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7

Conditional Statements – III

CSA101 : Problem Solving with Programming

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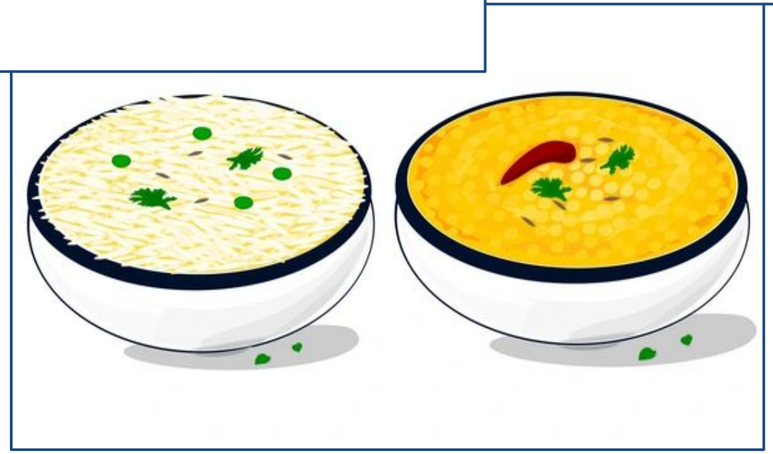
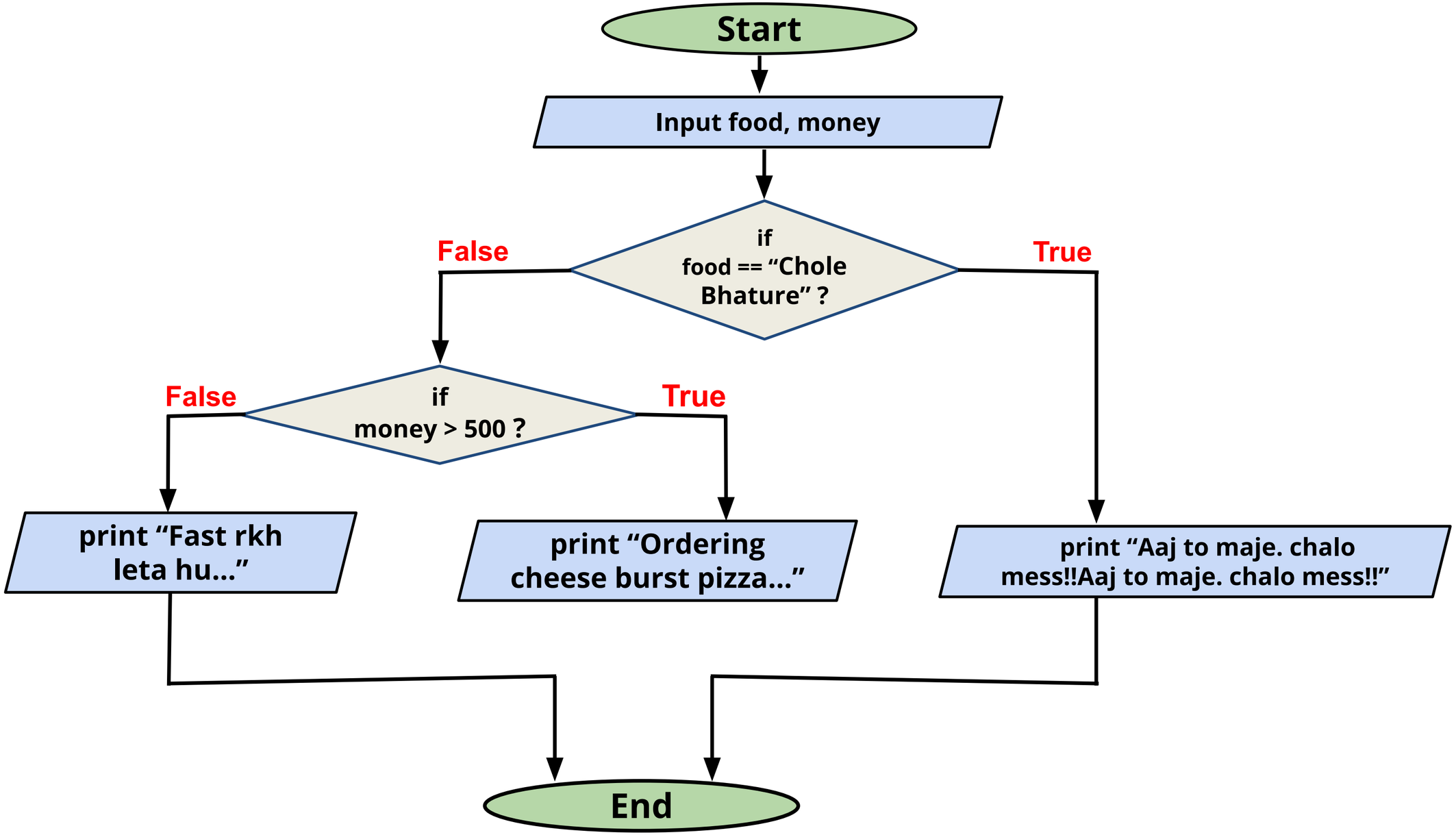
Sunday Lunch plan :



