Department of Computer Science and Engineering
SRM University–AP

Python: Code2Xplore – 60 Days Challenge

DAY-1 Submission Template

Challenge Title: User Profile Validation System

Subject: Hands on Python
Course Code: CSE205
Concerned Teacher: Dr. Yasir Afaq

Student Details

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Section: 'J'
Date of Submission: 29-01-2026
GitHub Repository Link (Mandatory): https://github.com/Ganeshreddy80/ganesh

Challenge Understanding

This is my Day-2 challenge of the Python: Code2Xplore program.
In this challenge, the task is to check whether the user-entered Student ID and Password are valid or not. The program should accept inputs from the user and apply given rules to decide whether access can be granted. If both ID and password follow the rules, access is allowed, otherwise access is denied with proper messages.

The main focus of this Day-2 challenge is practicing data types, conditional statements, and basic string manipulation without using any advanced concepts.

Validation Rules Implemented

Student ID Rules:

- Student ID must be exactly 6 characters long
- It should start with the letters STU
- The remaining characters must be numbers only

Password Rules:

- Password must contain at least 8 characters
- It should have at least one uppercase letter
- It should have at least one lowercase letter
- It should have at least one digit

Approach / Logic Used

First, the program takes Student ID and Password as input from the user.
For Student ID validation, length is checked first, then starting letters are verified, and finally the numeric part is checked using string methods.

For password validation, three flags are used to track uppercase letters, lowercase letters, and digits. A loop is used to go through each character in the password and update the flags accordingly. At the end, both validations are checked together to decide whether access should be granted or denied.

Algorithm / Steps

- Read Student ID from the user
- Read Password from the user
- Check the length of the Student ID
- Check whether Student ID starts with STU
- Check whether last characters of Student ID are digits
- Check password length
- Loop through password characters
- Check for uppercase, lowercase, and digit
- Display result based on validation outcome

Python Program

```
student_id = input("Enter Student ID: ")

password = input("Enter Password: ")

id_valid = True

if len(student_id) != 6:

   id_valid = False

elif student_id[:3] != "STU":

   id_valid = False

elif not student_id[3:].isdigit():

   id_valid = False

password_valid = True

upper = False

lower = False

digit = False


if len(password) < 8:
```

```
    password_valid = False
else:
    for ch in password:
        if ch.isupper():
            upper = True
        elif ch.islower():
            lower = True
        elif ch.isdigit():
            digit = True

    if not (upper and lower and digit):
        password_valid = False

if id_valid and password_valid:
    print("Access Granted")
else:
    print("Access Denied")

    if not id_valid:
        print("Invalid Student ID")

    if not password_valid:
        print("Invalid Password")
```

Test Case Verification

Verify your program using the instructor-provided test cases.

Test Case 1 Output:

Enter Student ID: STU123

Enter Password: Hello123

Access Granted

Test Case 2 Output:

Enter Student ID: ST123

Enter Password: Hello123

Access Denied

Invalid Student ID

Test Case 3 Output:

Enter Student ID: STU456

Enter Password: hello

Access Denied

Invalid Password

Learning Outcome

From this Day-2 challenge, I understood how Python basic concepts actually work in a program. I learned how to take input from the user and check whether the entered data is correct or not. I also learned how to use if and else conditions to control the flow of the program .Working with strings helped me understand how characters can be checked one by one. By doing this task, my logical thinking improved, especially for validation-based problems.
Overall, this challenge helped me get more confidence in using basic Python without using any advanced features.

Student Declaration

I hereby declare that this submission is my own original work. I have not copied the code from any AI tool or online source. I understand that plagiarism will result in ZERO marks.

Student Signature: R. Karthik Date: 29-01-26

Faculty In charge:
--dryasir