
 Marwadi University Marwadi Chandarana Group 	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: 92400133055

[GITHUB](#)

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

IDE: Visual Studio Code

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: PY45GF34R
```

```
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):
```

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```

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: john11@gmail.com
Valid email ID.

```

Post Lab:

Write a code combine both validations into a single program Code:



```

import re
def
validate_pan(pan):
    """
    Validate PAN card number.
Args:
    pan (str): The PAN card number to validate.

Returns:
    bool: True if valid, False otherwise.
    """
    pattern = r'^[A-Z]{5}[0-9]{4}[A-Z]{1}$'
    return bool(re.match(pattern, pan))
def
validate_email(email):
    """
    Validate email ID.
Args:
    email (str): The email ID to validate.

Returns:
    bool: True if valid, False otherwise.
    """
    pattern = r'^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$'
    return bool(re.match(pattern, email))
def
main():
    # Validate PAN Card Number

```

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```

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

print() # Print a newline for better readability

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

```

Output:

```

Enter PAN card number: Z00ZS7808P
Valid PAN card number.

Enter email ID: john11@gmail.com
Valid email ID.

```