

University of California, Merced

# Visual Novel Game Engine

Presented by Cristian Parker & Ethan Hom

## Use Case : Game Designer/Backend User

Manage Characters: Create, Read, Update, and Delete entries in characters table (ex. add character, change name)

Manage Art: Upload images to sprites and locations, also Link sprites to character

Manage Scenes: Create new scene giving them names (ex. Ch. 1), also Assign to a location (ex. The Library)

Dialogue: Add lines to scene. Defines text/content, speaker/char\_id, and order of speaking sequence\_id

Game Logic: Define events (ex. play music) and Events table to trigger events to start

Narrative: lines for player choice. Choices table to different scenes

## Use Case : Player/Frontend User

**Start New Game:** Player initializes game, scene is set to default/starting scene, Locations table is called for background path (bg\_path), and queries Sprites for character sprites

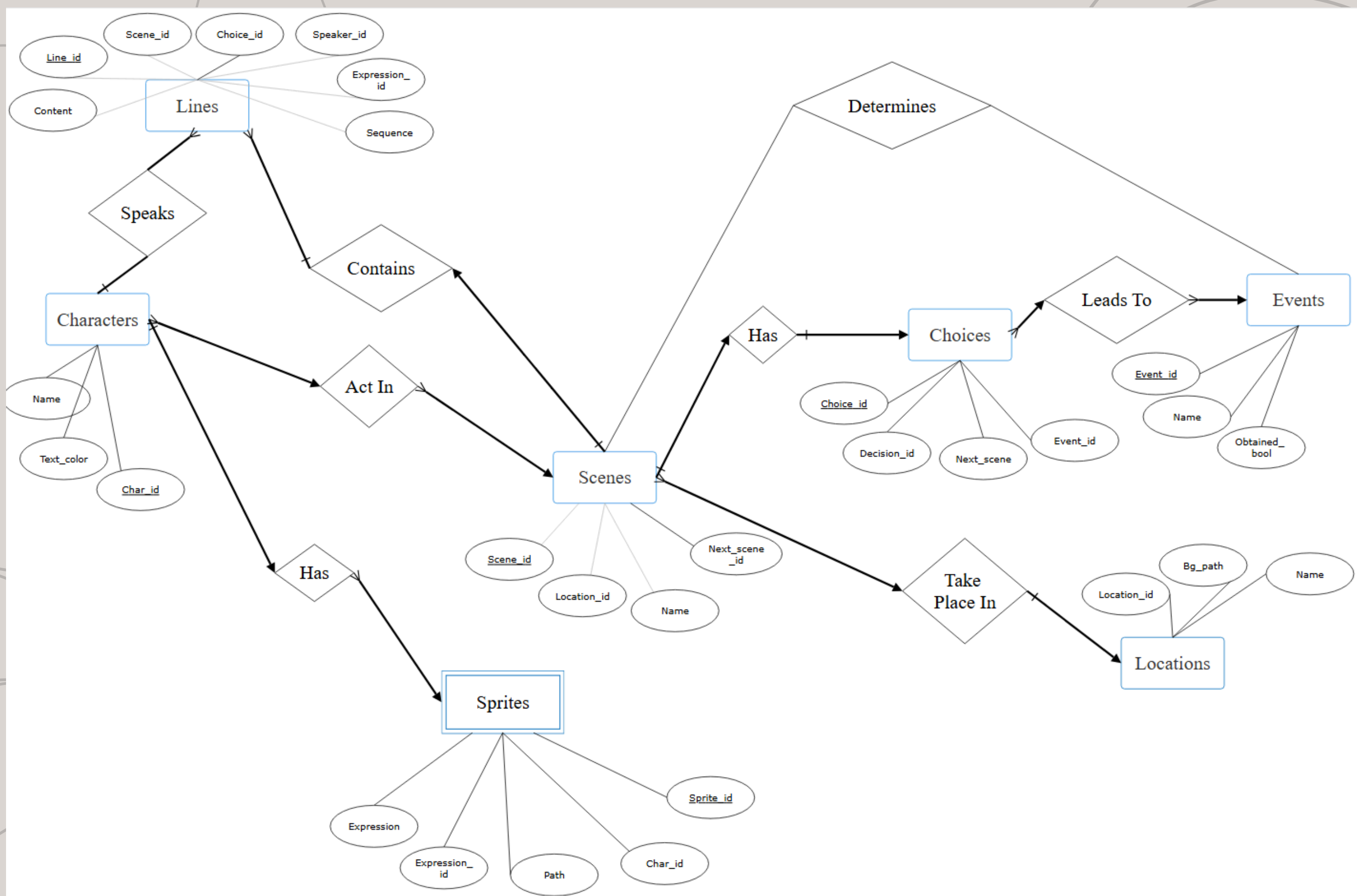
**Dialogue:** Click on buttons and queries Lines table to advance for the next scene in sequence, then shows content and speaker

