



# SOFTWARE ARCHITECTURE

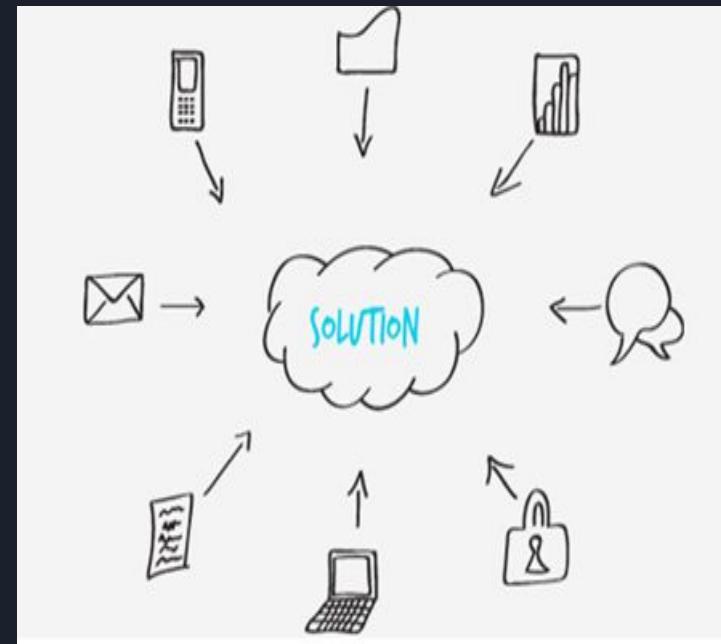
BY: APEKSHA JADHAV  
BAVITRA  
CHARITHA G  
PALLAVI  
SOMYA

# INTRODUCTION

- Blueprint for a system
- Establishes communication and coordination mechanism among system components
- The principles guiding its design and evolution

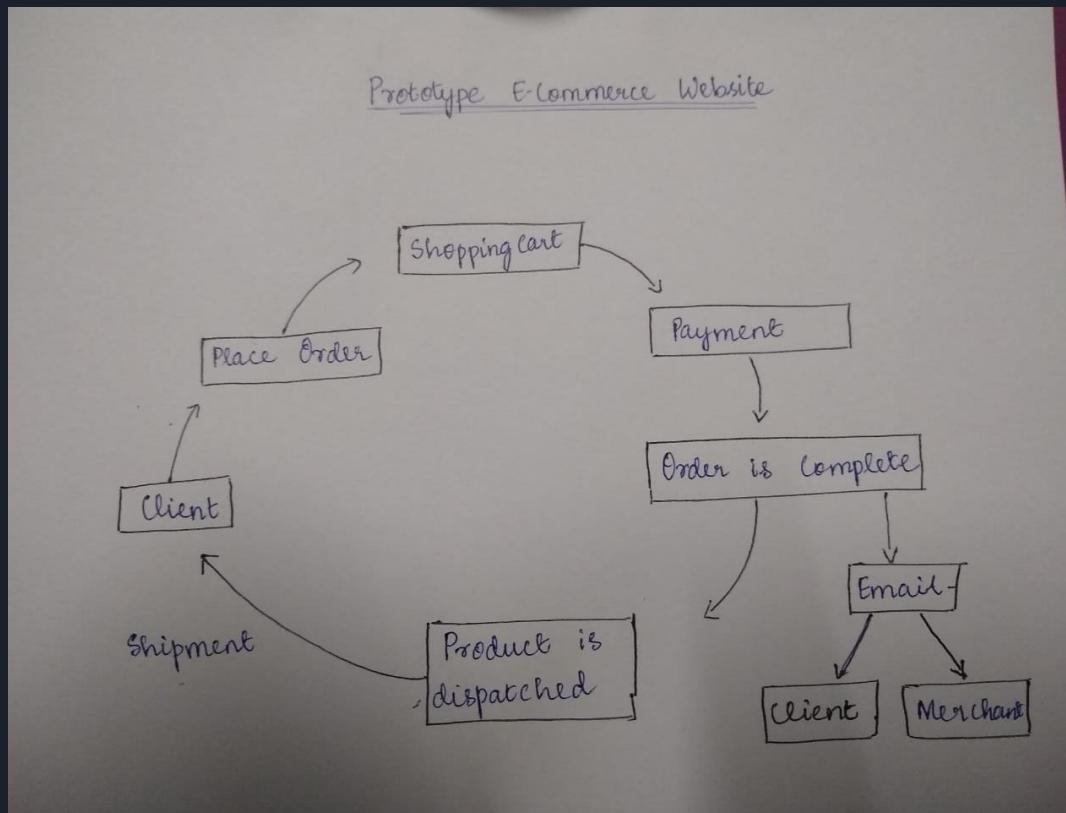
# Why do we need it??????

- World is increasingly dependant on software
- Reduce system complexity
  - Distributing works to teams for developing components
  - Integrating components
  - Understanding “big picture” of the system

