TTT Version 2 Reflection Activity

Q1 What are the new instance attributes that were added to the Game class of TTT Version 2 to make it a 2 player game? What are the initial values of these attributes when the Game object is created?

self.player _1 = 'X' self.player_2 = '0' self.turn = self.player_1

Q2 Answer the following questions about the given draw method in the Tile class of TTT Version 2:

Given Code

```
def draw(self):
        if self.flashing:
            pygame.draw.rect(Tile.surface, Tile.fg_color, self.rect)
            self.flashing = False
        else:
            pygame.draw.rect(Tile.surface, Tile.fg_color, self.rect, Tile.border_width)
        self.draw_content()
```

2a	**Which method in the Game class calls the draw method in the Tile class?**
	draw method in the Game
2a	**What object is self.flashing bound to when the draw method of the Tile class is called for the first time by the draw method of the Game class?**
	self.flashing = False
2b	**What does the draw method of the Tile class do if self.flashing is bound to False?**
	draw a black rectangle with a white border
2c.	**What does the draw method of the Tile class do if self.flashing is bound to True?**
	draw a white rectangle
2d.	**Why is the identifier self.flashing bound to False when the if condition has value True?**
	so that the tile flashes white instead of stays drawn white

Q3 Answer the following questions about the given select method in the Tile class of TTT Version 2:

Given Code

```
def select(self, position, new_content):
        selected = False
        if self.rect.collidepoint(position):
            if self.content == '':
                self.content = new_content
                selected = True
            else:
                self.flashing = True
        return selected
```

3a.	**Which method in the Game class calls the select method in the Tile class?**
	handle_mouse_up
3b.	**What type of object is the identifier position bound to? What does this object represent?**
	. tuple, location of the mouse click
3c.	**What type of object is the identifier new_content bound to? What does this object represent?**
	. string, the player symbol (X or O)
3d.	**Under what condition is self.content bound to the object that new_content is bound to?**
	if the event position is within the tile rectangle (tile is selected) and the tile is unoccupied
3e.	**Under what condition is self.flashing bound to True?**
	if the tile already has content and the tile is clicked
3f.	**What does the select method return?**
	bool
3g.	**Under what condition(s) the select method returns True?**
	if the click position is within the tile rectangle and the tile is unoccupied
3h.	**Under what condition(s) the select method returns False?**
	if the click position is not within the tile and the tile is occupied

Q4 Consider the following code segments of the Game class and the Tile class in TTT Version 2:

Class Game	Class Tile

def handle_mouse_up(self, event):
  for row in self.board:
  for tile in row:
  if tile.select(event.pos, self.turn):
  self.change_turn(tile)
 	
def change_turn(self, tile):
  if self.turn == self.player_1:
  self.turn = self.player_2
  else:
  self.turn = self.player_1
	def select(self, position, new_content):
	  selected = False
	  if self.rect.collidepoint(position):
	  if self.content == '':
	  selected = True
	  self.content = new_content
	  else:
	  self.flashing = True
	  return selected

4a	**What actions are taken by the handle_mouse_up method of the Game class if the select method in the Tile class returns True?**
	change_turn method is called
4b	**What does the change_turn method in the Game class do?**
	alternates between the X player and O player
4c	**What will happen if we call the change_turn method in the handle_mouse_up method without evaluating the return value of the select method in the Tile class?**
	every click that the player takes will count as the player's turn