KAIST

PYTHON TUTORING #6

School of Computing, KAIST & 대덕고등학교

INTRO

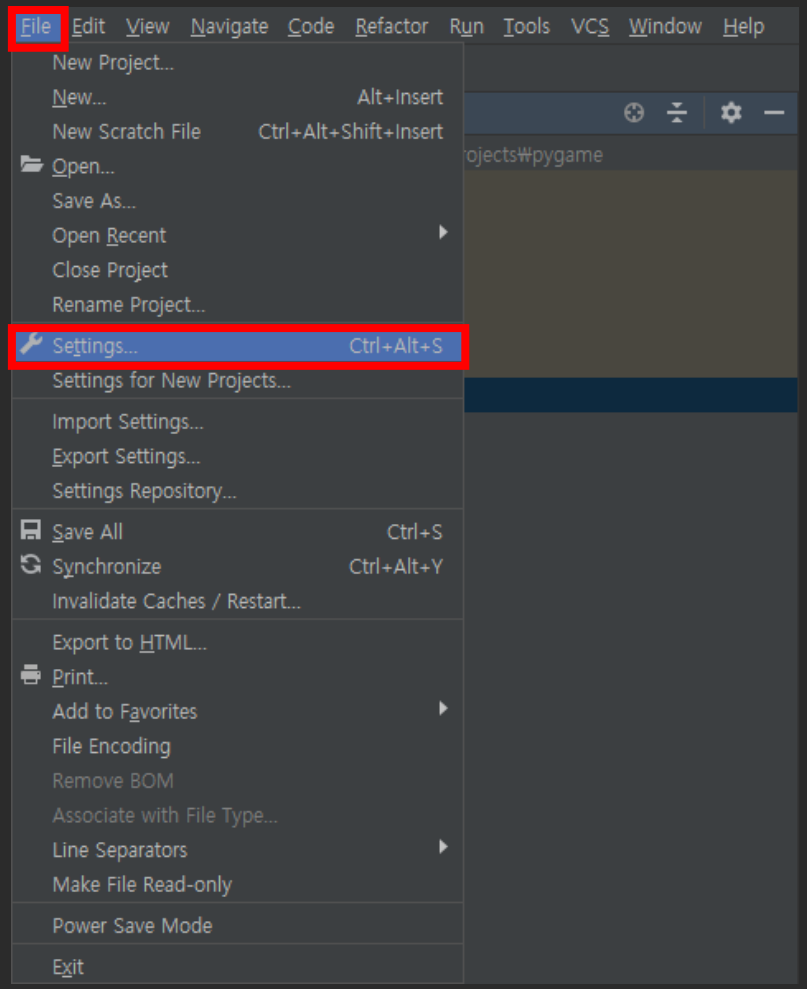
① Pygame 라이브러리 설치

② 강의에 필요한 파일 다운로드

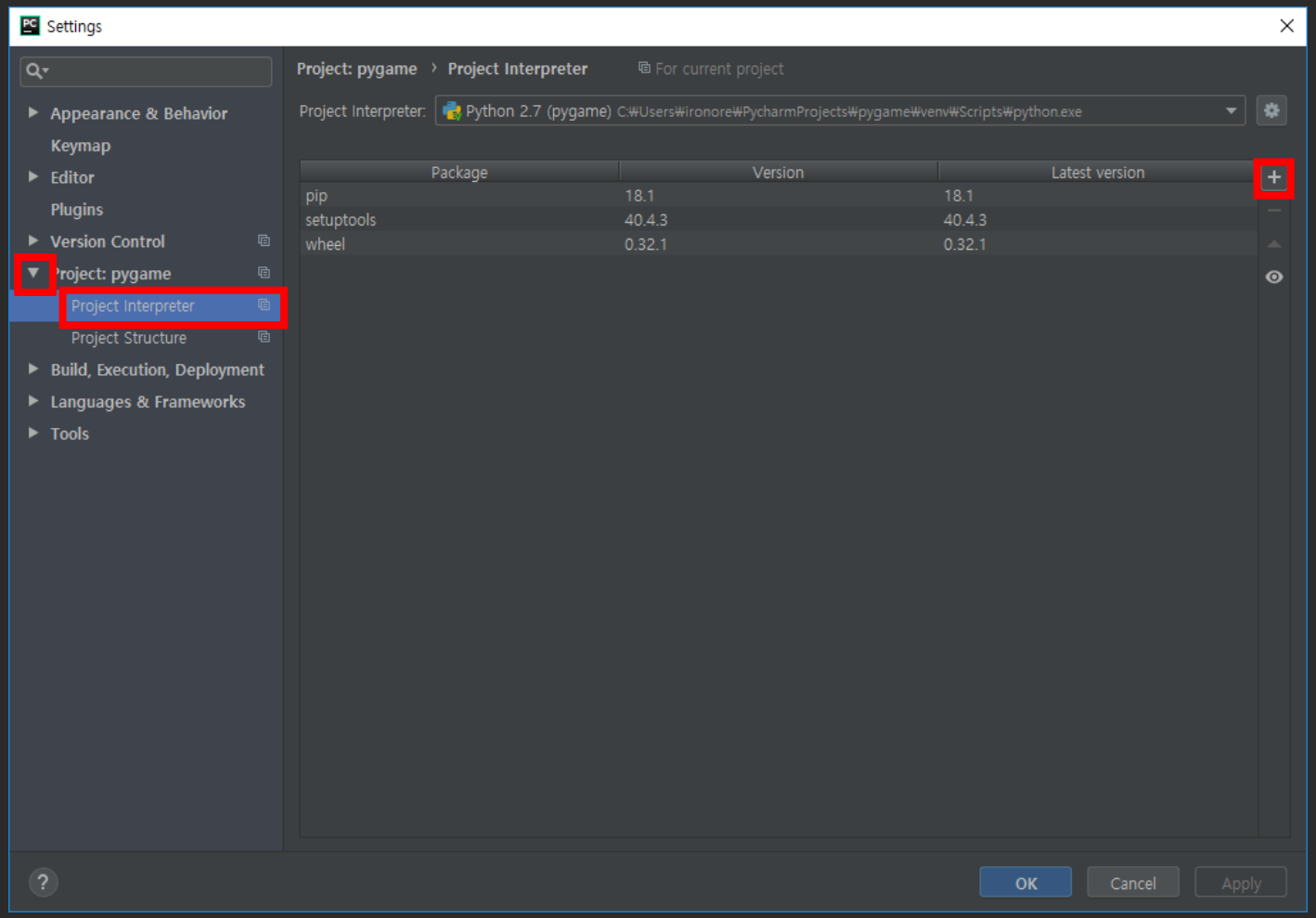
③ Buttons (Object Oriented Programming)

④ Player (Rotating images)