**View Scene Elements:** Continuously check Events linked to the current scene or line to trigger events (ex. effects, sprite change, music changes)

**Choice:** Display the choice text; on select, use Choices.next\_scene to load next scene

**Load Game:** Player selects save file. System stores scene\_id and any variables so player can load to exact point.

**Quit Game:** Player exits



Lines	
PK	<u>line_id int NOT NULL</u>
	content char(800) NOT NULL
FK1	scene_id int NOT NULL
FK2	speaker_id int NOT NULL
FK3	expression_id int NOT NULL
	sequence int NOT NULL
FK4	choice_id int NULL

Sprites	
PK	<u>sprite_id int NOT NULL</u>
FK1	char_id int NOT NULL
	path char NOT NULL
	expression_id int NOT NULL
	expression char(30) NOT NULL

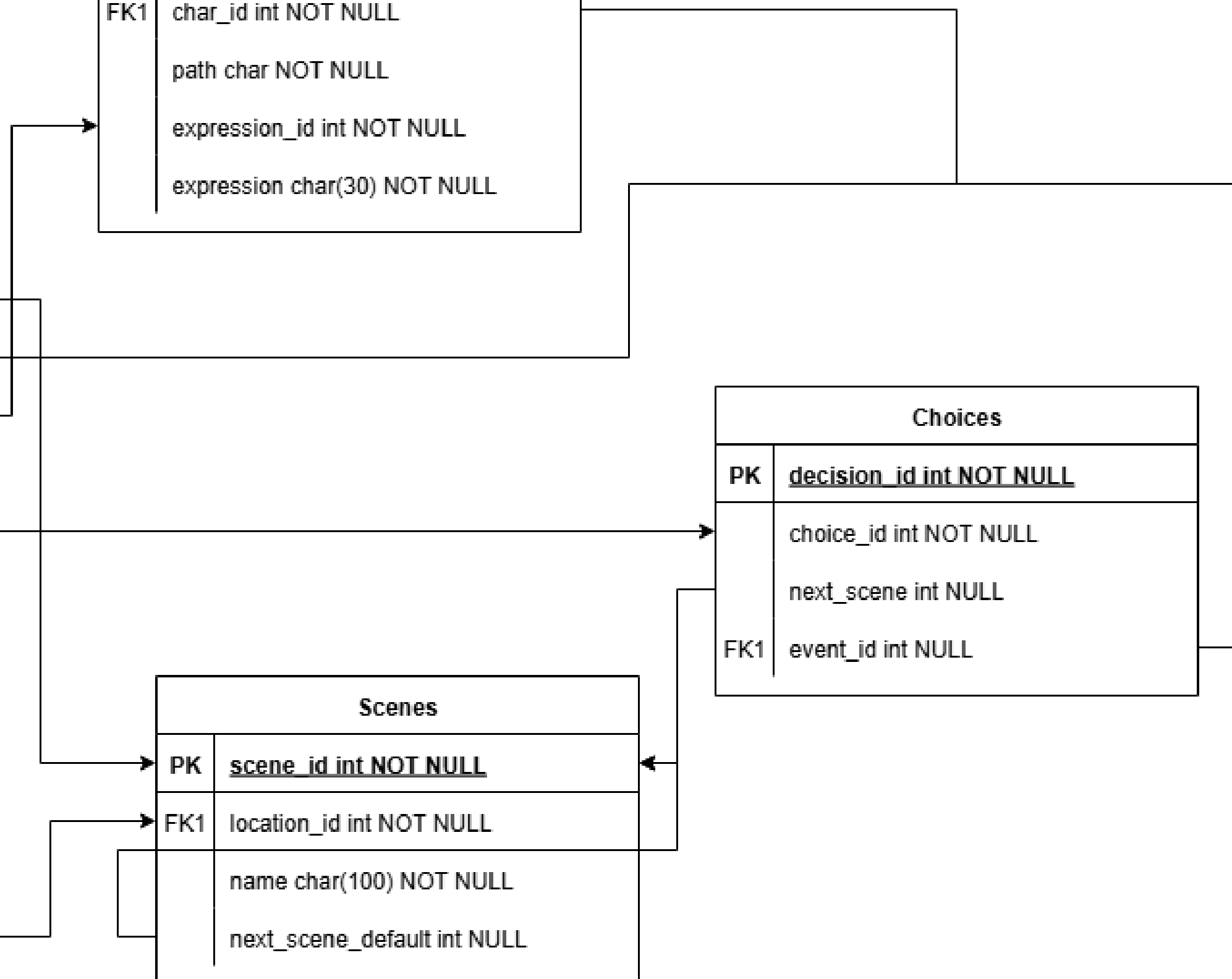
Characters	
PK	<u>char_id int NOT NULL</u>
FK1	char_name char(50) NOT NULL
	text_color char(6) NOT NULL

