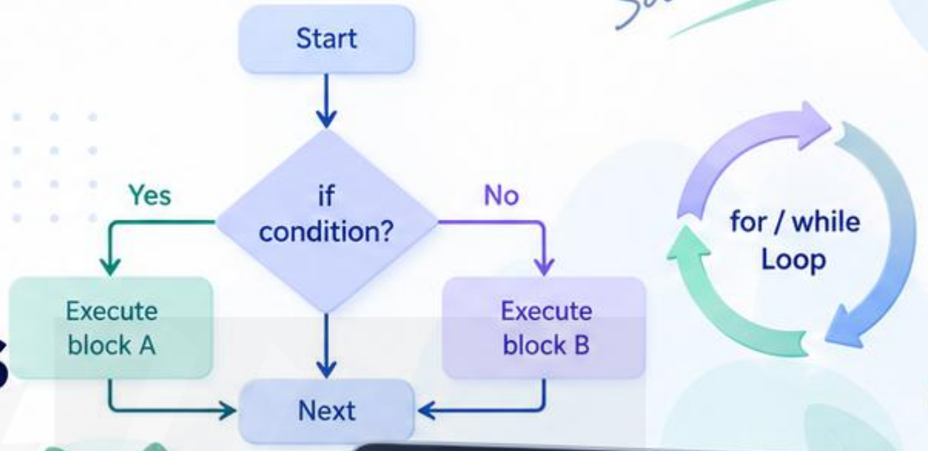
B.Pharm Semester 1

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Basics of Python Programming for Pharmaceutical Sciences



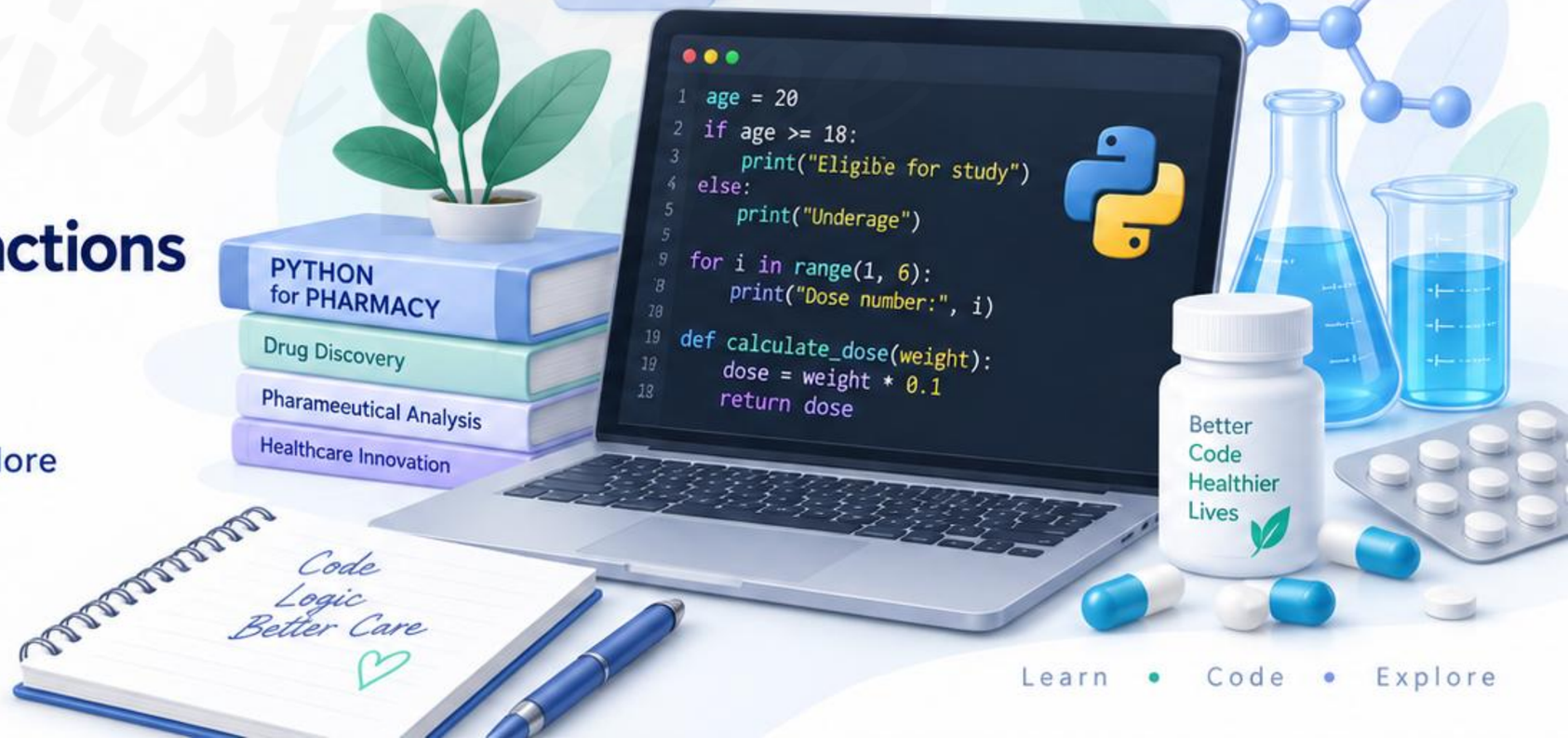

```
def calculate_dose():
    # function
    return dose
```