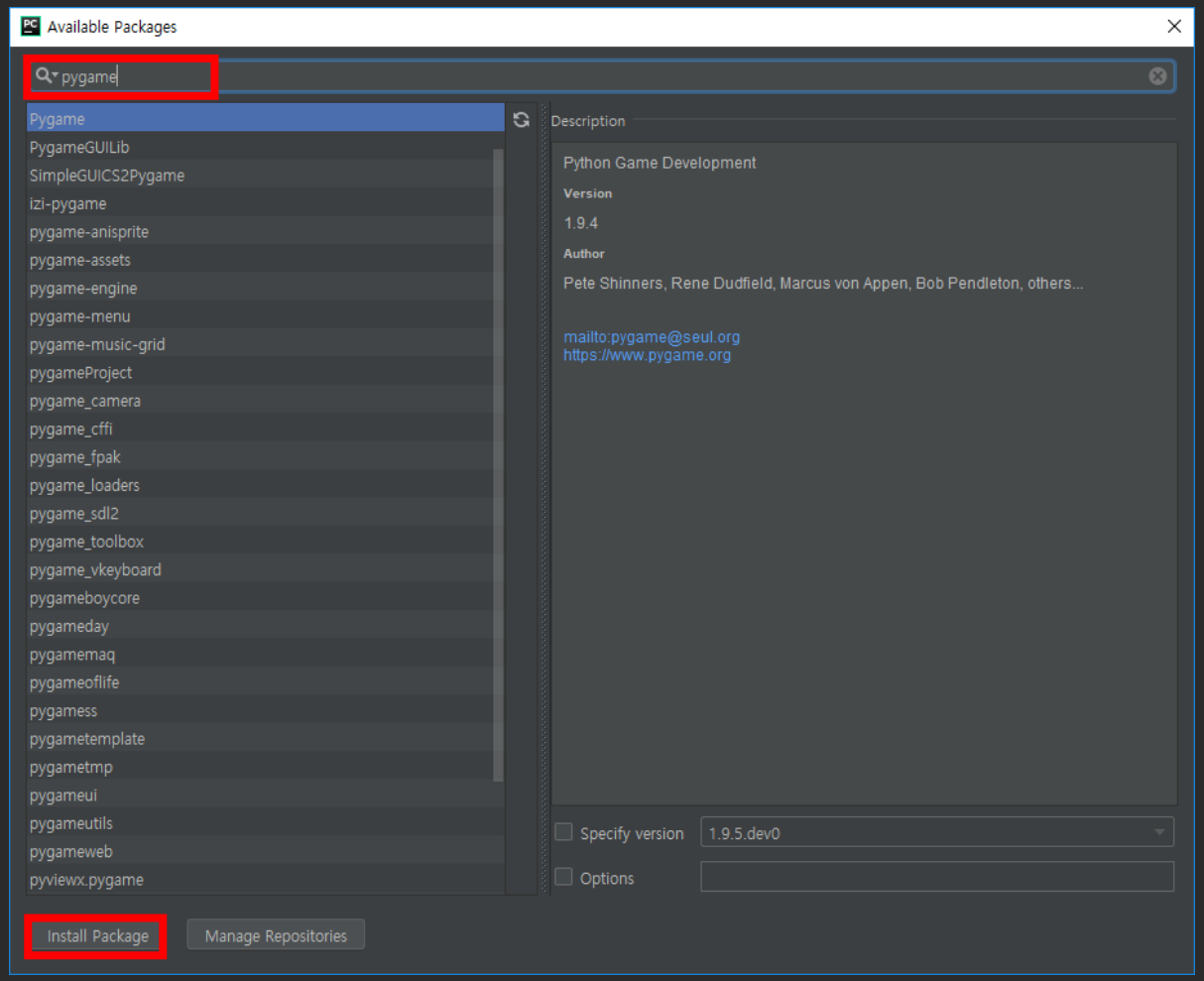
Pygame 라이브러리 설치



Pygame 라이브러리 설치

