



FACULTY OF ACCOUNTANCY UNIVERSITI TEKNOLOGI MARA

ACCOUNTING SYSTEM ANALYSIS AND DESIGN

AIS 655

LEARNING PACKAGE: CASE

PROBLEM BASED LEARNING

Session 2

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SYSTEM DESIGN

Management of Lestari Perdana Sdn Bhd(LPSB) decided to outsource the development of the Cash Disbursement system to Al-Wakeel Synergy Sdn Bhd, a prominent company for software development in Malacca. This is because a Purchase Ready-Made software is not considered as the best option for them. Since the system is being outsourced, LPSB needs to wait until the completion of the development, before the system can be tested and implemented. At the same time, the management of LPSB Sdn Bhd faces some issues related to the payroll system. En. Akhyar has asked En. Hakim to assist the finance department to solve these issues, while waiting for the new system being developed.

Database Design

En. Hakim proposed the database for the payroll management system by using the Microsoft Access. The database will be mainly used to store information about the LPSB Sdn Bhd's employees, the positions, and the branches. LPSB Sdn Bhd adopts the policy of "no overtime" to all of the staff to ensure that they have quality time with their families.

The designed database should support the following requirements:

- i. For an employee, store his/her employee ID, name, IC number, date of birth, gender, address, contact no., contact person, position code, branch ID, salary, allowance, EPF, SOCSO, and photo.
- ii. For branch, store the branch ID, branch name, address, contact no. and manager name.
- iii. For position, store the position code and name.

The relationships of the entities are as below:

- i. One branch can employed many employees, and one employee is stationed in one specific branch.
- ii. One position can be allocated to many employees, but each employee is appointed to one position only.

Required:

- a) Explain four (4) advantages of Database Management System(DBMS). **(8 marks)**
- b) Based on the above entities, identify the primary key for each of the entities. What is the purpose of assigning the primary key? **(5 marks)**
- c) Specify the relationship between these entities. Draw the Entity-Relationship Diagram (ERD) to illustrate the relationship. **(5 marks)**
- d) Discuss three (3) characteristics of web-based design. **(6 marks)**
- e) Discuss three (3) coding methods commonly used for system design. **(6 marks)**

- f) Compare and contrast three (3) types of network topology. **(6 marks)**
- g) Create a database using Microsoft Access. The tables should reflect the entities in the narration. Your database should also contain the following information:

1. A **start page** with Lestari Perdana Sdn Bhd logo, name of the system (Payroll System) and two buttons as below
 - i. One button was linking to the main menu and labeled as “ENTER.”
 - ii. One button is for the user to quit the application and labeled as “EXIT.”

Create this page using the form in the form design option. You must set this page to appear when the user first enters the system.

(4 marks)

2. The **main menu** with buttons linking to the **forms, queries, and reports**. You need to help users to navigate through the database.

(5 marks)

3. Create three (3) more forms, which are **employee form, branch form, and salary slip form**. **(6 marks)**

You need to use relevant data in **Queries** as part of your **FORM’s design**. Use your creativity to design these forms. The forms should have:

- i. One button to navigate to the next page and labeled as “NEXT” or you can use any appropriate sign
- ii. One button to navigate backward labeled as “BACK” or any appropriate sign
- iii. One button to **save records**
- iv. One button to **exit**
- v. One button to **print**
- vi. One button to **create a new record**
- vii. The use of a combo box to **create a drop-down menu in salary slip form**

(7 marks)

4. **Queries** for:

- i. Total salary
- ii. EPF deduction
- iii. Net salary

(6 marks)

5. **Reports** for:

- i. List of all employees with other relevant information
- ii. EPF deduction with other relevant information
- iii. Net salary with other relevant information

(6 marks)

6. **Create a dummy table** for the following: **(10 marks)**

- i. 30 employees
- ii. 10 positions
- iii. 5 branches

Note: Additional 10 marks will be awarded for the overall design and creativity of the database **(10 marks)**

SYSTEM IMPLEMENTATION & SYSTEM SUPPORT AND SECURITY

Once the development process in Al-Wakeel Synergy Sdn Bhd is completed, it is ready for the testing phase. The testing is necessary to ensure the new system has no defect that could lead to system failure.

The implementation phase is the process of installing a new system and putting it to use. Executing implementation activities involve carrying out of the design plan. Its covers selecting and training system users, site preparation and installing new computer equipment, file conversion and system conversion

- a) Briefly explain any four (4) types of system testing. **(8 marks)**

- b) Explain the type of documentation that is essential for successful system operation and maintenance. **(8 marks)**

- c) What is the system changeover? Discuss any three (3) of the system changeover **(8 marks)**

- d) The maintenance phase occurs once the system is operational. It includes implementation of changes that the system might undergo over a period of time. Explain any three (3) types of maintenance task.

(6 marks)

TOTAL : 120 Marks

END OF PBL 2