Choices	
PK	<u>decision_id int NOT NULL</u>
	choice_id int NOT NULL
	next_scene int NULL
FK1	event_id int NULL

Scenes	
PK	<u>scene_id int NOT NULL</u>
FK1	location_id int NOT NULL
	name char(100) NOT NULL
	next_scene_default int NULL

Events	
PK	<u>event_id int NOT NULL</u>
	obtained_bool bool NOT NULL
	name char(100) NOT NULL

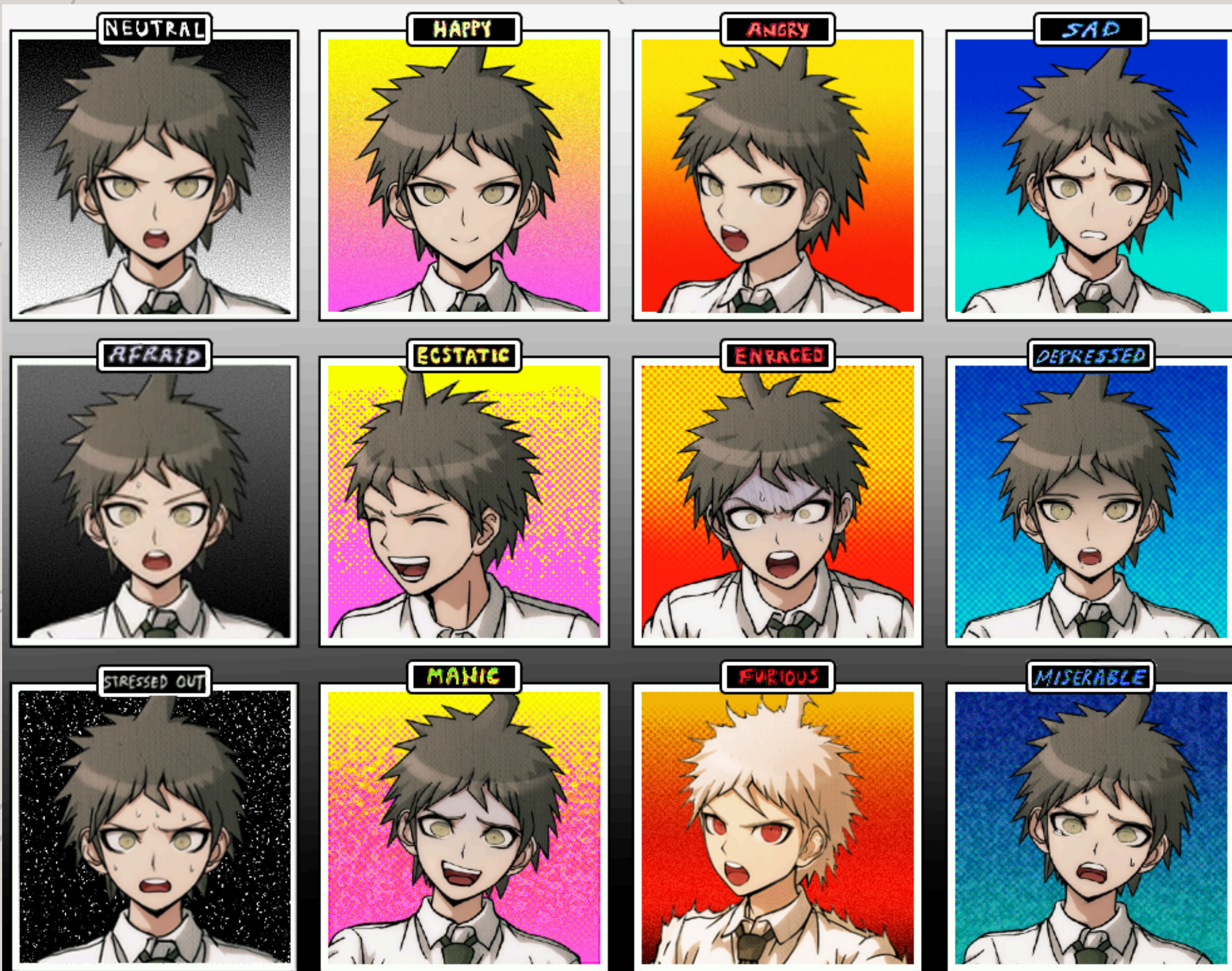
Locations	
PK	<u>location_id int NOT NULL</u>
	bg_path char(100) NOT NULL
	name char(100) NOT NULL