Unit 2

Control Structures & Functions

PPT Notes

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Conditional Statements

The if Statement

- A conditional statement chooses which code runs by checking a condition.
- A comparison such as `age >= 18` gives True or False.

The if Statement

```
age = 20
if age >= 18:
    print("Adult")
```

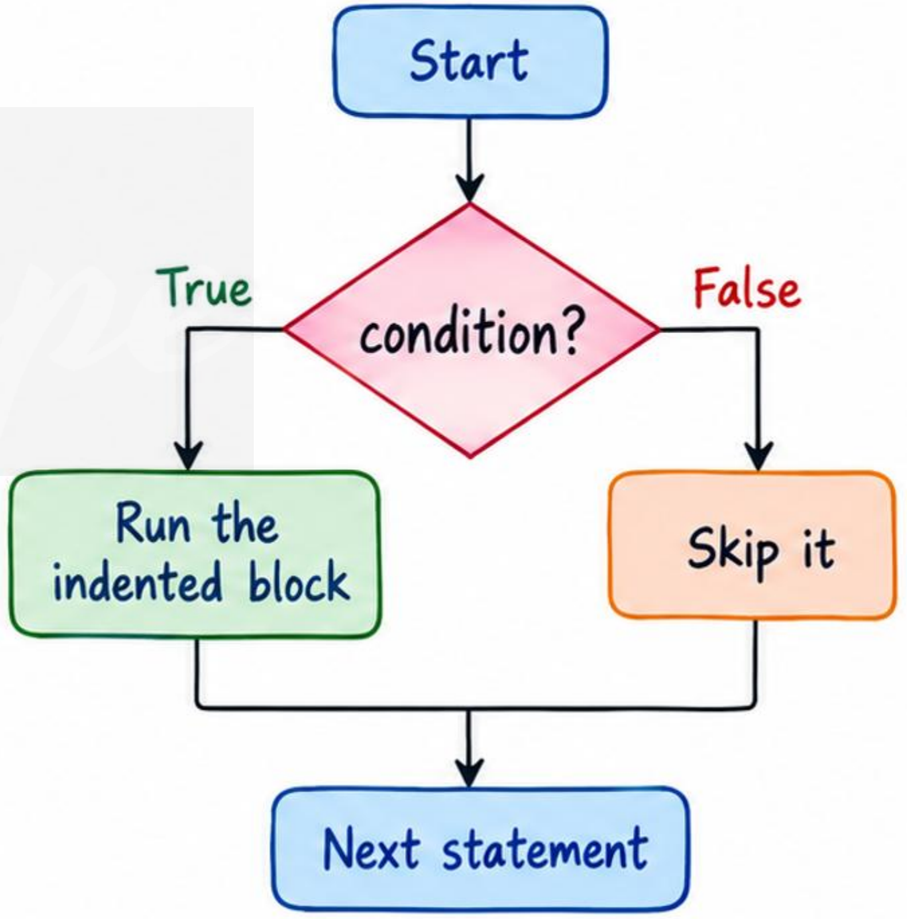
Output: Adult

Syntax

```
if condition:
    statement
```

- Use a colon after the condition.
- Indent the statements inside the block by four spaces.

