UNIT-I

Introduction To OOAD

MADHESWARI.K
AP/CSE
SSNCE

critical ability of an Object Oriented System?

- A critical ability of **Object Oriented development** is to skillfully **assign responsibilities** to **software objects**.

- It is one activity that must be performed either while drawing a UML diagram or programming and it strongly influences the robustness, maintainability, and reusability of software components.

SSN

Analysis and Design

Analysis

- **Analysis** emphasizes an *investigation* of the **problem and requirements**, rather than a **solution.**

- For example, if a new online trading system is desired, Analysis answers the following questions :

  How will it be used?

  What are its functions?

- "Analysis" is a broad term, and it is refered as *requirements analysis* (an investigation of the requirements) or *object-oriented analysis* (an investigation of the domain objects).

Analysis and Design

Design

- **Design** emphasizes a *conceptual solution* (in software and hardware) that fulfills the **requirements**, rather than its **implementation**.

- For example, a description of a **database schema** and **software objects**. Design ideas often exclude low-level or "obvious" details obvious to the intended consumers.

- Ultimately, designs can be implemented, and the **implementation** (such as **code**) expresses the true and complete realized design.

- As with analysis, the term is best qualified, as in *object-oriented design* or *database design*.

- Useful analysis and design have been summarized in the phrase *do the right thing (analysis), and do the thing right (design).*

SSN

Object Oriented Analysis and Design

- During **object-oriented analysis** there is an emphasis on finding and describing the objects or concepts in the problem domain. For example, in the case of the flight information system, some of the concepts include *Plane, Flight,* and *Pilot*.

- During **object-oriented design** (or simply, object design) there is an emphasis on defining software objects and how they collaborate to fulfill the requirements. For example, a *Plane* software object may have a *tailNumber* attribute and a *getFlightHistory* method (see Figure 1.1).

Analysis concept

Design concept

domain concept

visualization of domain concept

representation in an object-oriented language

Plane
tailNumber

```
public class Plane
{
private String tailNumber;

public List getFlightHistory() {...}
}
```