



TOPDOWN APPROACH

Journey to your best program 2024

Topdown Approach

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What is topdown approach ?

A method of analysis or decision-making that starts with the general or big picture and then moves to the specific or details.



Example

Imagine you have a big, complex project in front of you, like building a house. The top-down approach is like starting at the roof and working your way down, floor by floor, wall by wall, until you reach the foundation. It's a method of problem-solving or decision-making that starts with the big picture and then breaks it down into smaller, more manageable pieces.



Topdown approach principles

1. Define the Big Picture

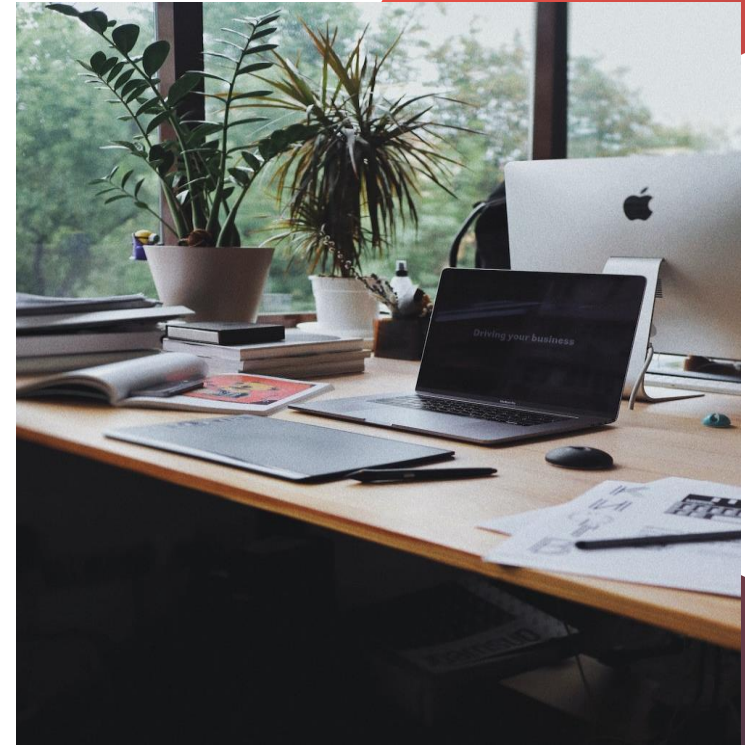
2. Breaking Down the Goal

3. Developing Plans for Each Sub-Goal

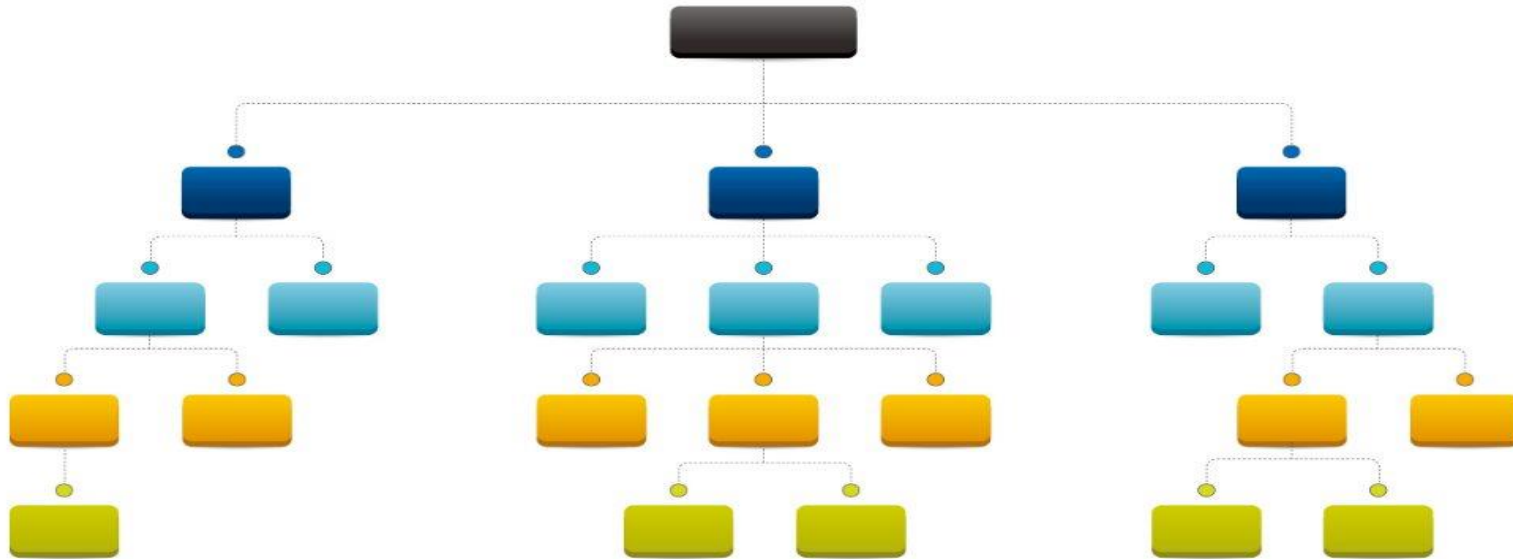
4. Implementation and Delegation

5. Monitoring and Adjusting

How the Topdown approach works

