

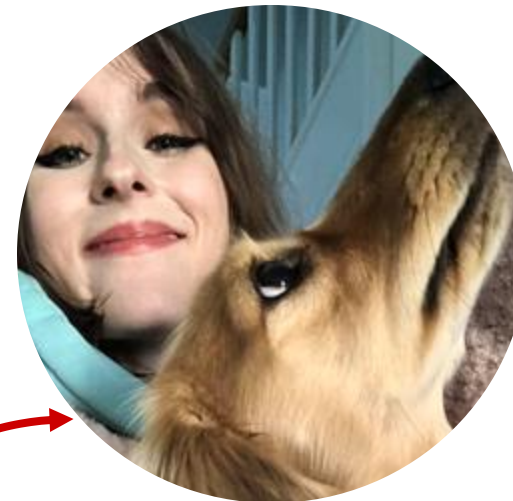
# Pokemon Top Trumps



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# Project Brief

To design a game using the Pokemon API where players compare stats similar to Top Trumps.

The game will give the player a random pokemon with different stats.

The player then selects one of the pokemon stats and a random card is selected for the opponent (the computer).

The stats of the two cards are compared and the player with the highest stat wins.



# Collaboration

Regular catch-ups

Task assignment

Availability  
& Planning

Let's do this!

Version control

Knowledge  
Sharing

Standardisation:  
f-strings, Functions  
Naming conventions

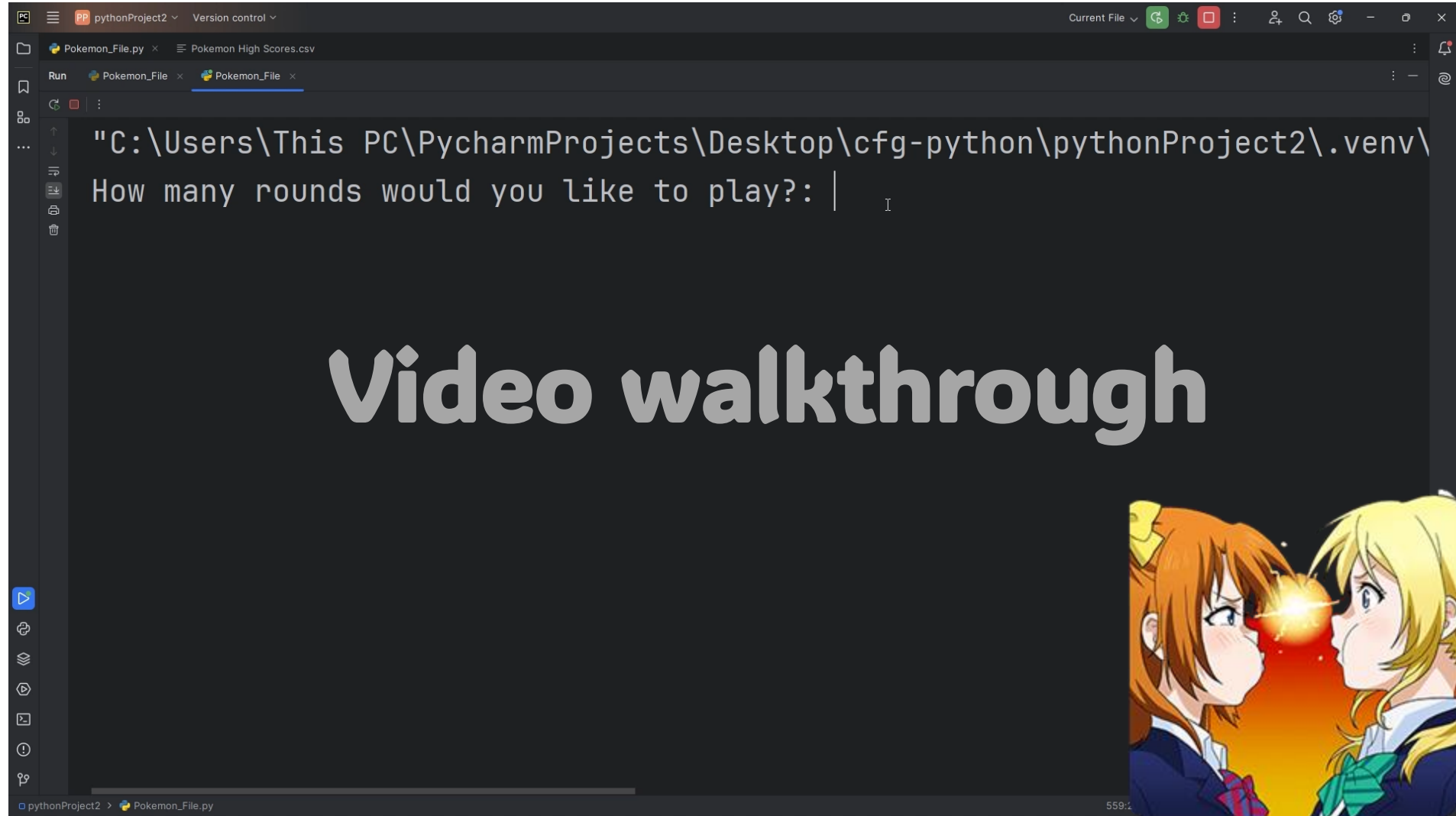
User friendly design  
Pokemon theme



# MoSCoW method

Must	Should	Could	Won't
CFG mandatory requirements	Who goes first - if opponent, computer randomly selects stat	Emojis	Use a different API
Use additional stats	No. of rounds with Game outcome	Numbers input as words	Retrieve multiple pokemons for the player to decide
Exception handling	Play again	Bold/underline to highlight rounds	Printing high scores and reset option
		Write high scores to file	
		Pikachu Game Over	

# Are you ready to battle?



# Exception handling

**if/else** statements to capture various conditions

```
if player_count > trainer_red_count:
    print(f'{smile_emoji} You won the game!: {smile_emoji}')
elif player_count < trainer_red_count:
    print(f'Trainer Red won. Better luck next time!')
else:
    print('It\'s a draw.')
```

**while** loop to repeat a question again if user enters invalid input

```
while who_picks.upper() != 'Y' and who_picks.upper() != 'N':
    who_picks = input('Would you like to go first? Yes (Y) or No (N): ')
```

**try/except** for errors that are not a value

```
while True:
    try:
        no_of_rounds = w2n.word_to_num(input('How many rounds'))