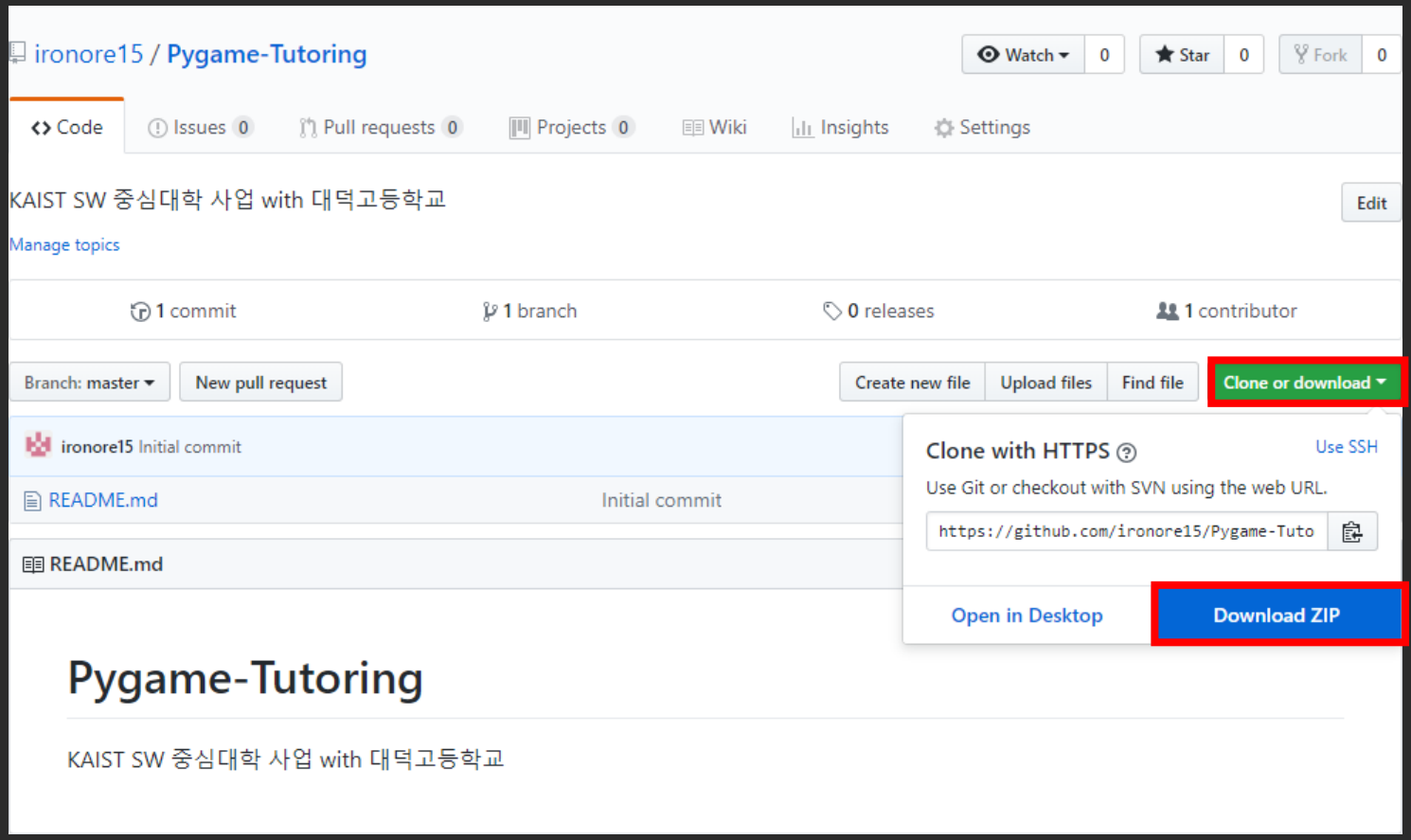


Pygame 라이브러리 설치

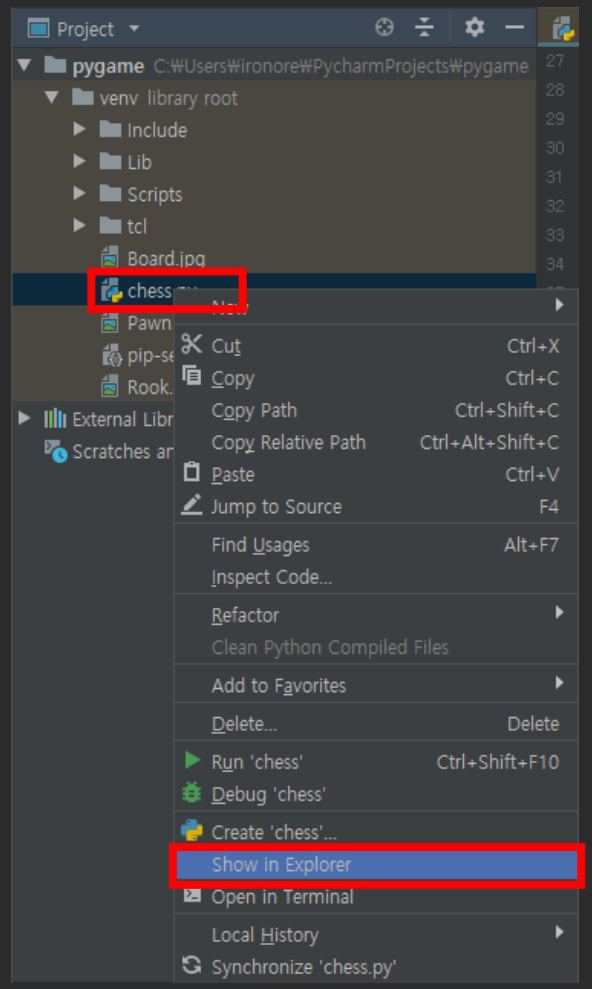


파일 다운로드

