Analysis and Design Models

Volume of Type of Management System Information Level Information Information Support Level

| Low Consensed | Unstructured | Strategic | Upper | DSS |
|-----------------------------------|--------------------------|--------------------------------|--------|-----|
| Medium Moderately Processed | Moderately Structured | Management Control Information | Middle | MIS |
| Large Detail Reports | Highly Structured | Operational Information | Lower | DPS |

Data Flow Diagram

Accessing / Using an Email Server

Data Dictionary

>100000

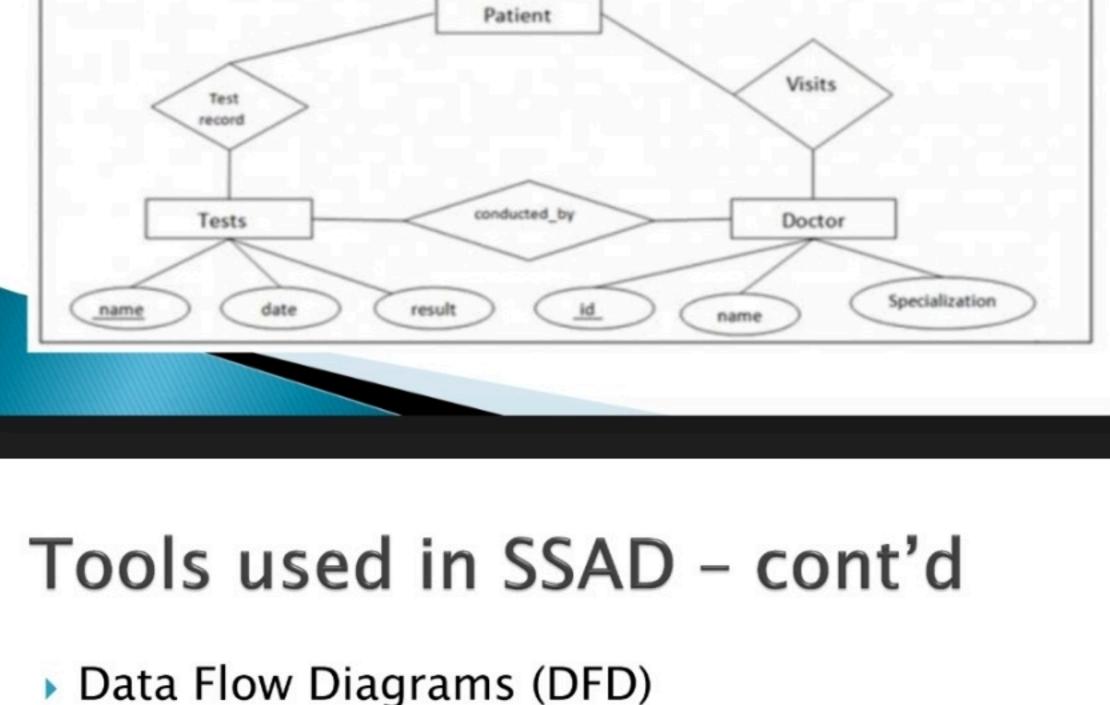
Tools used in SSAD

Visit_date

Send Message

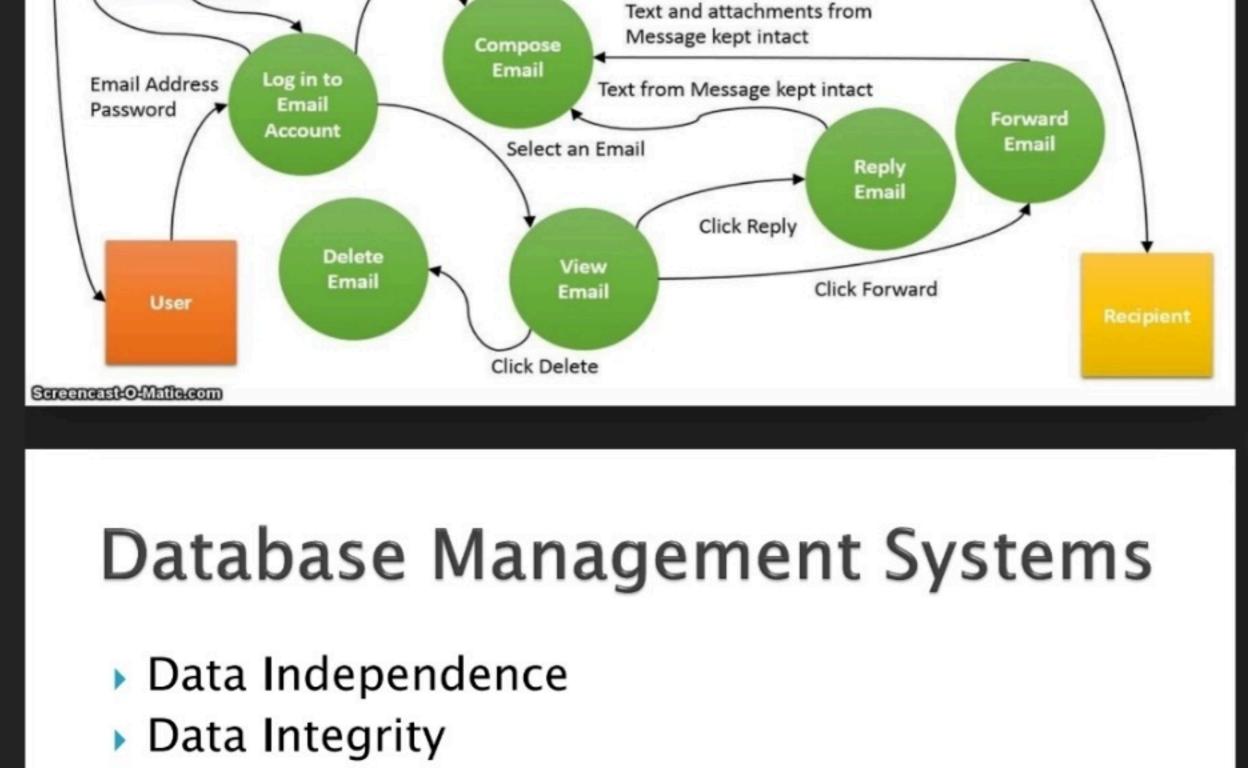
Message

Entity Relationship diagrams (ER Diagrams)



Confirmation of Sent Item

Click Send User Click Compose **Database**



This does not change even if some new fields

emp.dept from EMP-Table where emp.salary

Example: Select emp.name, emp.salary,

are added in EMP-Table or order is changed

More connected to real world examples

Systems are thought about as Objects and

For example - consider a Bank customer

Each Object and the functions that it can do are

doing a transaction in a Bank branch

Both of them can do some functions.

Object Oriented Analysis

their interactions.

Customer is an Object.

Teller is an Object.

considered together.

provide

store and functions

Objects belong to Classes

- OOAD cont'd Data and Operations are not separate as in SSAD

Customer Object contains what type of data

is stored inside and what functions he can

By proper interactions between these Objects,

Teller Object also similarly contains data

required functionality is achieved

OOAD - Cont'd Classes and Objects Inheritance

Private and Public Data storage mechanism

And so on......

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Deposit

System Reporting

System Shutdown

Bad PIN

Print Receipt

Bank

 Encapsulation Data Hiding

Polymorphism - Operator Overloading

software system under OOAD

 Object diagram Use Case diagram

Unified Modeling Language (UML)

Standard way to represent the blue print of a

- Sequence diagram Activity diagram

Diagrams used

Class diagram

Sample Use Case diagram Simple ATM Machine System

Administrator (Third-party)

Bank Customer

System Maintainence

Withdraw

Login

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Transaction

Check Balance

Structured System Analysis

SSAD and OOAD