Bharathidasan University

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Programme Name	:	Bachelor of Computer Applications
Course Code	:	20UCA5CC7
Course Title	:	Software Engineering
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Unit	:	IV
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IMPLEMENTATION

IMPLEMENTATION

- Software Implementation refers to the process of designing, coding, testing, and deploying software applications to a specific target environment.
- This process involves transforming the design and architecture of a software system into a functioning and fully operational software system.

The following are the key stages involved in software implementation:

1. Requirements Gathering

- The first stage of software implementation is to gather the requirements of the software system.

2. Design

- In this stage, the software architects and developers create a detailed design of the software system.

3. Coding

- In this stage, the software developers write the code for the software system based on the design.

4. Testing

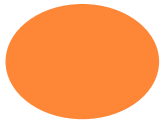
- Testing is a critical part of software implementation as it helps to identify any bugs or defects in the software system.

5. Deployment

- After the software has been thoroughly tested, it is deployed to the target environment, such as a client's data center.

6. Maintenance

- Once the software is deployed, it must be maintained to ensure that it continues to function as expected.



IMPLEMENTATION ISSUE

- Implementation issues refer to the challenges and obstacles encountered during the deployment of a software system.

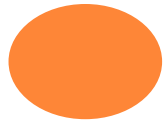
Some of the common implementation issues are:

(i). Inadequate Planning

The lack of proper planning and preparation can result in implementation delays and budget overruns.

(ii). Compatibility Issues

The software system may not be compatible with the existing hardware, software, or infrastructure, leading to implementation problems



(iii). Integration Issues

The software system may not be able to integrate with other systems, causing compatibility problems.

(iv). Technical Challenges

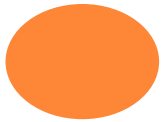
Technical challenges such as data migration, data loss, and system downtime can arise during implementation.

(v). User Acceptance

The end-users may not be accepting of the new software system, leading to resistance and decreased productivity.

(vi). Cost Overruns

The cost of the implementation may exceed the budget, resulting in financial strain on the organization.



DOCUMENTATION GUIDELINES

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Software documentation is the information that describes the product to the people who develop, deploy and use it.

These are some guidelines for creating the documents −

- Documentation should be from the point of view of the reader
- Document should be unambiguous
- There should be no repetition
- Industry standards should be used
- Documents should always be updated
- Any outdated document should be phased out after due recording of the phase out

DATA ABSTRACTION

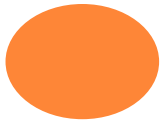
- Data abstraction is the reduction of a particular body of data to a simplified representation of the whole.
- Abstraction, in general, is the process of removing characteristics from something to reduce it to a set of essential elements.

