



MTS CERTIFICATION

ERP DATABASE SYLLABUS



Approved by USAID/ADM II, Washington DC,
@ George Washington University, Marvin
Center, USA
6/22/2012



MTS CERTIFICATION

PROJECT OF BTC, USAID/ADM II COMPANY

SYLLABUS AND PROJECTS

ERP DATABASE QUALIFICATIONS

2013-2017

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ERP DATABASE ADMINISTRATION I

1. AIMS

The aims of this syllabus are:

- a) to develop the basic use of Oracle SQL and its application to ERP Database Administration
- b) to lay a good foundation in Oracle PL/SQL for higher learning in ERP database
- c) to generate Management Information Systems Reports for Banking and Financial Institutions, Oil and Gas Companies, Manufacturing and Trading Companies, Mining, Agric and Health Sectors
- d) to equip candidates with technical knowledge in ERP database Reports to function as ERP MIS Administrator

2. TARGET POPULATION

- a) This syllabus is designed for candidates who have passed the Higher National Diploma certificate examination or university degrees or equivalent diplomas in Marketing, Management, Accounting, Human Resource Management, Information Technology, Project Management, and Business Studies.
- b) Mature employees with or without any of the qualifications specified in (2.a) above but who need to acquire qualification in ERP Database Administration to enhance their promotion
- c) Candidates with HND or degrees but not in the discipline specified in (2.a) may also apply.

3. FORM OF THE EXAMINATION

The examination will consist of three (3) hour paper. Candidates will be expected to answer four (4) questions out of seven (7) questions. Question 1 carries 40 marks while others carry 20 marks each

4. DURATION OF STUDY

A minimum period of four (4) hours per week will be sufficient to cover the syllabus fully in six months

5. DETAILED SYLLABUS

ID	TOPIC	COURSE OBJECTIVES
1	MTS Certification and ERP Database	<ul style="list-style-type: none"> • MTS Certification: Mission and Vision, Its Mother Company, Its Approval by ADM II, Application Fields • What is ERP, Difference between ERP and Accounting Software Packages, • Examples of ERP Packages (Cloud ERP, SAP, Sage, Tally); • ERP Modules (Production, CRM, SCM, HRM, Finance) • Database: Oracle Database, PL/SQL Developer, Creating Users and Granting Privileges, SQL and its Origin (IBM), RDBMS (Oracle, PowerEngine, SQL Server, MySQL...etc)
2	SQL Components	<ul style="list-style-type: none"> • DDL: Create Table, Drop Table, Rename Table, Add Column, Drop Column, Create Index, Create Primary and Foreign Key • DML : Insert, Insert All, Delete, Update • DCL: Create User, Drop User, Grant, Revoke • SELECT Queries: SELECT...FROM, WHERE, ORDER BY
3	SQL Queries and Views	<ul style="list-style-type: none"> • UNION Queries: Union multiple monthly Expenses Data, Build Classic and Standard Customers Reports, difference between UNION and UNION ALL • JOIN Queries: Customers payment report using Payments (CustID, Amount, PayDate) ; CustomersList (CustID, CustName, Address, Email). • DUPLICATION OF NUMERIC VALUES WITH JOIN: Use of Union instead of Join. • Difference between LEFT JOIN and RIGHT JOIN, INNER JOIN and Simple JOIN • SUB QUERIES (Not In, IN...etc)
4	ERP Reports (Trading, Banking and Crude Oil Database)	<ul style="list-style-type: none"> • Trading Operations, • Customers Accounts and CRM, • Suppliers Accounts and SCM and • Inventory Reports • Banking Database • Oil and Gas Production Database

6	Functions (Queries Boosters)	<ul style="list-style-type: none"> • String Functions, • Numeric Functions, • Date functions
7	PL/SQL Procedures	<ul style="list-style-type: none"> • Procedure with PL/SQL Views, • Procedures with INSERT Statement • Customers Account Procedure • Suppliers Account Procedure • Inventory Account Procedure
8	Oracle Database Administration I	<ul style="list-style-type: none"> • Oracle DBA Workshop I Course training

6. NOTES FOR GUIDANCE

TOPIC 1: MTS CERTIFICATION AND ERP DATABASE

- Candidates should understand that MTS is a project of BTC, a US based company and BTC project was endorsed by ADM II, 22nd June 2012, George Washington University, Marvin Center, Washington DC, USA
- Understand ADM and its Partners: (USAID and Western Union)
- MTS Application fields (Telecom, Banking, Oil and Gas, Manufacturing, Agric ERP, Mining, Health IT)
- MIS Engineers Position: (MIS Engineers or MIS Administrator, Data Warehouse Administrator, Database Administrator, Data Mining Engineers or Data Mining Operators, Explorative Database Administrator (Oil and Gas))
- MTS Mission and Vision, its Key Words: **Telecom** and **ERP Database**. Correct understanding of these three (3) keywords
- Understanding of ERP, ERP Modules and examples of ERP Software Packages
- Understand how to create user and grant privilege using Oracle PL/SQL Developer

TOPIC 2: SQL COMPONENTS

- **DDL**: Candidates should have good understanding of creating tables, data types, adding or dropping columns from a table, dropping tables. Emphasis should be laid on Customers table, incoming_Payments table by the credit customers.
- **Keys**: Creating Unique Index, Advantages and disadvantages of Index, Primary key and foreign key (Customers table as a primary table and Incoming_Payments as a foreign table). Difference between Primary Key and Unique Index : (Primary Key = Unique Index + Not Null)

- **DML:** Candidates should master data entry using Insert, Insert All, Update especially incrementing Unit price of a product by 10%, 12%...etc and Delete. They must also know that DML codes are referred to as transactions and must always be committed
- **DCL:** Emphasis should be laid on create user, drop user, grant and revoke
- **Select statement** must include WHERE with Date field Criteria, Numeric field criteria and character field criteria. Order By must also be used with ASC and DESC. Simple WHERE to display a particular subscriber or prepaid or postpaid subscribers. Group By should be used with SUM. Other aggregate functions will be introduced later in Query Boosters.

