



**Attendance:**  
**[tiny.cc/event-attendance](https://tiny.cc/event-attendance)**





# App Dev League

Day 5: More Pygame!!



# Agenda

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1. Pygame Reference
2. Few advanced Python/Pygame concepts
3. Review Kahoot
4. What is Simulate?
5. Simulate Project





1

# Pygame Reference



# Pygame Reference

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<https://www.pygame.org/docs/>





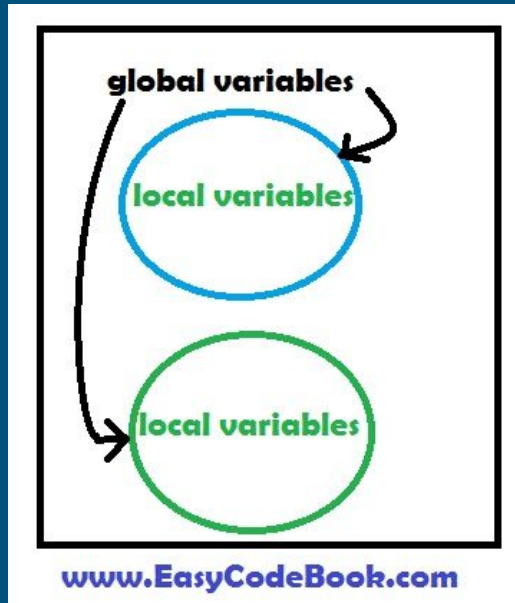
2

# Adv Pygame concepts



# Global Variables

- Usually variables created inside functions are local
- The **global** keyword allows variables to be created inside functions and accessed outside of them
- Values created outside of functions are automatically global



# Pygame Fonts

- Access Pygame fonts by using the **Pygame.Font.font()** and the render keywords
- Create the font object, render it, create the font rectangle, and reposition it

```
pygame 1.9.6
Hello from the pygame community. https://www.pygame.org/contribute.ht
ml
['arial', 'arialblack', 'bahnschrift', 'calibri', 'cambriacambriamath',
', 'cambria', 'candara', 'comicsansms', 'consolas', 'constantia', 'co
rbel', 'couriernew', 'ebrima', 'franklingothicmedium', 'gabriola', 'g
adugi', 'georgia', 'impact', 'inkfree', 'javanesetext', 'leelawadeeui
', 'leelawadeeuisemilight', 'lucidaconsole', 'lucidasans', 'malgunco
hic', 'malgungothicsemilight', 'microsofthimalaya', 'microsoftjhenghe
imicrosoftjhengheiu', 'microsoftjhengheimicrosoftjhengheiuibold', 'm
icrosoftjhengheimicrosoftjhengheiuilight', 'microsoftnewtailue', 'mic
rosoftphagspa', 'microsoftsansserif', 'microsofttaile', 'microsoftyah
eimicrosoftyaheiui', 'microsoftyaheimicrosoftyaheiuiibold', 'microsof
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extbmingliuhkscsextb', 'mongolianbaiti', 'msgothicmsuigothicmspgothic
', 'mnboli', 'myanmartext', 'nirmalau', 'nirmalauisemilight', 'palat
inolinotype', 'segoemdl2assets', 'segoeprint', 'segoescript', 'segoeu
i', 'segoeuiblack', 'segoeuiemoji', 'segoeuihistoric', 'segoeuisemibo
ld', 'segoeuisemilight', 'segoeuisymbol', 'simsun', 'simsunext
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tkadisplayboldsitkabannerbold', 'sitkasmallsitkatextbolditalicsitkasu
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thicuisemilight', 'holomdl2assets', 'swgamekeys', 'ti83emukeys', 'ti8
3emufrenchkeys', 'ti84emukeys']
```