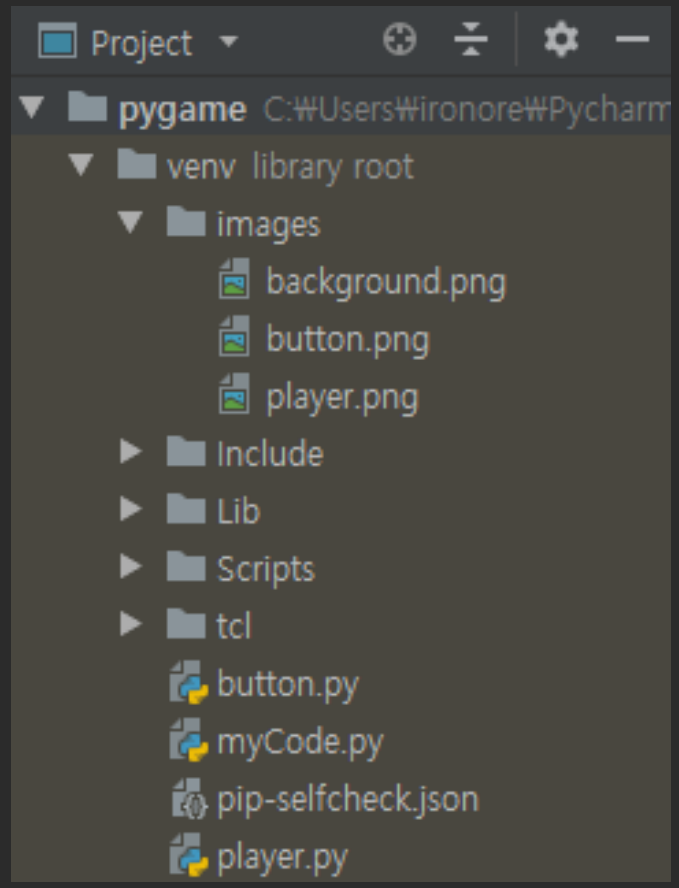
https://github.com/ironore15/Pygame-Tutoring



