

# TOPIC 01: APPROACH AND HOW TO USE IT?

	01	WHAT'S A TOP-DOWN APPROACH?
	02	WHAT'S THE MODULARIZATION?
CONTENTS	03	WHY SHOULD ONE USE A TOP- DOWN APPROACH?
	04	TOP-DOWN APPROACH IN ACTION?
	05	HOW TO APPLY THE TOP-DOWN APPROACH TO THE ASSIGNMENT?

### WHAT'S A TOP-DOWN APPROACH?

- The approach from top-down is a method of problem-solving by looking at the overall system/problem first, and then breaking it down into smaller parts.
- It keep breaking these modules until they can't be broken anymore. This process, known as 'modularization'.





- 1. Clearly define the main goal.
- 2. Divide it into independent modules.
- 3. Further break down each module.
- 4. Handle each module independently.
- 5. Repeat steps 2, 3, and 4, adjusting for clarity and efficiency

# WHY SHOULD ONE USE A TOP-DOWN APPROACH?



#### **ADVNTAGES OF TOP-DOWN APPROACH**

- 1. Understand the overall system and structure before delving into details.
- 2. Clearly grasp the goal that needs to be achieved.
- 3. Manage details effectively by breaking down large modules into smaller, independent ones.
- 4. Easily adjust and update when issues arise without affecting other modules.
- 5. Save time.

#### DISAVANTAGES OF TOP-DOWN APPROACH

- 1. Difficult to change the approach once the project has started.
- 2. Easy to overlook opportunities or important details.
- 3. Dependency on the initial design provided.
- 4. Waste of time
- 5. Not suitable for small projects.

#### THE COMPANIES USING TOP-DOWN APPROACH



1. Microsoft

Post: Microsoft's Bottom-up and Top-down Approach to change its Siloed Culture



2. Apple

Post: Apple vs. Google: Topdown vs. Bottom-up Innovation



3. Amazon

Post: Scaling the Cloud: A

Journey into AWS with a Top
Down Approach

WHEN SHOULD A TOP-DOWN

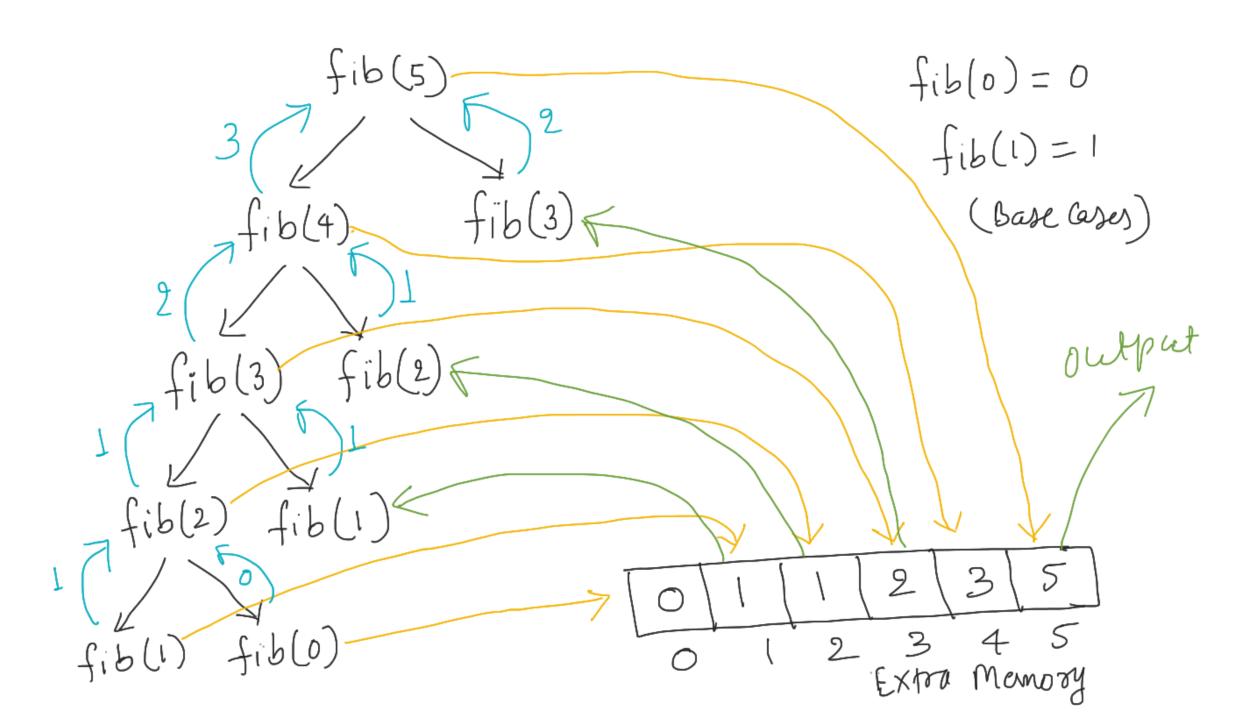
#### APPROACH BE USED?

