Python Variables: Definition, Examples & Rules

1. What is a Variable?

A variable is a name given to a value that is stored in memory. It acts like a container to hold data that can change during the program execution.

Examples:

```
>>> x = 10
# Stores number 10 in x
```

```
>>> name = "Ankita"
# Stores the string 'Ankita' in name
```

```
>>> x = 5
x = 20
print(x)
# Updates x to 20 and prints it
```

```
>>> a = 10
b = 5
sum = a + b
print(sum)
# Calculates and prints the sum
```

2. Rules for Naming Variables

- 1. Variable names must start with a letter or underscore (_).
- 2. Variable names cannot start with a number.
- 3. Variable names can only contain letters, numbers, and underscores (_).
- 4. Variable names are case-sensitive (age and Age are different).
- 5. Don't use Python keywords as variable names (like class, for, if, etc.).

Good Practices:

- Use meaningful names (e.g., student_name instead of sn).
- Use lowercase letters and underscores for multiple words.