



# SOFTWARE ENGINEERING

UNIVERSITI MALAYSIA TERENGGANU





KEMENTERIAN PENDIDIKAN TINGGI



# WEEK 11

# DESIGN AND IMPLEMENTATION

Presented by:  
Nama pensyarah,  
School of Informatics & Applied Mathematics  
Universiti Malaysia Terengganu, Malaysia  
Email:\*\*\*\*@umt.edu.my

# OBJECTIVES

**Understand the fundamentals of the design of user interface.**

**Understand the fundamentals of database concepts.**

**Understand the principles of design patterns.**

**Expose to the different open source software development tools.**

# Learning Outcomes

**Construct interface design for input and output process.**

**Explain the fundamentals of database concepts.**

**Design software with design patterns.**

**Use different open source software development tools for software development.**

# Chapter Outlines

**User Interface Design**

**Database**

**Open Source Development**

**Design Patterns**

# User Interface Design

**Navigation Design**

**Input Design**

**Output Design**

# Database

**Databases, Data and Information**



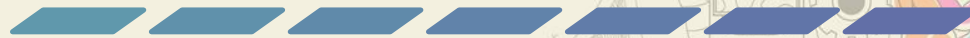
**File Processing vs Databases**



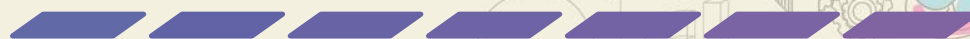
**Database Management Systems (DBMS)**



**Database Types**



**Normalization**



# Design Patterns

**Design Principles**

**Categories of Design Patterns**

**Design Patterns Application in Software Development**



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# Open Source Development

**Open Source Software**

**Open Source Software  
Development Tools**