

Made using:  
python 3.9.6  
pygame 2.0.2

## Setup:

- Add images/music to the assets folder (inside project).
- In your project folder (e.g. demo), add new chapter directories with your scripts to scene\_list.py. Scene classes require an `__init__()` with 3 variables, and `run()`.
- To change the names of the project folder, the starting chapter, or the starting scene, edit the variables in `main.py`.
- Use the configuration file for various general settings, as well as setting character images and map coordinates (to get user input).

## Script Command Options:

- \* Background
- \* Dialog Box
- \* Narration Box
- \* Menu
- \* Portraits/Images
- \* Map
- \* Change Scenes
- \* Save game
- \* Music, Sound Effects, Shake Screen, Pause, variables
- \* Coordinator
- \* Scene transitions
- \* Characters (RPG)

## Backgrounds:

-Background images are scaled to: 1430 x 950 (30px width remains offscreen, and is used for `shake_screen`)

Set the background in the `__init__`:

```
self.background = 'background_image.jpg'
```

- If `self.background = None`, then a solid color is used.
- You can also set the background image or color in the `__init__`.

Add text on background:

```
self.game.display_bg_text(text, x, y, color='White', font='Georgia', size=75, bold=0)
```

-The x, y can be the int pixel coordinates, or a percent of screen size as a str: "40%". You can also use 'center' for the x coordinate.

Remove the background text:

```
self.game.clear_bg_text()
```

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## Dialog Box:

-Dialog box takes a list of quotes. Each quote is a list of 3-4 items: the character name, character image index, quote-text, and (optional) choices. Choices must be in the last quote:

```
self.game.display_dialog([
    ['name', 0, 'quote'],
    ['name', 0, 'quote', ['Yes', 'No']]
])
```

-To disable certain choices, add a **set\_disabled** argument with a list of booleans of the same length as choices:

```
self.game.display_dialog([[ 'Name', 0, 'quote', ["Yes", "No", "Maybe"] ]], set_disabled=[True, True, False])
```

Color:

-Text color (for a single quote only):

Add '**RED:**' to the start of the quote. (Check configuration file for color name options)

-Text color (dialog box setting):

```
self.game.dialog_boxes['default'].color = 'Red'
```

Note: any pygame color can be used, or RGB value (255,0,0)

-Background color (dialog box setting):

```
self.game.dialog_boxes['default'].surface.background_color = 'Black'
```

Move the dialog box to top or bottom of screen:

```
self.game.dialog_box.move_dialog_up()
self.game.dialog_box.move_dialog_down()
```

-These can also take optional arguments **x** and **y** for placement other than the default set in configuration.py.

Prevent automatic removal of dialog box:

```
self.game.display_dialog(quotes, remove=False)
self.game.dialog_box.remove_dialog_box()
```

-If you want no name tag, use an empty string "", same with image and quote (latter of which is useful with animations by keeping it up with remove=False):

```
self.game.display_dialog(["", "", ""], remove=False)
```

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Advanced Dialog Box options:

-Change settings of dialog box in the configuration file. Use the below options to change mid script or the box dimensions.

Font:

```
self.game.dialog_boxes['default'].change_font(
    font_name=None,
    text_size=None,
    color=None,
    name_tag=False)
```

-To change for the nametag, use: name\_tag=True

Toggle typing animation:

```
self.game.dialog_boxes['default'].gradual_typing = False
```

Typing speed:

```
self.game.dialog_boxes['default'].typing_speed = 15
```

-This is the default in milliseconds. A higher number will increase the delay time between characters.

To change the size, location, or background color of the box and choices menu, use any of the optional arguments:

-Note: The first 4 arguments can take either an integer or percent (of screen size) as a string, ex:  
"10.5%"

```
self.game.dialog_boxes['default'].config_surface(  
    x=None,  
    y=None,  
    width=None,  
    height=None,  
    background_color=None,  
    border_color=None,  
    border_width=None  
)
```

To change the name tag, add 'name\_tag=True' and any of the other optional arguments:

```
self.game.dialog_boxes['default'].config_surface(  
    x=None,  
    y=None,  
    background_color=None,  
    border_color=None,  
    border_width=None,  
    name_tag=True  
)
```

Note: width and height of the name tag are set automatically according to the size of the text.

