

## Assignment 2: Pokemon class

You are probably familiar with Pokémon characters, at least with some of Generation 1 Pokémon. If not, you can find a list of Pokémon at <http://pokemondb.net/pokedex/national>. You will see that each Pokémon has a **number** and one or two **elemental types** (grass, bug, flying, etc.).

Using **Visual Studio 2019**, create an **empty project** and write the **definition** (Pokemon.h) and **implementation** (Pokemon.cpp) of the class **Pokemon**. Your class must have the following attributes:

- **Member variables**
  - A **string** that stores the name of the Pokémon
  - An **int** to store the Pokémon's number
  - A **string** to store the Pokémon's first type
  - A **string** to store the Pokémon's second type—if the Pokémon has no second type, the string will remain empty.
- **Default constructor**
- **Two overloaded constructors**
  - **Parameters** (in this order): the name, the number, the first type
  - **Parameters** (in this order): the name, the number, the first type, the second type
- Functions **getType1**, and **getType2**
  - Each function returns the value of the appropriate type.
- Function **commonType**
  - **Parameter:** An object of the class **Pokemon**
  - The function compares the types of the **calling object** and the **parameter object**. If at least one type is the same, the function returns true; if the objects do not have any type in common, the function returns false.
  - Note that the type order does **not** matter:

|                                |  |  |
|--------------------------------|--|--|
| Bulbasaur: Grass <b>Poison</b> |  | They have a common type: <b>Poison</b> |
| Nidoking: <b>Poison</b> Ground |  |  |
- Function **print**
  - Prints information in this format → **Bulbasaur: Grass Poison**
  - If the Pokémon has no second type, then the function prints → Charmander: Fire
- **Destructor**

Use the **Main.cpp** file given to test your functions.

Do **NOT** write any implementation in the class **interface**. All **implementation** should be written in the **.cpp** file (**separate compilation**).

#### Make sure to:

- Add a **name header** with your name, date, etc.
- Pass by **reference** when needed and add the **const** modifier to the parameters **ONLY when necessary**.
- Do **NOT** use a **return** statement without returning anything! → **return;**
- Do **NOT** use the **break** and **continue** statements (there are no switch statements to use **break**).
- Do **NOT** use global variables **ever**.
- Do **NOT** modify any of the given code.
- Use the **const** modifier when necessary for **member functions**.

#### Keep in mind the following:

- Divide your code in meaningful blocks for readability
- Name your variables using descriptive names
- Use all appropriate conventions for naming
- Do not leave unnecessary spaces or lines in your code