**pygame.font.get\_fonts()**





# Pygame Sounds

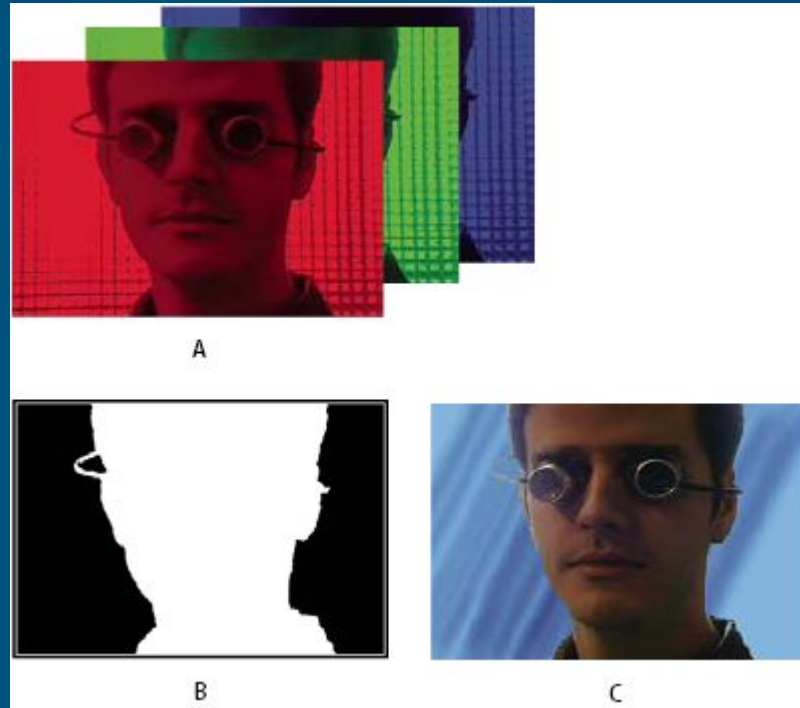
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- Use `pygame.mixer.Sound()` function to load the sounds
- `play()` command to play the sounds



# convert\_alpha()

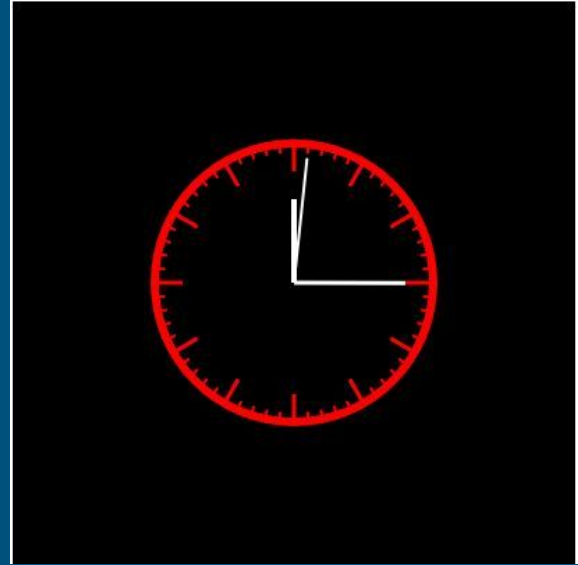
- The alpha of an image is a fourth channel that affects transparency
  - ◆ Not all image formats have an alpha values
- Alpha channel is a “transparency map”
- Converts the pixel makeup of a pygame surface for slightly faster blitting



# Pygame.time.Clock

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- Similar to the clock module in python, allows program to keep track of time
- Useful method: **clock.tick()**, which advances the clock forward





3

# Kahoot



# Kahoot

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# Simulate

Now let's take a look at some of the code!



# What is Simulate?

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- Modeled off of the game Simon Says
- Objective: Click on the 4 buttons to mimic the pattern shown
- Patterns progressively get harder and longer



# THANKS!

ANY QUESTIONS?

You can find more info @

- ◇ <https://www.appdevleague.org>
- ◇ <https://linktr.ee/AppDevLeague>

