# Welcome to

# Computer Tutorial Hub

# Computer 1st Year

## Chapter 01

**2025**

## Lecture # 02

# Requirement Gathering

# ➢Requirement Gathering

➢**Functional Requirement**

➢**Non Function Requirement**

# Requirement Gathering

➢ In this initial phase, the goal is to **understand and collect** what the software needs to achieve.

➢ This involves **talking to the people who will use** the software, as well as other stakeholders, to find out their needs and expectations.

# Key Activities Requirement Gathering

## Key activities in this phase include:

➢ **Interviews and Surveys**

➢ **Observations**

➢ **Document Review**

Maqbool Hussain

**Asking questions and collecting feedback** from potential users to understand their needs and preferences.

**Watching how users interact** with current systems to identify problems and opportunities for improvement.

**Looking at existing documents**, such as reports and user manuals, to gather additional information about the requirements.

# Requirements categorized Types

**Requirements are generally categorized into two types**

➢functional requirements.

➢non-functional requirements.

# Functional Requirements

- Functional requirements describe the **specific behaviors or functions** of a system.

- These requirements outline what the system should do and include **tasks, services, and functionalities** that the system must perform.

- They define the interactions between the **system and its users** or other systems.

# Example functional requirements

**Some functional requirements for a Library Management System are:**

➢**User Registration:**

The system should allow users (students, faculty) to register and create an account.

➢**Book Borrowing:**

The system should enable users to search for books and borrow them.

➢**Inventory Management:**

Librarians should be able to add, update, and remove books from the inventory.

# Non-functional requirements

➤ Non-functional requirements define the **quality attributes, performance criteria**, and constraints of the system.

➤ These requirements specify **how the system performs** a function rather than what the system should do.

# Example Non-functional requirements

**Some non-functional requirements for a Library Management System are:**

➤ **Performance:**

The system should handle up to 1000 simultaneous users without performance degradation.

➤ **Reliability:**

The system should be available 99.9% of the time, ensuring high availability and minimal downtime.

➤ **Security:**

User data should be encrypted, and access should be controlled through secure authentication mechanisms.

# Difference B/W Function and Non Functional

| Functional Requirements | Non-Functional Requirements |
|---|---|
| ➤ Define specific behaviors or functions of the system | ➤ Define the quality attributes and constraints of the system |
| ➤ What the system should do | ➤ How the system should perform |
| ➤ Directly related to user interactions and system tasks | ➤ Related to system performance, usability, reliability, etc |

## Maqbool Hussain

# JAZAKALLAH

**Contact at:**

maqbool4090092@gmail.com

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