Marwadi University Marwadi Chandarana Group NAAC A+	**Marwadi University** **Faculty of Engineering & Technology** **Department of Information and Communication Technology**	
Subject: Programming With Python (01CT1309)	**Aim:** Practical demonstrate to validate PAN card number and Email ID.	
Experiment No: 23	**Date:**	**Enrollment No:92400133131**

GITHUB LINK:- https://github.com/farhan-web404/farhankaladiya.git

Aim: Practical demonstrate to validate PAN card number and Email ID.

IDE:

For this experiment, you only need the built-in **re** library for regular expressions, which comes with Python.

Validating a PAN Card Number

PAN Card Format:

- A PAN (Permanent Account Number) card in India consists of 10 characters.
- The first five characters are uppercase letters (A-Z).
- The next four characters are digits (0-9).
- The last character is an uppercase letter (A-Z).

Regular Expression: ^[A-Z]{5}[0-

9]{4}[A-Z]{1}$ import re

```
def validate_pan(pan):
   pattern = r'^[A-Z]{5}[0-9]{4}[A-Z]{1}$'
if re.match(pattern, pan):
      return True
return False
```

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Test the function pan_number = input("Enter

PAN card number: ") if

validate_pan(pan_number):

print("Valid PAN card number.") else:

print("Invalid PAN card number.") output:-

```
In [7]: %runfile 'E:/collage/python/python lab code/lab 21/1.py' --wdir
Enter PAN card number: A54S1
Invalid PAN card number.
```

Validating an Email ID

Email Format:

- An email consists of local and domain parts, separated by an @ symbol.
- The local part can include letters, digits, dots, underscores, and hyphens.
- The domain part should consist of a domain name and a top-level domain (TLD), such as .com, .org, etc.

Regular Expression:

^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$ def

validate_email(email):

pattern = r'^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$'

if re.match(pattern, email):

return True

return False

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```
# Test the function email_id =
input("Enter email ID: ") if
validate_email(email_id):
print("Valid email ID.") else:
    print("Invalid email ID.")
```

output:-

