

## Pokemon battle simulator

### Topics:

- loops
- dictionaries
- lists
- conditions

### Task description:

- We are simulating pokemon battles.
- Each player has 5 pokemons.
- Each pokemon has the following attributes:
  - name
  - level
  - strength (1-10)
  - speed (1-5)
  - type
  - life - 120
- Each player starts the fight by randomly selecting 1 pokemon.
- in order to select which pokemon attacks first, generate a random number 1-20 for each pokemon, and add to it the speed score.  
The pokemon with the higher score will attack first.
- attacking is calculated like so:  
$$\text{damage} = \text{type modifier} * (\text{random number (1-20)} + \text{strength})$$
- types are = fire, water, earth, wind.

type	fire	water	earth	wind
fire	-	fire	earth	fire
water	water	-	water	wind
earth	earth	water	-	earth
wind	fire	wind	earth	-

- use this table to decide which type is strong in what combination.
- if the types are not the same and the attacker pokemon is stronger than the defending pokemon (based on type), set the type modifier to 2 in the damage formula.
- subtract the damage from the opponent pokemon.
- Pokemon continue to fight until their life is 0 or lower. then the pokemon is dead.
- when a pokemon dies, a new pokemon is selected from your inventory.
- when one player has no more pokemon - he loses and his opponent wins.
- logs:
  - log (print) every attack in this format: `{pokemon 1} attacks {pokemon 2}. deals {x} damage. {Pokemon 2} now has {X} amount of life after the attack.`
  - log a pokemon joining the fight in this format `{pokemon name} has joined the fight`
  - log the death of a pokemon.
  - print the winner and the loser.