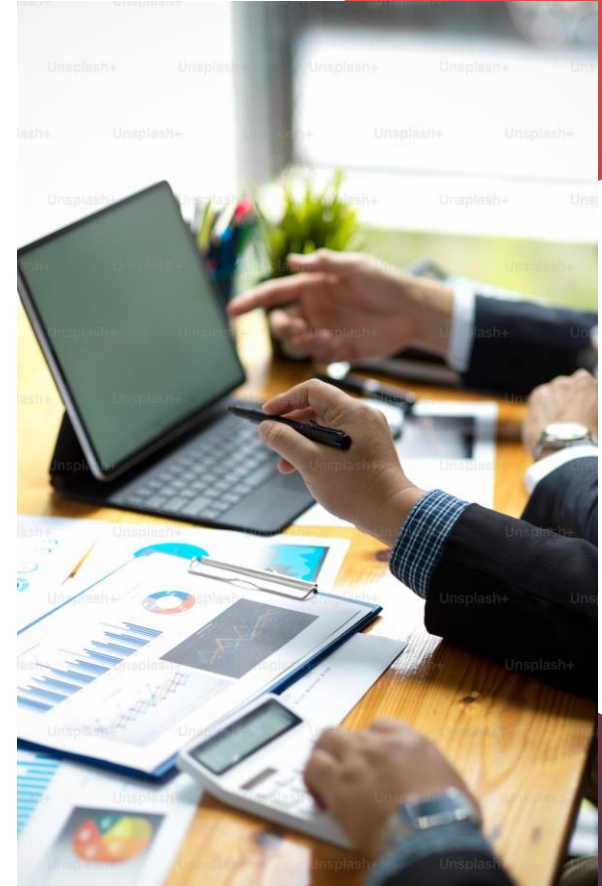


A top-down approach in a hierarchy system refers to the organizational structure where decisions and directives flow from the top-level management down to the lower levels. This hierarchical structure typically consists of different levels or layers, each with its own set of responsibilities and authority.



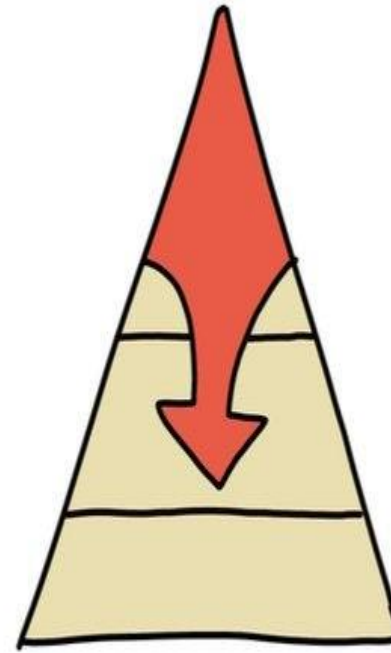
Hierarchy System image

Topdown approach vs Bottom up approach

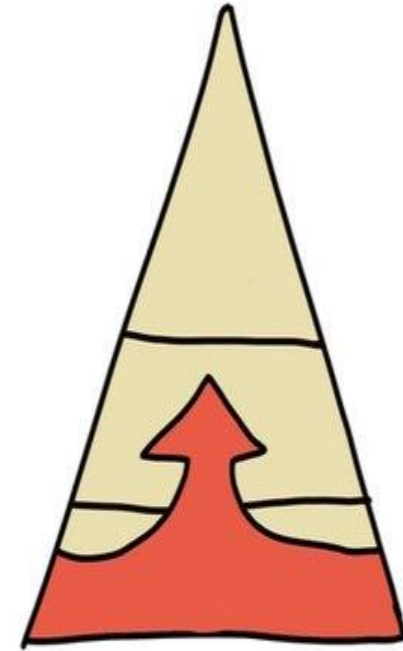


Topdown approach :

- **Start Point:** Begins with a broad, comprehensive system or idea.
- **Decomposition:** The system is broken down into smaller, more manageable parts.
- **Focus:** Emphasizes the final outcome or the overall goal from the beginning.
- **Implementation:** Components are developed in sequence, typically after the overall design or plan is completed.
- **Integration:** Individual components are integrated into the larger system, often after they have been developed.