```
In [8]: %runfile 'E:/collage/python/python lab code/lab 21/1.py' --wdir
Enter email ID: mahes@
Invalid email ID.
```

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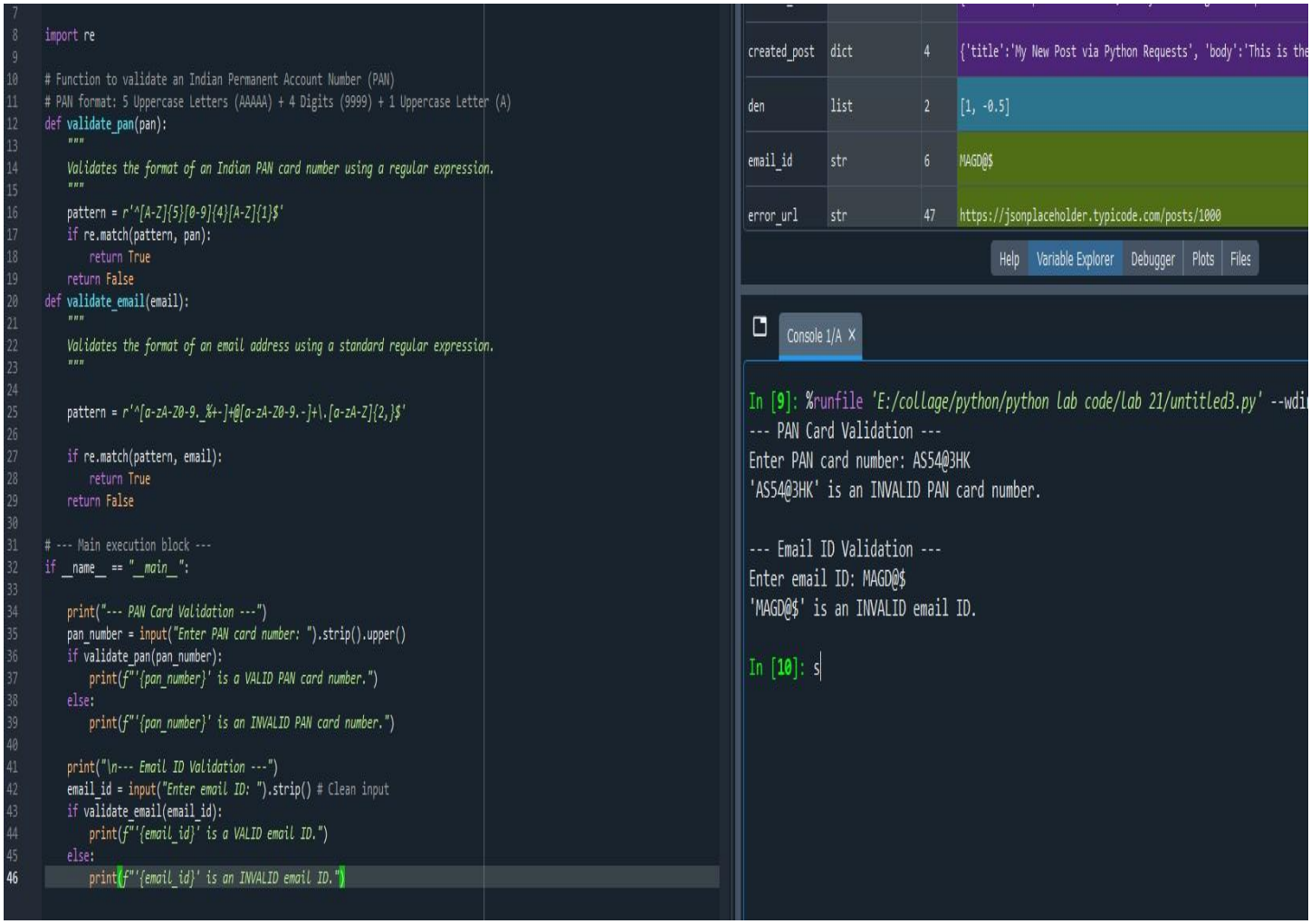
Post Lab:

Write a code combine both validations into a single program Code

and output:



```
import re

# Function to validate an Indian Permanent Account Number (PAN)
# PAN format: 5 Uppercase Letters (AAAAA) + 4 Digits (9999) + 1 Uppercase Letter (A)
def validate_pan(pan):
    """
    Validates the format of an Indian PAN card number using a regular expression.
    """
    pattern = r'^[A-Z]{5}[0-9]{4}[A-Z]{1}$'
    if re.match(pattern, pan):
        return True
    return False
def validate_email(email):
    """
    Validates the format of an email address using a standard regular expression.
    """

    pattern = r'^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$'

    if re.match(pattern, email):
        return True
    return False

# --- Main execution block ---
if __name__ == "__main__":

    print("--- PAN Card Validation ---")
    pan_number = input("Enter PAN card number: ").strip().upper()
    if validate_pan(pan_number):
        print(f"'{pan_number}' is a VALID PAN card number.")
    else:
        print(f"'{pan_number}' is an INVALID PAN card number.")

    print("\n--- Email ID Validation ---")
    email_id = input("Enter email ID: ").strip() # Clean input
    if validate_email(email_id):
        print(f"'{email_id}' is a VALID email ID.")
    else:
        print(f"'{email_id}' is an INVALID email ID.")
```

created_post	dict	4	{'title':'My New Post via Python Requests', 'body':'This is the
den	list	2	[1, -0.5]
email_id	str	6	MAGD@$
error_url	str	47	https://jsonplaceholder.typicode.com/posts/1000

Help | Variable Explorer | Debugger | Plots | Files

Console 1/A

```
In [9]: %runfile 'E:/collage/python/python lab code/lab 21/untitled3.py' --wdi
--- PAN Card Validation ---
Enter PAN card number: AS54@3HK
'AS54@3HK' is an INVALID PAN card number.

--- Email ID Validation ---
Enter email ID: MAGD@$
'MAGD@$' is an INVALID email ID.

In [10]: s
```