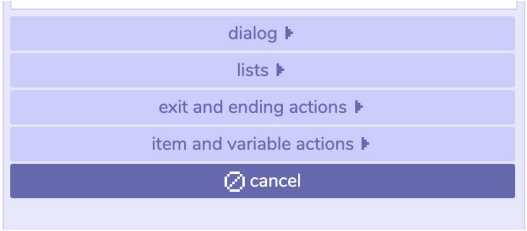
In the dialog editing box, you will see that once the dialog is triggered, you can chain several actions.

Some of the possible actions are:

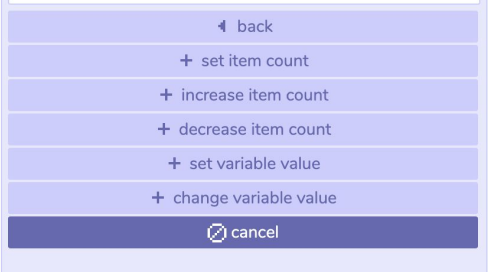
- Conditional dialogue (have different dialog based on variables or inventory)
- Changing variables and item counts
- Teleport the user or trigger an ending

Play around with the different possibilities in your game! [This is a good resource] for learning about dialog.

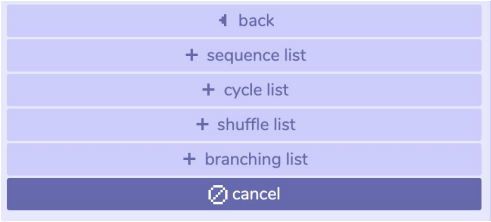
These are all of the dialog action categories



Within the item and variable category, you can modify item and variable values.

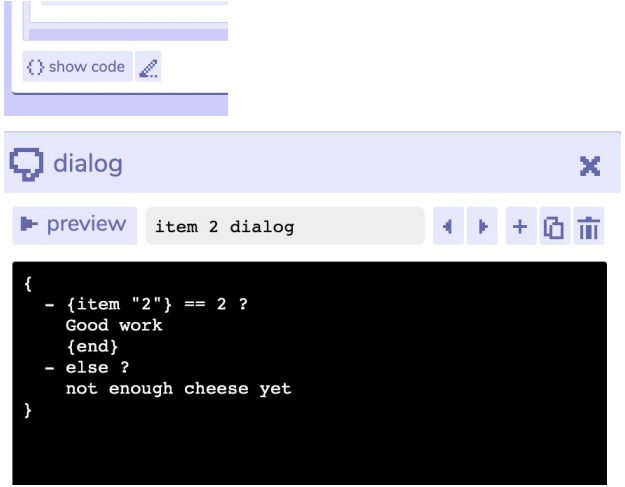


You can also have a list of dialog that can be shown in different ways (shuffled, conditional,, in order).



Advanced dialogue pt 3.

You can lock the player in a room until they see a certain dialogue after picking up an item.



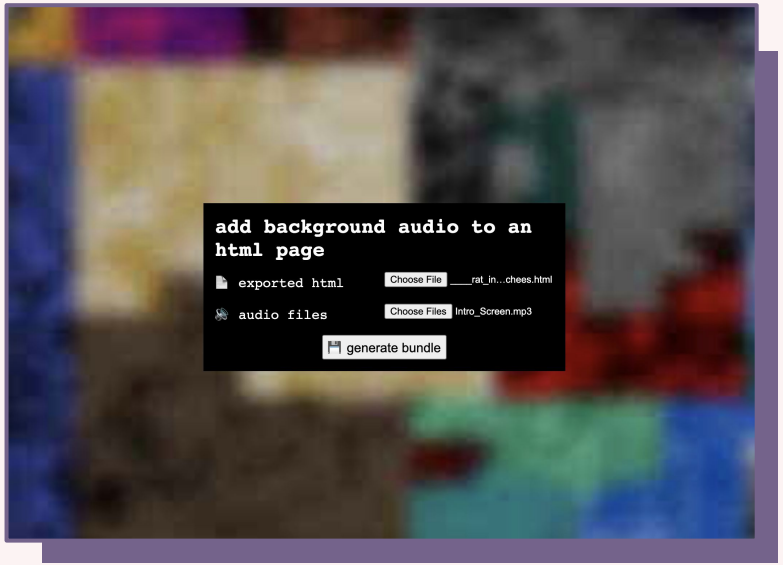
You can nest the dialog so that it ends the game or does another action in a branching dialog, but it's a bit tricky in the GUI so I suggest hitting "show code" to do that.

Adding sound

Use candle.itch.io/bitsy-audio

If you wish to add a single background track to this game, this tool makes it SUPER easy. Once you download the game file (which is one single HTML file) from Bitsy, you can go to this link and upload that file, along with an audio track. It will generate a ZIP file which you will use instead of the original HTML file when uploading it to itch.io.

You can also have more complex sound that's triggered by certain actions, but that's more difficult. Check it out here.