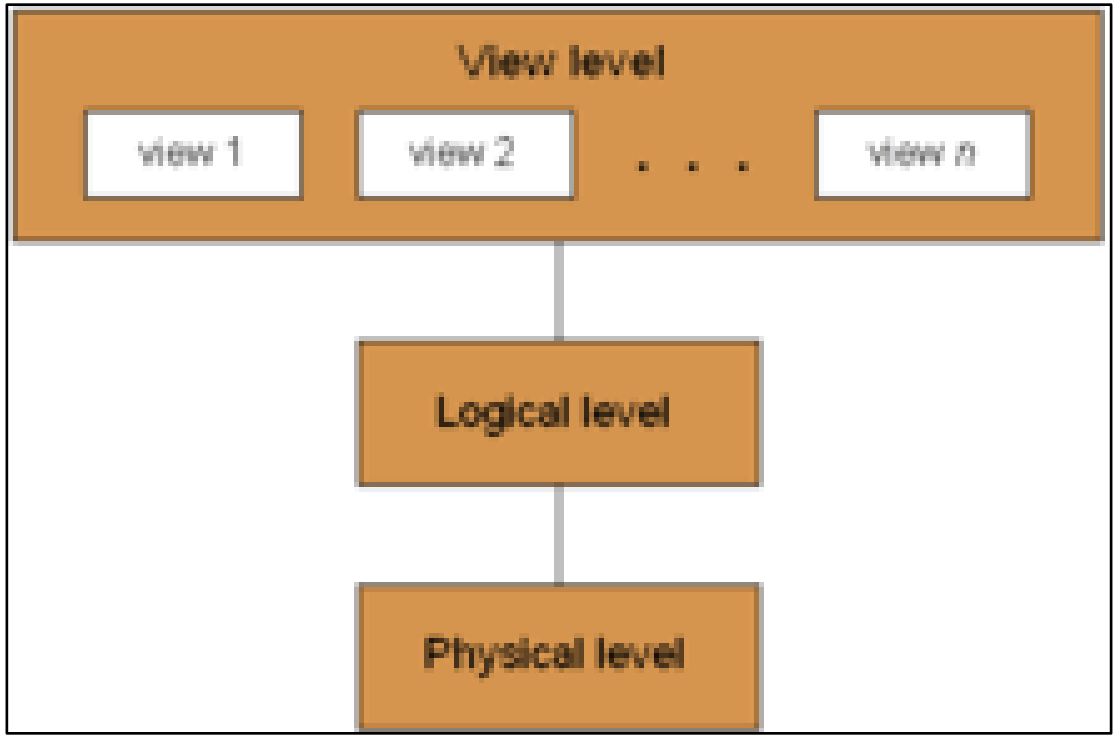
Types of Data Abstraction

Physical: The Physical layer is the lowest level of data abstraction.

Logical: The Logical level indicates the specific types of data in the storage and the connections between the data.

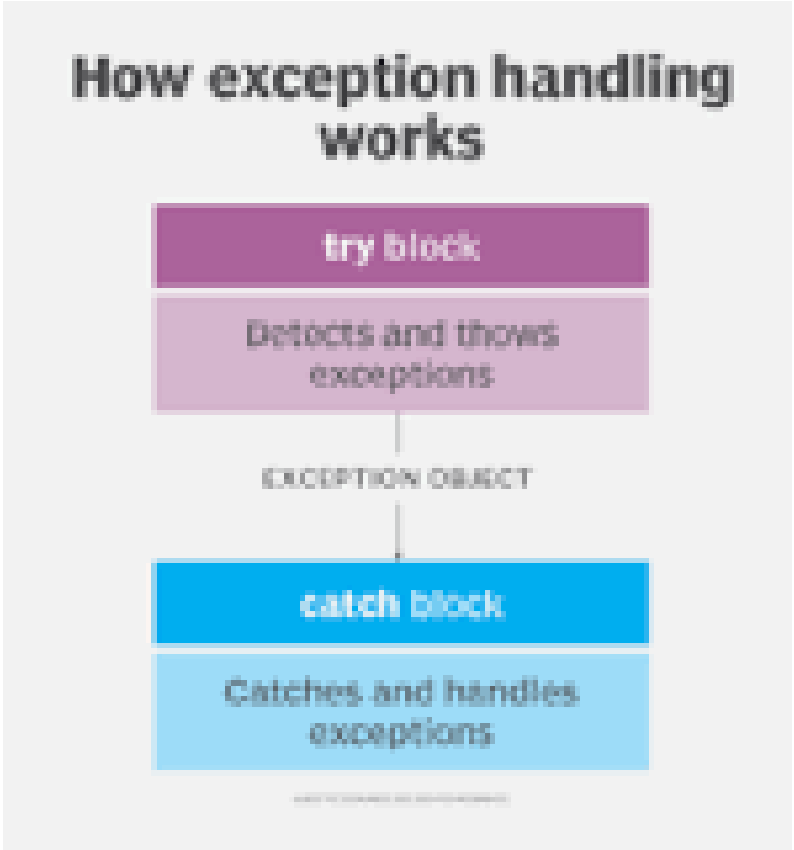
View: The View layer represents the highest level of data abstraction.




View level
view 1
view 2
. . .
view n
Logical level
Physical level

EXCEPTION HANDLING

- Exception handling is the process of responding to unwanted or unexpected events when a computer program runs.



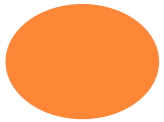
Types Of Error

1. Syntax error

- It is due to poor understanding of the language.

2. Logical error

- It is due to poor understanding of the problem



Exception Handling Mechanism

1. Try

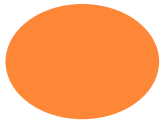
- This keyword is used to write a block of statement which may generate exceptions.
- This block is called try block.

2. Throw

- If an exception is found it is thrown using throw statement.

3. Catch

- This keyword catches the expression thrown by the throw statement from the try block and handle it properly.



THANK YOU