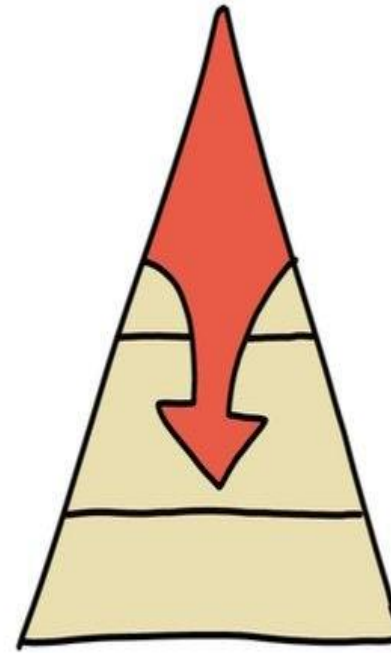
top-down



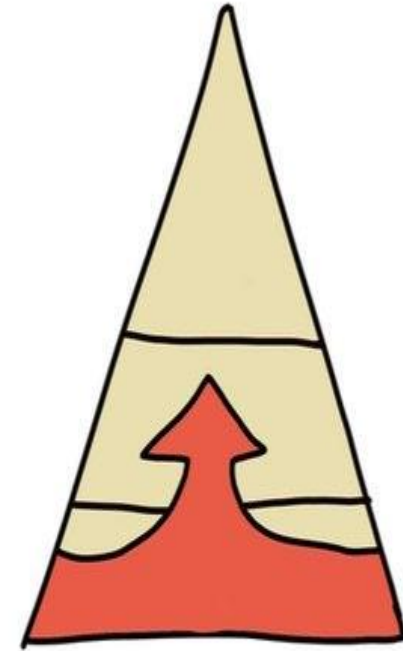
bottom-up

Bottom up approach :

- **Start Point:** Begins with specific, small-scale components or elements.
- **Aggregation:** These components are developed and then combined to form larger systems or understandings.
- **Focus:** Emphasizes individual components and their functionality before considering the overall system.
- **Implementation:** Components are often developed simultaneously and independently
- **Integration:** The integration of these components gradually reveals the bigger picture or final outcome.



