VARIABLES - A variable is like a container or a label that stores a value/data

#syntax

variable_name = data/value

eg:

student_name = "john"

age = 17

fees = 15000.00

print(student_name)

print(age)

print(fees)

📏 **Rules for Naming Variables**

Must start **with** a letter or underscore

Cannot start **with** a number

Can contain letters, numbers, and underscores

Are case-sensitive (Name **and** name are different)

✅ **Valid Variable Names:**

name = "Alice"   # Starts with a letter

_name = "Bob"   # Starts with an underscore

u1ser1 = "Charlie"   # Letters and digits allowed after the first character

user_name = "David"   # Underscores are allowed

```python
PI = 3.14            # Constants in uppercase
```

❌ Invalid Variable Names: (will cause errors)

```python
1name = "Alice"        #  Starts with a number
user-name = "Bob"        #  Hyphens are not allowed
total$ = 100          #  Special characters like $ are not allowed
class = "Python"       #  'class' is a reserved keyword
```

Multi Words Variable Names:

1.Camel Case - Each word, **except** the first, starts **with** a capital letter:

eg - student_Name = "Rajesh"

2.Pascal Case - Each word starts **with** a capital letter:

eg - Student_Name = "Rajesh"

3.Snake Case - Each word is separated by an underscore character:

eg - student_name = "John"

Many Values to Multiple Variables:

```python
x, y, z = "Orange", "Banana", "Cherry"
print(x)
print(y)
print(z)
```

eg of varibles :

student_name = "Amit Sharma"

car = "Hyundai i20"

bike = "Royal Enfield Classic 350"

age = 21

phone_number = "9876543210"

city = "Delhi"

college = "Delhi University"

sports = "Cricket"