Downloading and uploading to itch.io

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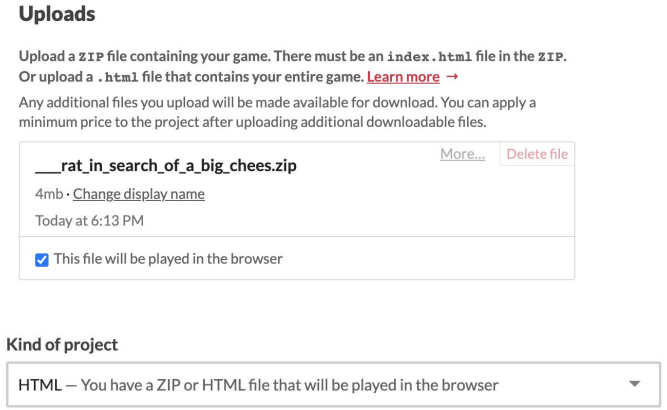
Step 1: Download from Bitsy

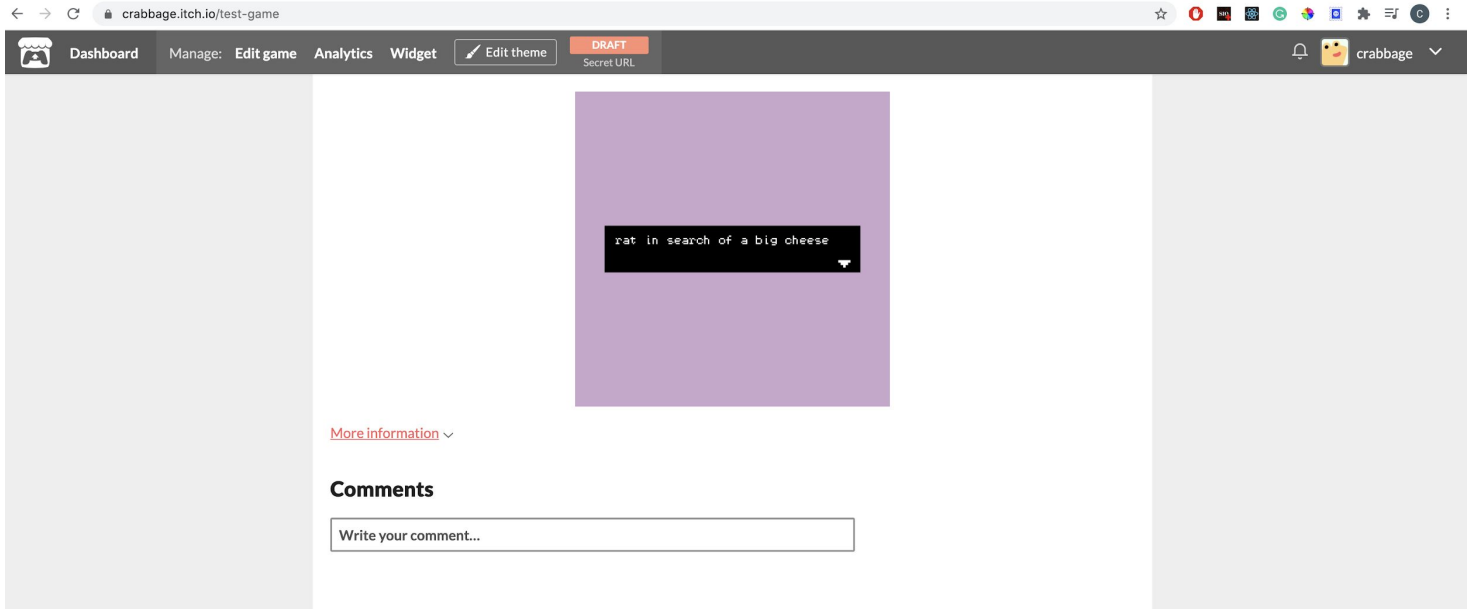
It will generate a single .html file

Step 2: Make a itch.io account and make a new project

Then upload that single HTML file (or if you're using the sound addon, use the ZIP file that was generated) and make sure to select "HTML" for "Kind of project"



Step 3: and that's it! It should be up :-)



Resources

Resources

Where you can learn more about Bitsy. Some of these resources will be slightly outdated because Bitsy has changed how some of the features work over the years.

- ★ Wikia homepage
- ★ Tutorials
- ★ Wikia FAQ (lots of good hacks here for more colors, better interactions, etc)
- ★ Youtube examples (slightly outdated)
- ★ Learn more about variables!

Tools list

Tools to modify Bitsy's default behavior

- ★ Borksy (can be used to hack Bitsy)
- ★ Bitsy sound and music handlers
- ★ Pixsy
- ★ Pixilart (can be used to draw 128x128 pixel rooms and then uploaded to Pixsy)
- ★ Fontsy
- ★ Spritesy
- ★ Bitsy 3d
- ★ And more!