파일 다운로드


Project
pygame C:₩Users₩ironore₩PycharmProjects₩pygame
venv library root
Include
Lib
Scripts
tcl
Board.jpg
Pawn
External Libr
Scratches ar
Cut Ctrl+X
Copy Ctrl+C
Copy Path Ctrl+Shift+C
Copy Relative Path Ctrl+Alt+Shift+C
Paste Ctrl+V
Jump to Source F4
Find Usages Alt+F7
Inspect Code...
Refactor
Clean Python Compiled Files
Add to Favorites
Delete... Delete
Run 'chess' Ctrl+Shift+F10
Debug 'chess'
Create 'chess'...
Show in Explorer
Open in Terminal
Local History
Synchronize 'chess.py'

파일 다운로드


Project
pygame C:₩Users₩ironore₩Pycharm
venv library root
images
background.png
button.png
player.png
Include
Lib
Scripts
tcl
button.py
myCode.py
pip-selfcheck.json
player.py

Button Class

```
1
2
3  class Button(object):
4      def __init__(self, image, pos, text=None, font_name=None):
5      def resize(self, scale):
6      def setText(self, color="black", size=0):
7      def eventHandler(self, event):
8      def display(self, screen):
9
10
11
12
```

Create new button

```
1  import pygame
2  from button import Button
3
4
5  pygame.init()
6  screen = pygame.display.set_mode((800, 800))
7  img = pygame.image.load("images\\button.png")
8
9  b1 = Button(img, (400, 400))
10 b2 = Button(img, (400, 400), "Press it!")
11 b3 = Button(img, (400, 400), "Press it!", "Calibri")
12
```

Display button

```
while True:
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            pygame.quit()
            exit()
        elif b3.eventHandler(event):
            # Do something you want!
            print("button pressed!")

    b3.display(screen)
    pygame.display.flip()

```

Change settings

```
1  b3 = Button(img, (400, 400), "Press it!", "Calibri")
2
3  b3.resize(0.8)
4
5  b3.resize(1.5)
6
7  b3.setText("blue")
8
9  b3.setText("aquamarine", 30)
10
11
12
```

Player Class

```
1
2
3  class Player(object):
4      def __init__(self, image, pos, speed, aspeed):
5      def eventHandler(self, event):
6      def move(self):
7      def display(self, screen):
8
9
10
11
12
```

Create player

```
1  import pygame
2  from player import Player
3
4  pygame.init()
5  screen = pygame.display.set_mode((800, 800))
6
7  bg = pygame.image.load("images\\background.png")
8  bg = pygame.transform.scale(bg, (800, 800)).convert()
9  player_image = pygame.image.load("images\\player.png")
10
11 player = Player(player_image, (400, 400), 5, 10)
12 clock = pygame.time.Clock()
```

Create player

```
1  import pygame
2  from player import Player
3
4  pygame.init()
5  screen = pygame.display.set_mode((800, 800))
6
7  bg = pygame.image.load("images\\background.png")
8  bg = pygame.transform.scale(bg, (800, 800)).convert()
9  player_image = pygame.image.load("images\\player.png")
10
11 player = Player(player_image, (400, 400), 5, 10)
12 clock = pygame.time.Clock()
```

Handle event and move

```
1  while True:
2      for event in pygame.event.get():
3          if event.type == pygame.QUIT:
4              pygame.quit()
5              sys.exit()
6          player.eventHandler(event)
7
8      player.move()
9      screen.blit(bg, (0, 0))
10     player.display(screen)
11     pygame.display.flip()
12     clock.tick(60)
```

pygame.transform.rotate

```
1
2  def display(self, screen):
3      if self.angle != self.prev_angle:
4          self.prev_angle = self.angle
5          self.rotate_image = pygame.transform.rotate(self.image,
6                                                      self.angle)
7
8      rect = self.rotate_image.get_rect()
9      rect.center = self.pos
10     screen.blit(self.rotate_image, rect)
11
12
```