Flowchart - Sunday Lunch Plan :



Conditional statements - nested if :

A nested conditional **if statement** is like making decisions within decisions. It's when you have an **if statement inside another if or else statement.**

```
mess_food = "Kaddu ki subzi"
money = 1200

if mess_food == "Chole Bhature":
    print("Aaj to maje. chalo mess!!")
else:
    if money > 500:
        print("Ordering cheese burst pizza...")
    else:
        print("Fast rkh leta hu...")
```

Code Snippet

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Nested if-else Syntax

Nested if statement :

```
if condition1:
    if condition2:
        # Code to execute if condition1 and condition2 are true
    else:
        # Code to execute if condition1 is true and condition2 is false
elif condition3:
    if condition4:
        # Code to execute if condition3 and condition4 are true
    else:
        # Code to execute if condition3 is true and condition4 is false
else:
    # Code to execute if none of the above conditions are true
```

Question - 1 : Basic Greater or Smaller

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You are given two functions:

```
def greater(a, b):
    print(max(a, b))
```

```
def smaller(a, b):
    print(min(a, b))
```

greater(a, b) → prints the greater of two integers a and b.
smaller(a, b) → prints the smaller of two integers a and b.
Note: You should call these functions as required

Write a program that takes:

- **A single character input: "G" for greater or "S" for smaller**
- **Two space-separated integers**

Example: G
4 9

Output : 9

Question - 2 : Basic Greater or Smaller-2

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Write a program that takes:

- **A single character input: "G" for greater or "S" for smaller**
- **Two space-separated integers**

Task: If the character is "G", print the greater of the two numbers using the greater() function. If the character is "S", print the smaller of the two numbers using the smaller() function.

You are supposed to implement two functions:

- **greater(a, b) → Gives greater of two integers a and b.**
- **smaller(a, b) → Gives smaller of two integers a and b.**

Note: You should implement and then call these functions as required.

Example: G
4 9

Output :

```
9
```

Question - 3 : Greater or Smaller Without Functions

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You are given:

- **A single character input:**

  "G" – to find and print the greater of two numbers.
  "S" – to find and print the smaller of two numbers.
- **Two space-separated integers on the next line.**

Your Task: Based on the character input:

- **If the input is "G", print the greater of the two numbers.**
- **If the input is "S", print the smaller of the two numbers.**

You must use only nested if and else conditions to compare the numbers.

Example: G
4 9

Output : **9**

Question - 4 : Pass or Fail: The English Rule

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You are given marks in 4 subjects:

English, Physics, Chemistry, Math

To pass the exam, a student must meet both of these conditions:

1). Pass English (marks ≥ 45)

2). Pass in at least 2 out of 3 subjects among Physics, Chemistry, and Math (marks ≥ 35 in each subject)

Rules:

- **Passing Marks in English: 45**
- **Passing Marks in Physics, Chemistry, Math: 35**
- **Failing in English results in automatic failure, regardless of other marks.**

Your Task: Write a program that:

- **Takes 4 space-separated integers as input.**
- **Checks if the student has passed English.**
- **Uses a helper function check(p, c, m) that returns how many science subjects (Physics, Chemistry, Math) the student has passed.**
- **Applies both logical operators (and, or) and nested conditionals to decide and print either:**

Question - 4 : Pass or Fail: The English Rule

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Example 1 : 48 40 20 38

Output : **Pass**

Quiz Time!

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Please fill the feedback!

Thank You!