- The problems are complex.
- Understand the big picture before delving into details.
- Knowing the final output.



#### HOW DOES THE TOP-DOWN APPROACH WORK?

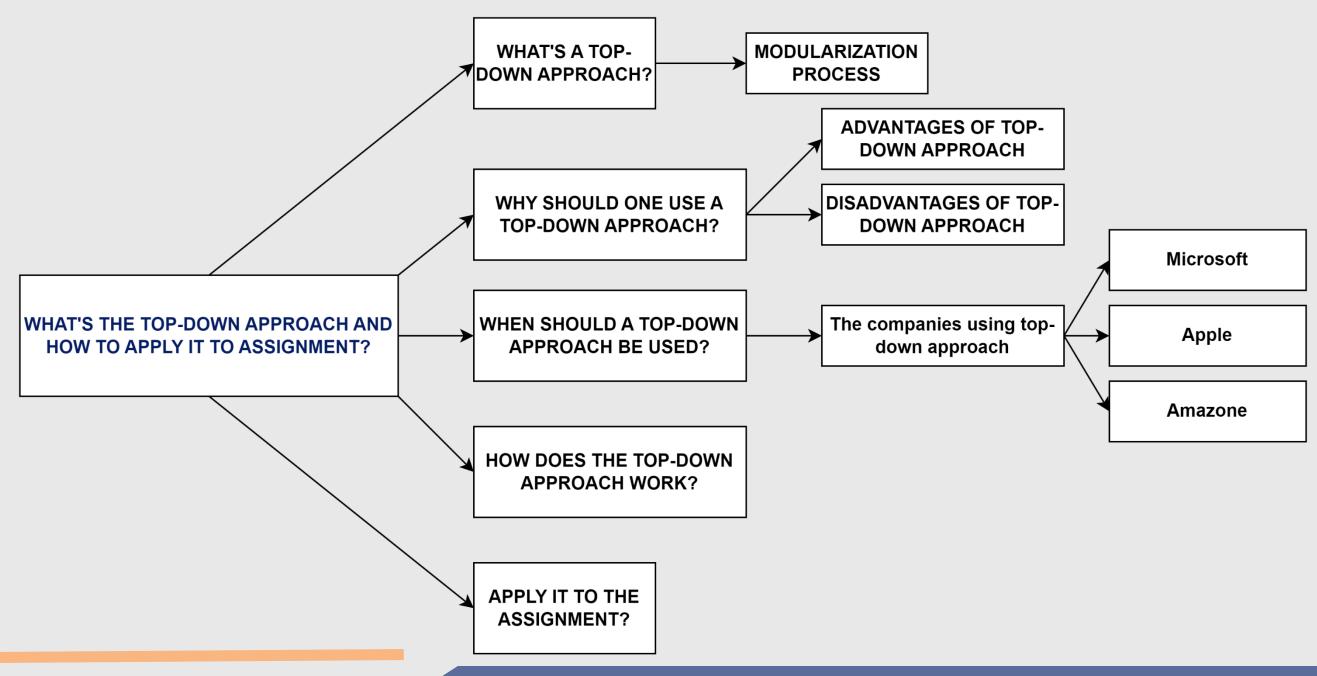
Finding the 5<sup>th</sup> Fibonacci using top-down approach.



## HOW TO APPLY THE TOP-DOWN APPROACH TO THE ASSIGNMENT?

- The assignment aims to turn us into good developers. Challenges are the branches stemming from this main goal, each with its own difficulty level suited to individual abilities.
- The end goal may differ for each person (BA, DA, FE, BE, etc.), but the overarching objective is clear: successfully complete the program, become skilled in the IT field, and land a job.

#### CONCLUTIONS



#### THANK YOU FOR READING