Flow diagram



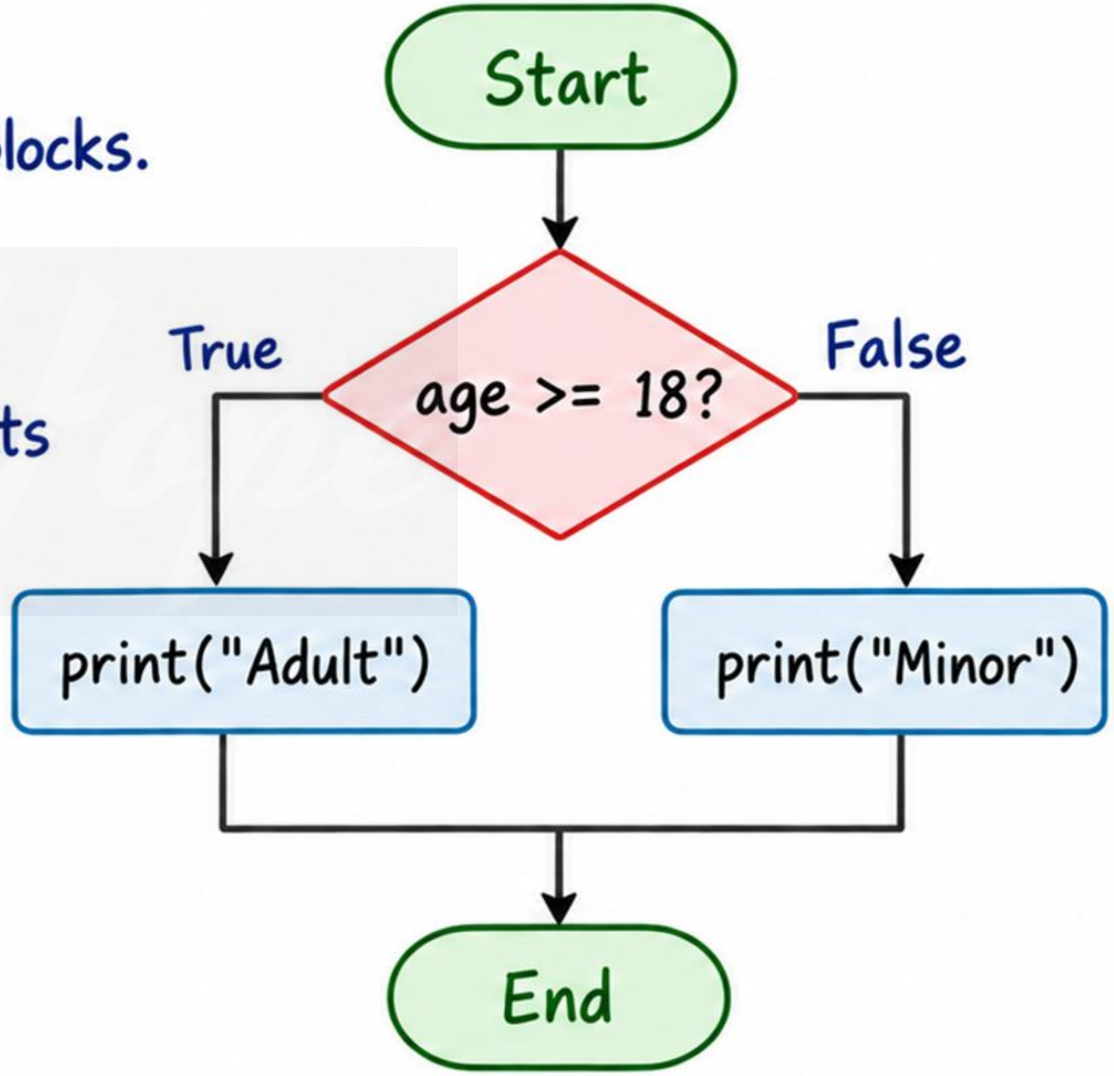
Conditional Statements

The if-else Statement

- The if-else Statement chooses between two blocks.
- If the condition is True, the if block runs.
- Otherwise, the else block runs.
- Keep if and else aligned. Indent the statements in each block by four spaces.

```
age = 16
if age >= 18:
    print("Adult")
else:
    print("Minor")
```

Output: Minor



Conditional Statements

The if-elif-else Statement

- The if-elif-else Statement checks several conditions in order.
- Python runs the first block whose condition is True. It skips the remaining alternatives.

```
marks = 75
if marks >= 90:
    print("Grade A")
elif marks >= 75:
    print("Grade B")
elif marks >= 50:
    print("Grade C")
else:
    print("Fail")
```

Output: Grade B

- elif means "else if". else handles values that match none of the earlier conditions.

Nested Conditions

Nested Conditional Statements

- Nested Conditional Statements place one if inside another.
- Example: check adulthood first, then citizenship.

```
age = 22
citizen = True
if age >= 18:
    if citizen:
        print("Eligible to vote")
    else:
        print("Not a citizen")
else:
    print("Too young")
```

Output: Eligible to vote

- A nested block needs another level of indentation.

Second example

```
age = 16
if age < 18:
    if age >= 13:
        print("Teenager")
    else:
        print("Child")
else:
    print("Adult")
```

Output: Teenager

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