top-down



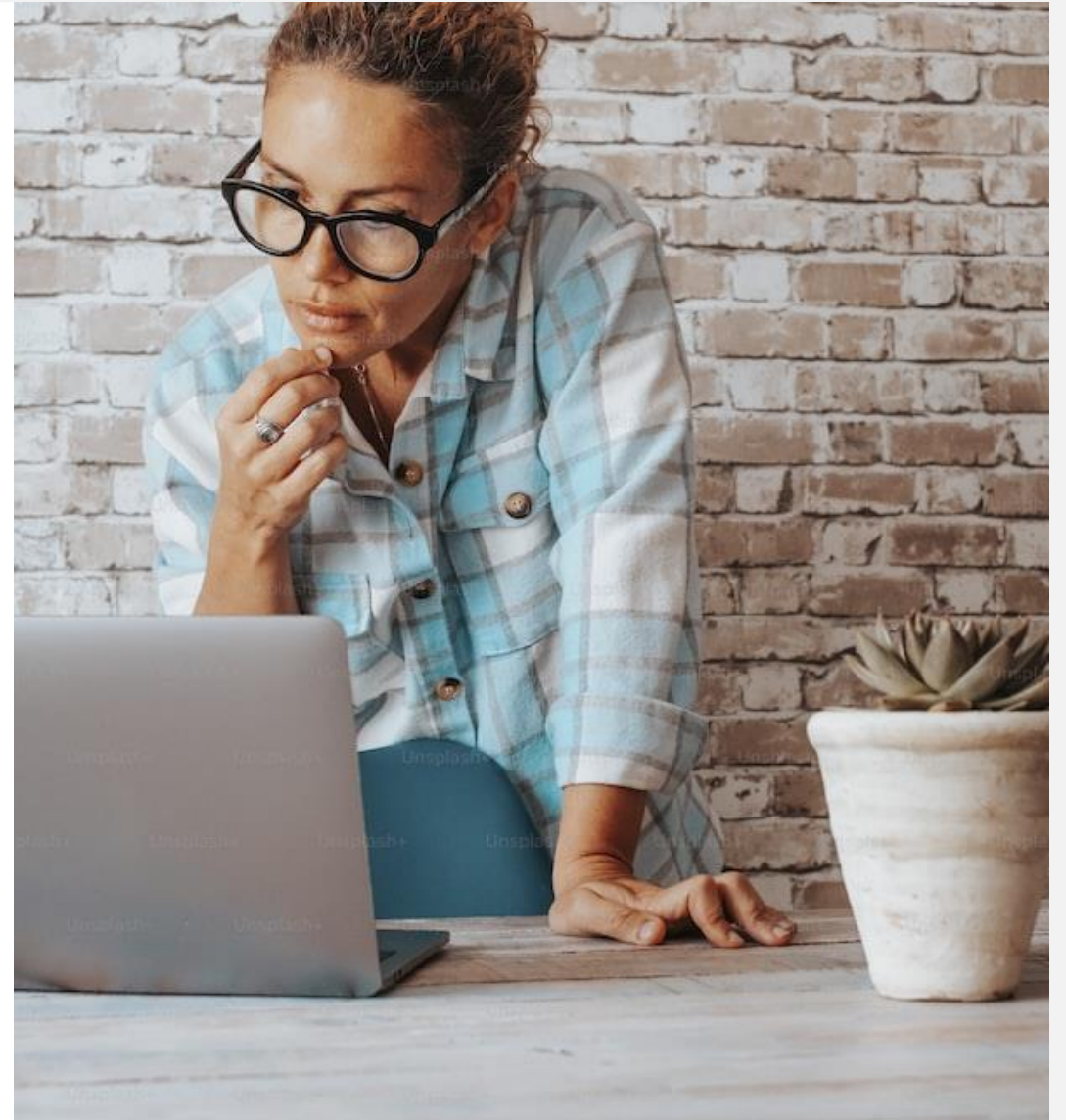
bottom-up

How to apply Topdown approach in real world

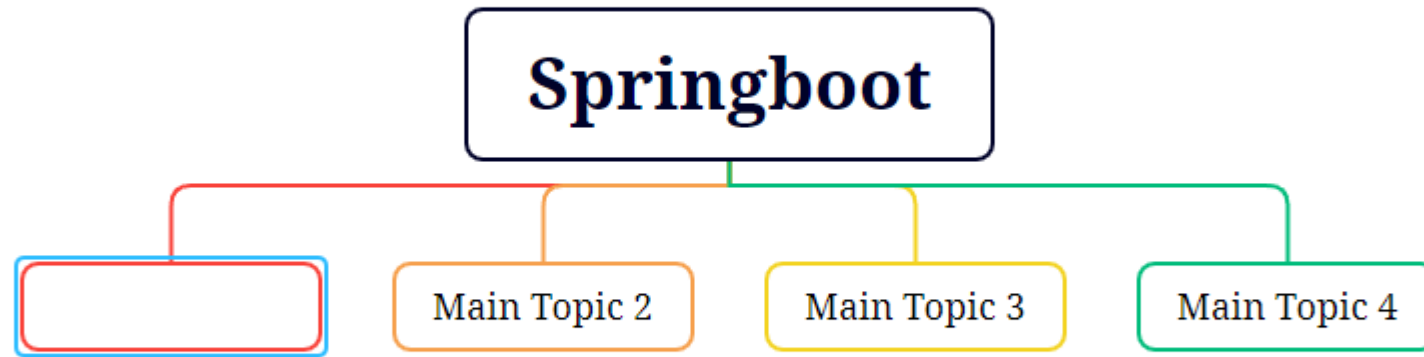
```
let subjectAverage;  
query(  
  "SELECT * FROM marks WHERE subject_ID=" + subject  
  function (datasetsWithSubject) {  
    if (datasetsWithSubject.length > 0) {  
      subjectAverage = 0;  
      datasetsWithSubjectLength = datasetsWithSubject.length;  
      datasetsWithSubject.forEach((dataset) => {  
        subjectAverage += parseFloat(dataset["marks"]);  
      });  
      subjectAverage =  
        subjectAverage / datasetsWithSubjectLength;  
    } else {  
      subjectAverage = 0;  
    }  
  }  
);
```

Problem

The professor has assigned you the task of rapidly learning Spring Boot to prepare for the presentation in the new course, "Introduction to Web Application." Your responsibility includes understanding and grasping some essential features in Spring Boot



