Mlops Assignment 3
Q1)

```json
{
    "students": [
        {
            "id": 101,
            "name": "Sarah Johnson",
            "courses": [
                "CS101",
                "MATH200",
                "ENG150"
            ],
            "gpa": 3.85,
            "active": true,
            "graduation_date": null
        },
        {
            "id": 102,
            "name": "Alex Chen",
            "courses": [
                "CS101",
                "CS102",
                "STAT101"
            ],
            "gpa": 3.92,
            "active": true,
            "advisor": null,
            "notes": "Excellent student with strong analytical \nskills"
        },
        {
            "id": 103,
            "name": "Maria Rodriguez",
            "courses": [],
            "gpa": 3.67,
            "active": false,
            "special_programs": [
                "honors",
                "research"
            ]
        }
    ],
    "last_updated": "2024-09-15T10:30:00Z",
    "total_students": 3
}
```

In the json script i have kept the id of the third student as 103 (int datatype) as "103" is also acceptable but i thought it might be best to keep all the key value datatype as same

Q2) Analyze the configuration and answer the following questions:
a. How many feature flags are currently defined, and which ones are active?
There are two feature flags defined as "new_ui" and "analytics" . In these one is active
Which is "new_ui"

b. What happens when the log file reaches 100MB?
When the log file reaches 100MB it will rotate. This process typically involves renaming the current file (e.g., to myapp.log.1) and creating a new, empty myapp.log file to continue logging.

c. If you wanted to make the server accessible only from localhost, what should you change?
In the server table i will host address from "0.0.0.0" to either "localhost" or "127.0.0.1"

d. Calculate the total number of seconds that cached items will remain valid.
cached items will remain valid for 3600 seconds

e. Explain the difference between the [feature_flags] and [[feature_flags]] syntax.

This is the key difference between [**feature_flags] and [[feature_flags]] is**

- **[feature_flags]:** Defines a unique table or object. You can only have **one** table with that specific name in the configuration. For example, there is only one **[feature_flags]** configuration.
- **[[feature_flags]] :** Defines an **element in an array** (a list) of tables. Every time you use this syntax with the same name, you add a new object to that list. This is why you can have multiple **[[feature_flags]]** sections.