# QA Back-End Technologies Basics

# Regular Exam I – 25.02.2024

## EcoLife Data Reconstruction

Welcome to the **EcoLife Project**! We focus on detailed analysis of wildlife ecosystems. Due to technical issues, our wildlife database has become disorganized. Properly structured and comprehensive data are crucial for understanding wildlife and supporting conservation efforts. The scrambled data includes essential information about different species.  
You will be provided information on **7 wildlife species**. Each entry includes the species' **ID**, **name**, **habitat**, **lifespan**, **diet**, and **migration patterns**. You need to organize it. The details are presented in a **sentence format**:

1. "Species ID **9501** is the **Grey Wolf**, inhabiting the **Forest**. It has a lifespan of **8 years**. Its diet includes **Rodents**, **Ungulates**, and **Berries**. Migrations: **Long-range**."
2. "The Humpback Whale, species ID 9502, is found in the Ocean, with a lifespan of 45 years. Its diet consists of Krill, Fish, and Plankton. Migrations: Ocean crossing."
3. "Identified as species ID 9503, the African Elephant resides in the Savannah and has a lifespan of 65 years. Its diet is composed of Grass, Roots, and Fruits. Migrations: Water tracking."
4. "The Bald Eagle, with species ID 9504, lives in the Forest, with a lifespan of 20 years. It feeds on Fish, Carrion, and Mammals. Migrations: Lake fishing."
5. "Species ID 9505, the Giant Panda, lives in the Forest and has a lifespan of 20 years. Its diet mainly includes Bamboo, Shoots, and Leaves. Migrations: Elevation shifts."
6. "The Monarch Butterfly, species ID 9506, primarily found in the Meadow, has a lifespan of 1 year. It feeds on Nectar, Milkweed, and Pollen. Migrations: Mass migration."
7. "Species ID 9507, the Red Kangaroo, native to Grassland areas, has a lifespan of 12 years. Its diet includes Grass, Shrubs, and Leaves. Migrations: Drought escape."

**Convert** the scrambled data into **structured JSON format manually:**

* **Use a text or a code editor** to write the JSON document. We recommend **Notepad++ or VS Code**.
* **Extract relevant details** from each species' description.
* **Organize the data** into a structured JSON format.
* **Each wildlife species** **record** in the JSON document should include **the following attributes**:
* **speciesId: Integer** (A unique identifier for each species)
* **speciesName: String** (The name of the species)
* **habitat: String** (The primary ecosystem where the species is typically found)
* **lifespan: Integer** (The average lifespan of the species, in years)
* **habits: Object** This object will have two fields:
  + **diet: Array of Strings** (Three words, primary diet components of the species)
  + **migration: String** (Two-word description of the species' migration pattern)

You are provided with a **JSON** **parser application**. Use it to **parse and validate** the JSON file you have created.

* **Replace the content of Spieces.json** with the JSON data you created.
* After pasting your JSON data into the coresponding JSON file, **make sure to save any changes**.
* **Run the parser** application within your IDE.
* **The parser will process the chosen JSON file** and display the extracted data **in the console**.
* Carefully review the output in the console.
* If the parser displays an error message, check your JSON file for any syntax errors or formatting issues.
* Ensure all required keys are present and correctly named.
* **Copy the results from the console into the Judge System.**

\*Use Ctrl + C to copy from the console.