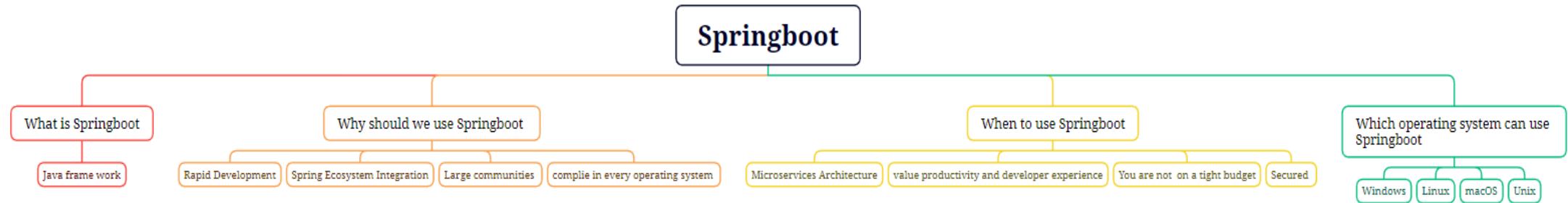
Step 1 : Define the big Picture



Step 2 : Break down the Goal



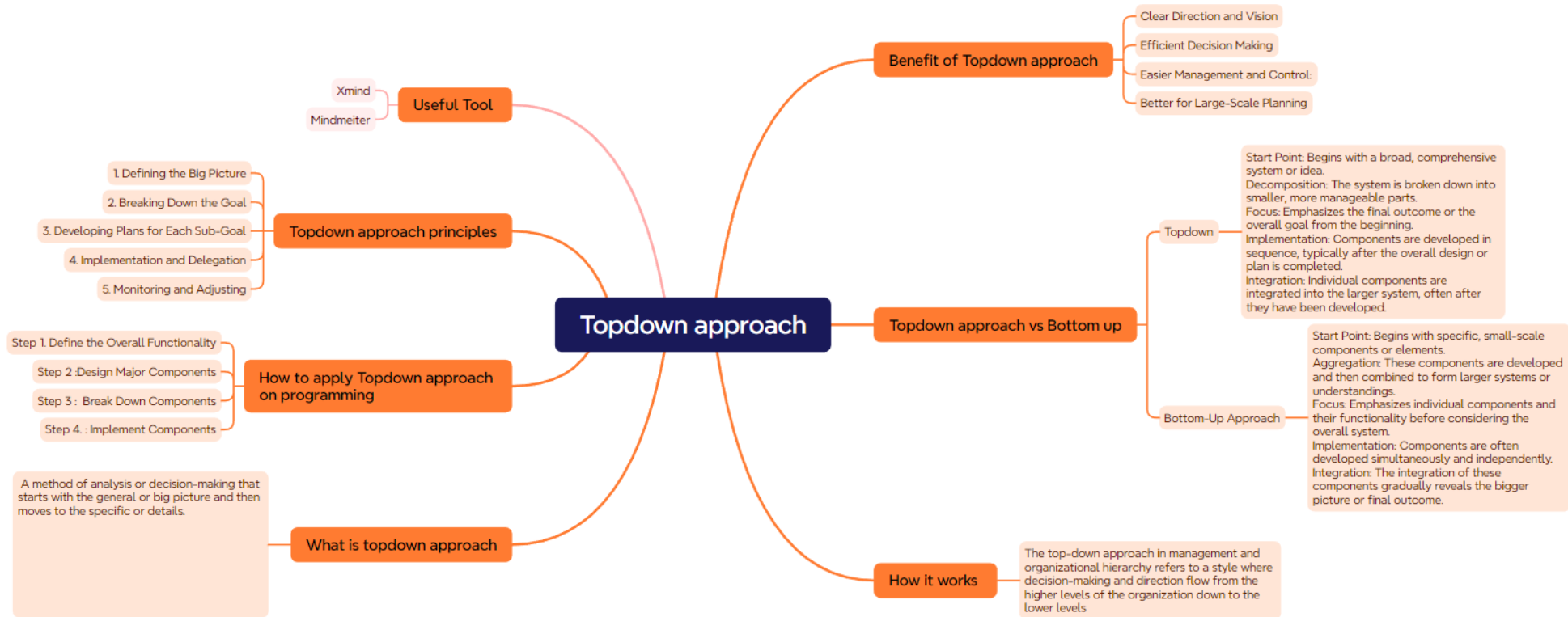
Step 3 : Development sub goals



Useful tools for Topdown approach



Summary by mindmap



THANKS

Any questions for my presentation & topdown
approach