To create and switch to a new dialog box:

```
self.game.create_dialog(  
    'new_name',  
    x=None,  
    y=None,  
    width=None,  
    height=None,  
    background_color=None,  
    border_color=None,  
    border_width=None,  
    name_tag_x=None,  
    name_tag_y=None  
)
```

```
self.game.dialog_boxes['new_name'].change_font(  
    font_name=None,  
    text_size=None,  
    color=None,  
    name_tag=False)
```

```
self.game.switch_dialog('new_name')
```

- 'new\_name' becomes new default. Use `self.game.switch_dialog('default')` to switch back.

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## Narration Box:

Narration Boxes take a list of text lists. Text can be of any length, but more than one text list will create a new Narration Box to display if you don't wish to fill the page.

```
self.game.display_narration(text, choices=[], remove=True, set_disabled=[])
```

To get user input, simply use a choices argument:

```
self.game.display_narration(text, choices=["Yes", "No"])
```

The optional '`remove=True`' will keep the Narration box with text up after the user clicks to continue.  
To remove it, display another narration box or use:

```
self.game.narration_box.remove_narration_box()
```

-To disable certain choices, add an optional `set_disabled` argument with a list of booleans of the same length as choices.

### Color:

-Text color (single quote only):

Start the quote with "**RED**:" (Check configuration file for color name options, or to add pygame colors)

-Text color (all):

```
self.game.narration_box.color = 'Red'
```

Note: Any pygame color can be used, or RGB value: (255,0,0)

-Background color (all):

```
self.game.narration_box.surface.background_color = 'black'
```

---

Advanced:

-Change settings for Narration Box in the configuration file: To change mid script or box dimensions, use the below options:

Toggle typing animation:

```
self.game.narration_box.gradual_typing = False
```

Typing speed:

```
self.game.narration_box.typing_speed = 2
```

-This is the default in milliseconds, a higher number will increase the delay between characters.

To change the font:

```
self.game.narration_box.change_font(font_name=None, text_size=None, color=None)
```

To change the size, placement, and background colors, fill in any of the optional arguments:

```
self.game.narration_box.config_surface(  
    x=None,  
    y=None,  
    width=None,  
    height=None,  
    background_color=None,  
    border_color=None,  
    border_width=None  
)
```

-Can use int or percent (of screen size) ex: "10.5%"

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## Menus

Create a menu:

```
self.game.create_menu(  

```

```
        name,  
        items,  
        x,  
        y,  
        color="Black",  
        size=50,  
        spacing=10,  
        align='left',  
        bold=0,  
        font='georgia'  
    )
```

- items example with three options: ["First", True], ["Second", True], ["Third", True]]
- Replacing True with False will show the item but disabled so it cannot be selected.

To add a background box behind menu text:

```
self.game.menus['menu_name'].add_bg(  
    padding=20,  
    bg_color='white',  
    border_color='Grey',  
    border_width=0  
)
```

Display menu:

```
self.game.menus['menu_name'].show_menu(remove=True, default=0)
```

- remove=False will keep menu up (unusable as a background) after a selection has been made. Useful with transitions.
- default is the index for which item is highlighted. -1 for none, 0 is first.

Remove the menu (after displayed with remove=False):

```
self.game.menus['menu_name'].remove_menu()
```

To enable or disable a menu item using the index number:

```
self.game.menus['menu_name'].disable_enable_menu_item(0)
```

Move in from sides (animation):

```
self.game.menus['menu_name'].move_in_left(remove=True, default=0)  
self.game.menus['menu_name'].move_in_right(remove=True, default=0)
```

## Portraits/Images

Add an image to screen:

```
self.game.portraits['example'].blit_image(self, x=0, y=0, dialog='left')
```