# End Example

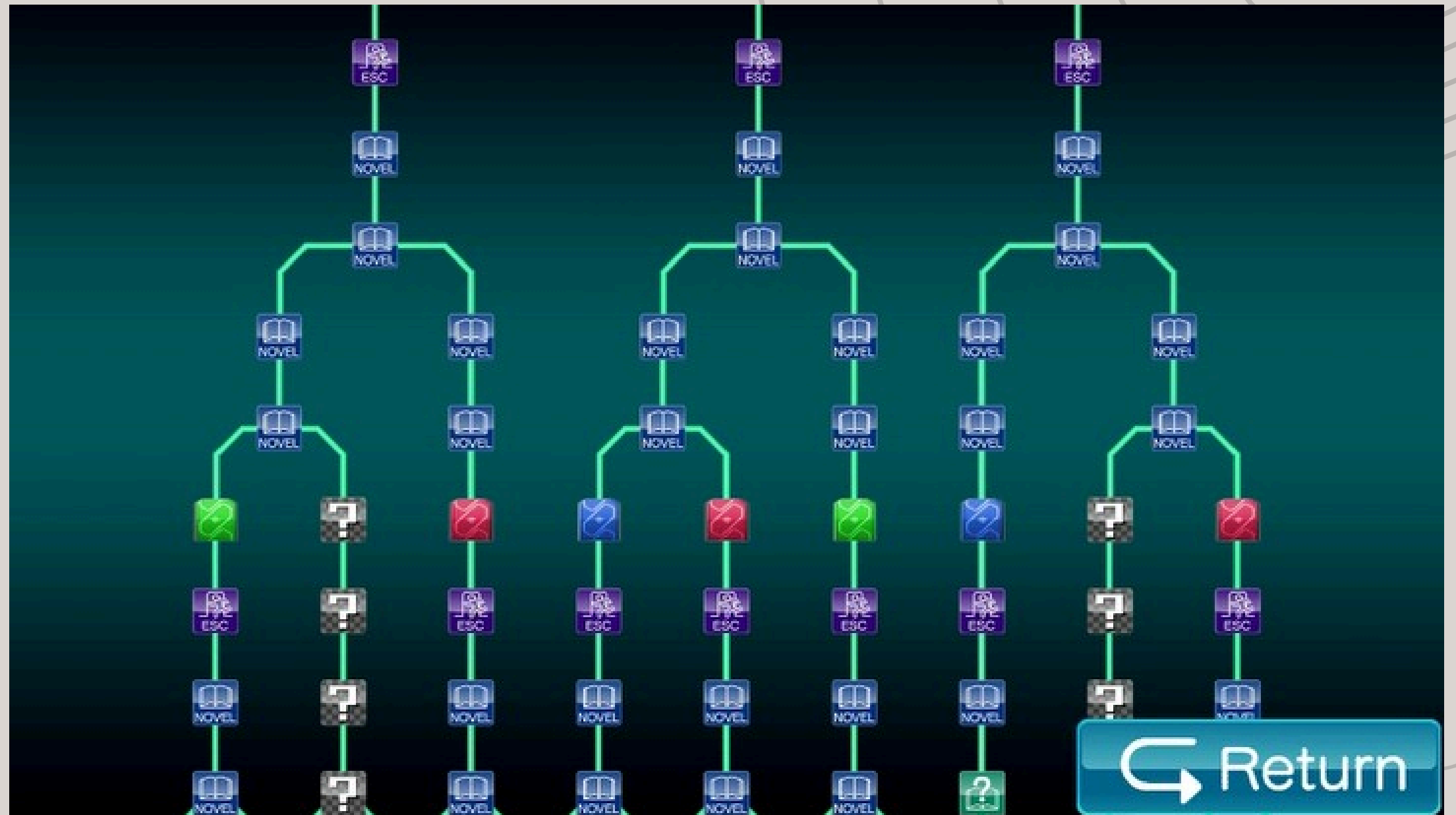




# Sprites



# Choices





<https://github.com/EthanHom/Visual-Novel-Game>

# Thank You

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