	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: 92510133025**

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


# Test the function
pan_number = input("Enter PAN card number: ")
```

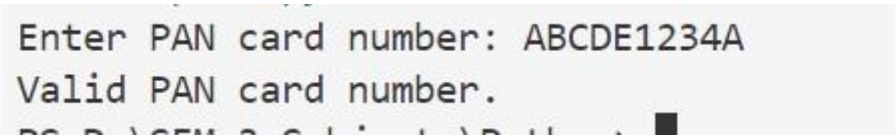
```
if validate_pan(pan_number):

    print("Valid PAN card number.")

else:

    print("Invalid PAN card number.")
```

Output:



```
Enter PAN card number: ABCDE1234A
Valid 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



# Test the function

email_id = input("Enter email ID: ")
```

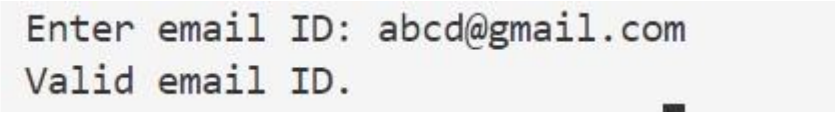
```
if validate_email(email_id):

    print("Valid email ID.")

else:

    print("Invalid email ID.")
```

Output:



```
Enter email ID: abcd@gmail.com
Valid email ID.
```

Post Lab:

Write a code combine both validations into a single program.

Code:

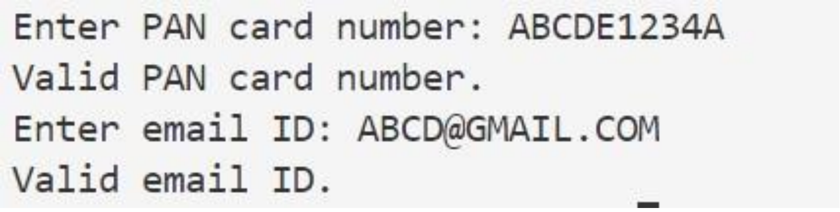
```
import re
def validate_pan(pan):
    pattern = r'^[A-Z]{5}[0-9]{4}[A-Z]{1}$'
    if re.match(pattern, pan):
        return True
    return False

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
def validate_inputs():
    # Validate PAN
    pan_number = input("Enter PAN card number: ")
    if validate_pan(pan_number):
        print("Valid PAN card number.")
    else:
        print("Invalid PAN card number.")

    # Validate Email
    email_id = input("Enter email ID: ")
    if validate_email(email_id):
        print("Valid email ID.")
    else:
        print("Invalid email ID.")

validate_inputs()
```

Output:



```
Enter PAN card number: ABCDE1234A
Valid PAN card number.
Enter email ID: ABCD@GMAIL.COM
Valid email ID.
```

Github link: https://github.com/JenishDesai5115/PWP_postlabs