-x can be: 'right' 'center' 'left' or int

-y can be: 'bottom' or 'top' or int

-dialog can be: 'left' 'right' or 'center' (automatic x y placement above dialog box)

Animations:

```
self.game.portraits['example'].move_in_left(y='default')
self.game.portraits['example'].move_in_right(y='default')
self.game.portraits['example'].move_out_left()
self.game.portraits['example'].move_out_right()
```

Change size:

```
self.game.portraits['example'].upscale(-20)
```

Remove image:

```
self.game.portraits['example'].remove()
```

## Maps

Display a map:

```
self.game.display_map('map_name') -> 'name of location'
```

-input returned is stored in self.game.input\_return

No input, reset the previously chosen location, or set a starting location:

```
self.game.display_map('map_name', display_only=True, reset_loc=True, set_loc='loc_name')
```



Show/hide a location during script:

```
self.game.show_map_loc('map_name', 'loc_name')
self.game.hide_map_loc('map_name', 'loc_name')
```

Remove map:

```
self.game.remove_map()
```

To disable input only:

```
self.game.remove_map(keep_display=True)
```

Configure a map's settings:

```
self.game.maps['map_name'].config_map(
    x=15,
    y=15,
    width="80%",
    height="80%",
    border_color='Grey',
    border_width=4,
    txt_color='white',
    txt_bg='Black',
    font_size=50,
    font='georgia',
    bold=1,
    dot_radius=30,
    pad_multi=None
)
```

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## Scenes

To change scene:

```
self.game.change_scene('chapter_name', 'scene_name')
```

- 'chapter\_name' is the directory name inside project folder. 'scene\_name' is the name for the class specified in scene\_list.py.

## ----- Save game

To save:

```
self.game.save(index=None, name=None)
```

-This saves the chapter, scene, and flag variables. No parameters will use the first unused number for the name, e.g. 'Save 3'

Get a list of saved game names:

```
self.game.get_saved_file_names(menu=True) -> e.g. [['Save 0', True], ['Save 1', True]]
```

-The list-boolean pairs are used for creating Menus. Use **menu=False** to return a simple list of names without booleans: ['Save 0', 'Save 1']

Load a game:

```
self.game.load_game(saved_game_name)
```

-For now game only loads once current scene ends, same as switching scenes.

Remove saved game:

```
self.game.delete_saved_game(saved_game_name)
```

## ----- Various

Music:

```
self.game.play_song(  
    song_name,  
    volume=None,  
    fade=False  
    stop=False,  
    pause=False,  
    unpause=False,  
    repetition=-1  
)
```

-volume is a number between 0 and 1.

-fade is time in milliseconds: fade until stop.

Check if a song is currently playing using pygame:

```
pygame.mixer.music.get_busy() -> T/F
```

Sound Effect:

```
self.game.sounds['sound_name'].play()
```

Shake Screen:

```
self.game.shake_screen(pause=False)
```

A pause without input:

```
self.game.game_loop_input(num) # num is number of loops. 30 = 1 second  
pygame.time.delay(1000) # 1 second
```

To create a variable to use, can use the flag\_vars dictionary (can also be added in configuration file):

```
self.game.flag_vars["new_var"] = False
```

## ----- Coordinator

The map locations in configuration uses percent of screen rather than coordinates, so that it will scale to screen size changes. To quickly get the locations, you can use the Coordinator, simply put the code at the start of your script and click on the map where you want the location, and the coordinates will print to the console. (Coordinator.py can also be run directly)

```
self.game.coordinator.coordinate('map_name')
```

## ----- Transitions

```
self.game.fade_out()  
self.game.fade_in()  
self.game.slide_left('background_image.jpg')  
self.game.slide_right('background_image.jpg')
```

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# Characters

Note: To add RPG elements to game, but not implemented yet.

Adding a character to dict in configuration.py:

```
{'Name': Character(preset='knight')}
```

-preset options: 'knight', 'archer', 'thief', 'white mage', 'black mage'

Without a preset:

```
{'Name': character(name=None, hp=0, mp=0, attack=0, defense=0, speed=0, target=0)}
```