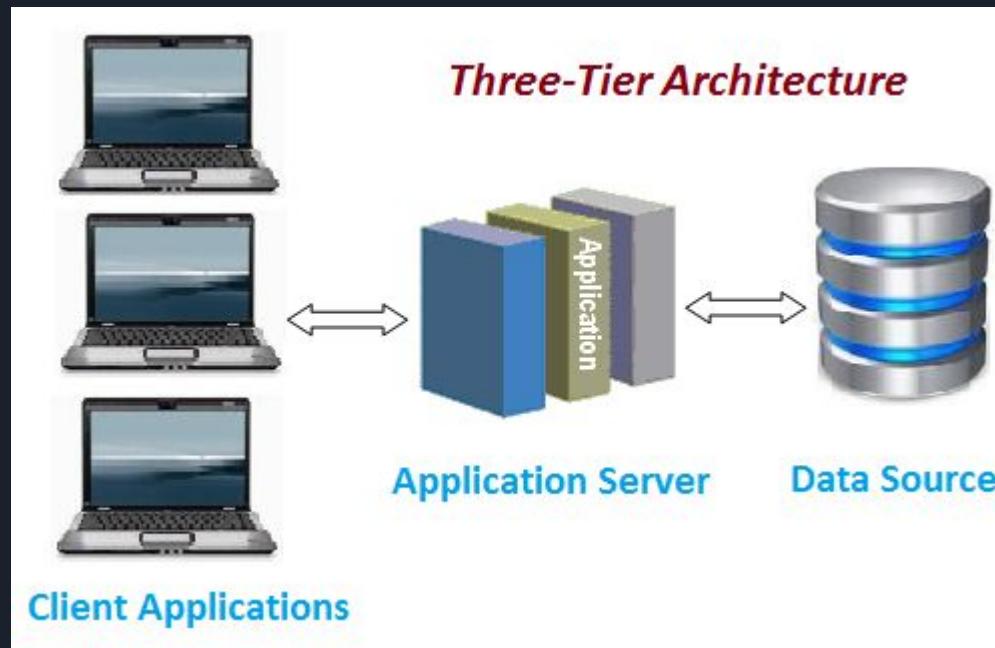




# ARCHITECTURE OF AN E-COMMERCE SITE



# THREE-TIER ARCHITECTURE





# QUALITY ATTRIBUTES

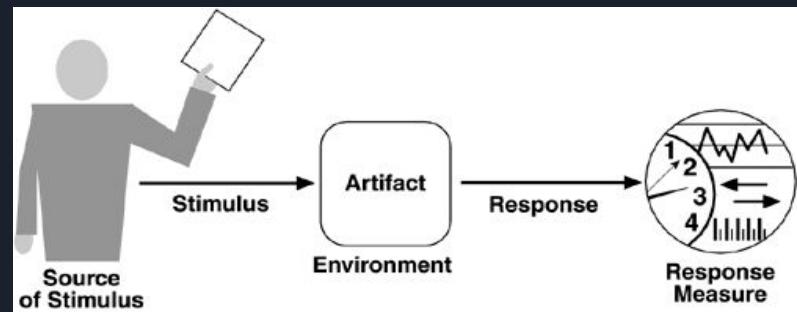
What are **QUALITY ATTRIBUTES** ?

- A quality attribute (QA) is a measurable or testable property of a system that is used to indicate how well the system satisfies the needs of its stakeholders.
- It is used as a measure to be free of all the defects and risks.
- Implementation of Quality Attributes differentiates a good system from a bad one.

# QUALITY SCENARIOS

Quality scenarios define how to prevent a failure. It is a set of that can be divided into 6 attributes.

- *Source*
- *Stimulus*
- *Environment*
- *Artifact*
- *Response*
- *Response measure*

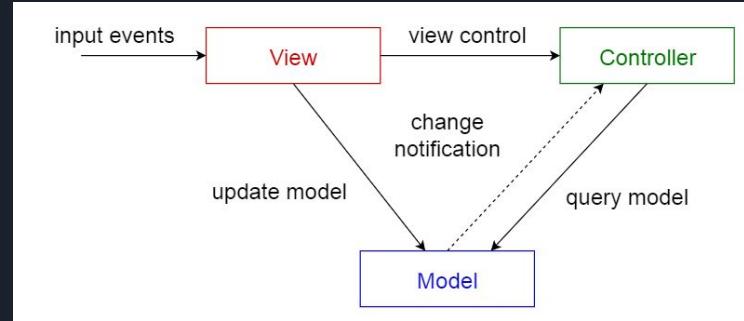


# ARCHITECTURAL STYLES AND PATTERNS

## 1. Layered pattern

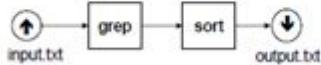
- Presentation layer ( UI layer)
- Business logic layer(domain layer)
- Data access layer ( persistence layer)

## 2. MVC

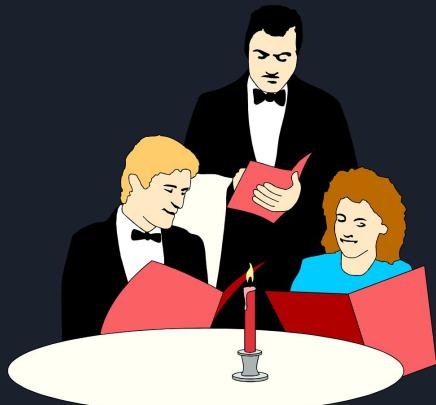


# ARCHITECTURAL STYLES AND PATTERNS

Unix shell: cat input.txt | grep "text" | sort > output.txt



## 3. Pipes and filters



## 5. Client-server



## 4. Event-driven



## 6. Peer to peer



# Goals

- Provide a personalized experience.
- Make your website responsive.
- Security
- Privacy
- Try to address the requirements of various stakeholders.



# REFERENCES

- [https://en.wikipedia.org/wiki/Software\\_architecture](https://en.wikipedia.org/wiki/Software_architecture)
- <https://www.slideshare.net/dehringer/test-driven-development-5785229>
- <https://youtu.be/N8NWDHgWA28>

## Architecture patterns:

- <https://www.youtube.com/watch?v=lTkL1oIMiaU>
- <https://towardsdatascience.com/10-common-software-architectural-patterns-in-a-nutshell-a0b47a1e9013>
- <https://www.youtube.com/channel/UCDhwJtVmUH3ezjKEZskXBBA/videos>

Thank you!