        break
    except ValueError:
        print('Oops! Try entering a valid number...')
```

# Key Coding Challenges

```
# Loops through random pokemon dictionary and prints all stats except name
for pokemon in random_pokemon():
    if pokemon != 'name':
        print(f' {pokemon.title()}: {player_pokemon[pokemon]} ')

stat_choice = input(f'\nWhich stat do you want to use?: ').lower()

elif who_picks.upper() == 'N':
    stat_choice = random.choice(list(trainer_red_pokemon.keys())[1:]) # convert
```

Printing all stats from dictionary except 'Name' (not a value)  
& getting all the keys except 'Name'

Writing high scores to a text file



```
if os.path.exists(filename):
    update_score()
else:
    write_scoreboard()
    update_score()
```

# Problem Solving

The following websites were used to aid with some of the challenges encountered during the **code development**, **testing** and **debugging** phases:

- \* Geeksforgeeks
- \* Github
- \* Python docs
- \* PyPi
- \* Real Python
- \* Stackoverflow
- \* w3schools





# Game Over - Functions

```
def letter_M(self, x, y, size):  
    self.noTrace_goto(x, y)  
    t = self.t  
  
    t.setheading(90) # sets turtle to North (default 0 = East)  
    t.forward(40 / size)  
    t.right(135)  
    t.forward(22 / size)  
    t.left(90)  
    t.forward(22 / size)  
    t.right(135)  
    t.forward(40 / size)
```

```
t.color('black')  
turtle.tracer(1) # turns automatic screen update off  
self.letter_G(-300, -260)  
self.letter_A(-290, -300)  
self.letter_M(-255, -300, size: 1)  
self.letter_E(-215, -300, size: 1)
```



Credit: Pikachu drawing - Saksham Aggarwal

<https://github.com/saksham0626/Python-Turtle-Projects-Cartoon-Character/blob/main/pikachu.py>

# THANK YOU!

The code is available to view via GitHub:  
[https://github.com/Melanie-Clark/pokemon\\_top\\_trumps](https://github.com/Melanie-Clark/pokemon_top_trumps)

