

# Sliding Puzzle

Making Game with Python

3/31/2019

Click tile or press arrow keys to slide.



**Reset**

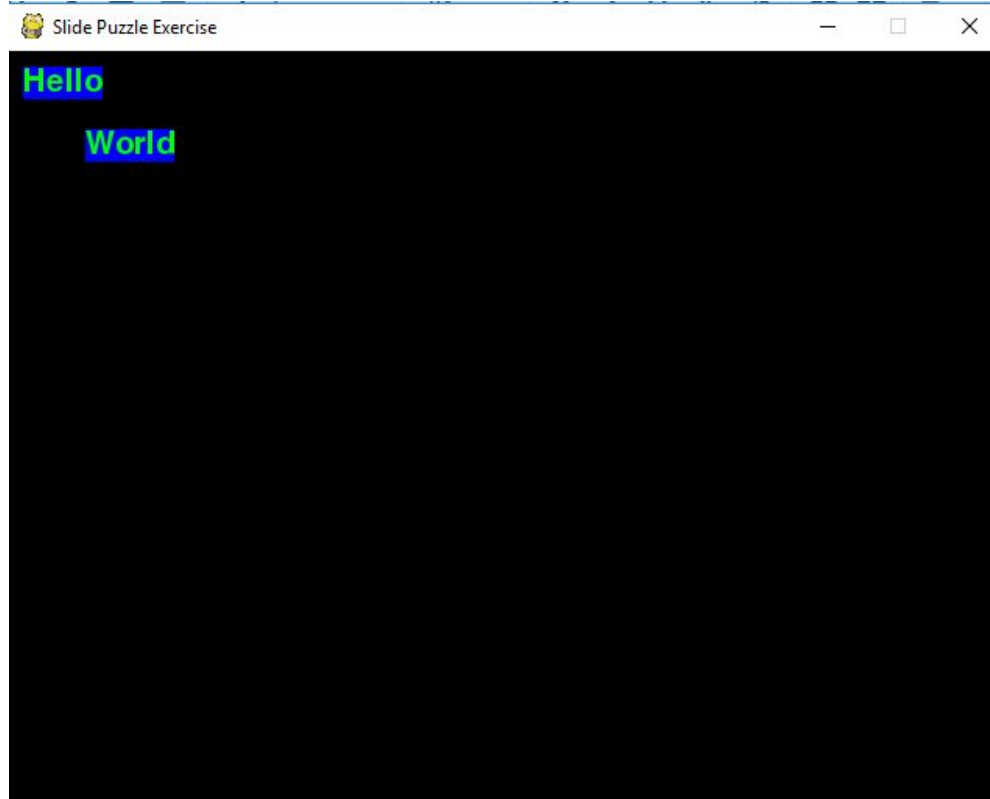
**New Game**

**Solve**

# Features of the Game

- Quit: 'X' sign, ESC Key
- Words: Reset, New Game, Solve, Message
- Board:
  - Mouse
  - Arrow Keys: left, right, up, down
  - Letter Keys: A W S D

# Small Project: Word Game



# Main function (1)

```
def main(FPS=10):  
    global BASICFONT  
  
    pygame.init()  
    FPSCLOCK = pygame.time.Clock()  
    DISPLAYSURF = pygame.display.set_mode((640, 480))  
    pygame.display.set_caption('Slide Puzzle Exercise')  
    BASICFONT = pygame.font.Font('freesansbold.ttf', 20)  
  
    textColor = (0, 255, 0)  
    textBGColor = (0, 0, 255)  
    helloSurf, helloRect = makeText('Hello', textColor, textBGColor, 10, 10)  
    worldSurf, worldRect = makeText('World', textColor, textBGColor, 50, 50)
```

## Main function (2)

```
while True:
    DISPLAYSURF.fill((0, 0, 0))
    DISPLAYSURF.blit(helloSurf, helloRect)
    DISPLAYSURF.blit(worldSurf, worldRect)
    for event in pygame.event.get(): # event handling loop
        if event.type == QUIT:
            pygame.quit()
            sys.exit()
        elif event.type == MOUSEBUTTONUP:
            # check if the user clicked on an option button
            if helloRect.collidepoint(event.pos):
                textSurf, textRect = makeText('Hello is clicked', textColor, textBGColor, 100, 10)
                DISPLAYSURF.blit(textSurf, textRect)
            elif worldRect.collidepoint(event.pos):
                textSurf, textRect = makeText('World is clicked', textColor, textBGColor, 150, 50)
                DISPLAYSURF.blit(textSurf, textRect)
    pygame.display.update()
    FPSCLOCK.tick(FPS)
```

## makeText function

```
def makeText(text, color, bgcolor, top, left):  
    # create the Surface and Rect objects for some text.  
    textSurf = BASICFONT.render(text, True, color, bgcolor)  
    textRect = textSurf.get_rect()  
    textRect.topleft = (top, left)  
    return (textSurf, textRect)
```

# Entry Point

```
if __name__ == '__main__':  
    if len(sys.argv) > 1:  
        main(int(sys.argv[1]))  
    else:  
        main()
```

Windows: py slidepuzzle\_exercise.py 10

Mac: python3 slidepuzzle\_exercise.py 10



# Python 3.7 IDE

Import os

os.chdir(your\_working\_directory)

os.popen('py slidepuzzle\_exercise.py 10').read()