

Task - 2

User Data Validation & Text Analysis System

You are developing a text processing module for an online application.

The system receives raw string inputs from users and must clean, validate, and analyze the data before storing it.

Given Data:

```
user_data = [  
    " Anu, anu@gmail.com , 21 ",  
    "Ravi ,ravi123gmail.com, 17",  
    " Suresh,suresh@gmail.com,25 ",  
    "Meena,meena@gmail,22",  
    ",invalid@gmail.com,30"  
]
```

Tasks:

1. Data Cleaning

- Remove extra spaces
- Split name, email, age
- Convert name to title case
- Convert email to lowercase

2. Email Validation

- One '@'

- At least one '.' after '@'
- Should not start or end with '@'

3. Age Validation

- Convert age to integer
- Check eligibility (≥ 18)

4. Invalid Record Identification

- Missing name
- Invalid email
- Invalid age

5. Summary Report

- Total records
- Valid users
- Invalid users
- Eligible and underage users

6. Output Formatting

Format:

Name: Anu | Email: anu@gmail.com | Age: 21

Constraints:

- Use only string methods
- No regex or external libraries

Bonus Task:

- Extract email domains
- Count users per domain