TOPIC 3: SQL QUERIES AND VIEWS

- Candidates should have good understanding of Union queries, different between Union and Union All. They should be able to use Union Query to union customers from many regions (Regional Customers Report).
- They should understand the difference between INNER JOIN, LEFT JOIN and RIGHT JOIN. Disadvantages of JOIN Queries especially in duplicating numeric values.
- Understand the Sub Queries and its importance, especially with NOT IN and IN. Customers and Incoming_Payments tables can be used to illustrate

TOPIC 4: TRADING ERP REPORTS

- Candidates should be able to analyze trading transactions in order to tabulate the data, create tables and insert the data into it.
- Candidates should be able to work with credit transactions and how to generate their customers and suppliers accounts.
- Candidates should also be familiar with examples from Banking and Oil and Gas data
- Candidates should understand the difference building customers accounts with JOIN queries and UNION queries. Emphasis should be laid on UNION Queries accounts building techniques for correct and accurate records.

TOPIC 5: FUNCTIONS / QUERIES BOOSTERS

- Oracle Functions: TO_CHAR, TO_NUMBER, TO_DATE, TRUNC; LENGTH, TRIM, UPPER, LOWER, INITCAP, SUBSTR; SUM, MAX, MIN, AVG, COUNT
- JET Functions: LEFT, RIGHT, MID,LEN, FORMAT, TRIM, LTRIM, RTRIM, UCASE, LCASE; CDATE, CSTR, CDBL, CSNG, CLNG, CINT,CCUR; DATEPART, DATEDIFF, DATEADD, MONTH, DAY, YEAR, WEEKDAY
- Candidates should be able to use them to boost the performance of queries

TOPIC 6: PL/SQL PROCEDURES

- Candidates should be able to create procedures with views and insert and with variables. Create table from existing SQL Statements and use in the procedure.
- They should also be able to test their procedure and debug.

TOPIC 7: DATABASE ADMINISTRATION I

- Candidates should know how to export and import tables, objects and data

ERP DATABASE ADMINISTRATION II

1. AIMS

The aims of this syllabus are:

- a) to equip candidates with higher technical knowledge to function as ERP MIS Engineer or ERP Database Administrator in international firms
- b) to empower candidates with good command in PL/SQL Programming to develop applications for Banking and financial institutions, oil and gas companies, agribusiness, and manufacturing firms

2. TARGET POPULATION

- a) This syllabus is designed for candidates who have passed the MTS ERP Database Administration I
- b) Mature employees without the qualification specified in (2.a) above but has equivalent diploma from recognized institution acceptable to MTS will be considered for outright exemption.

3. FORM OF THE EXAMINATION

The examination will consist of three (3) hour paper. Candidates will be expected to answer four (4) questions out of seven (7) questions. Question 1 carries 40 marks while others carry 20 marks each

4. DURATION OF STUDY

A minimum period of four (4) hours per week will be sufficient to cover the syllabus fully in six months

5. DETAILED SYLLABUS

ID	TOPIC	COURSE OBJECTIVES
1	PL/SQL Variables and Constants	<ul style="list-style-type: none">• Explain Variables and Constants, Data types, Declaration and Assigning values to Variable• Assign value to variable from Database• Use Date Variable to create ATM_Summary Project, Life_Insurance Project that loads the

		report daily into the summary report table (Project #: ERP201)
2	PL/SQL Control Structures	<ul style="list-style-type: none"> • If Condition, • For..Loop, • Simple Loop, • While Loop, • Case
3	PL/SQL Records	<ul style="list-style-type: none"> • What is Records • Records Application in Database • ROWTYPE declaration • Using Records to select Data
4	PL/SQL Cursors	<ul style="list-style-type: none"> • Implicit Cursors • Explicit Cursors • Cursor with Simple Loop, While Loop, For.. Loop • Cursors with Onnet, Offnet, International, Peak, OffPeak and Late Night Calls
5	Banking Database and Reports	<ul style="list-style-type: none"> • Annuity Functions: FV, IPmt, NPer, Pmt, PPmt • Oracle Banking Reports: Deposit Liabilities, Primary and Secondary Reserves Assets, Level Held and Required Level Reports • Microsoft Banking Reports: Crosstab Query, Loan Repayment Report • Insurance Reports: Educational Life Insurance
6	Manufacturing Operations	<ul style="list-style-type: none"> • Overall Equipment Effectiveness (OEE) • Production and Inventory <ul style="list-style-type: none"> ○ Extrusion-Printing-Slitting and Cutting ○ Injection and Blow Mold ○ ROTO Mold ○ PET-PREFORM
7	Other OM Reports	<ul style="list-style-type: none"> • Healthcare MIS Reports • Agric ERP Database • Oil and Gas, and Mining Database
8	Industrial Payroll	<ul style="list-style-type: none"> • Basic Pay • Normal Overtime Pay • Off Day Overtime Pay • Weekly Holiday Overtime Pay • Yearly Holiday Overtime Pay
9	Oracle Database Administration II	<ul style="list-style-type: none"> • Oracle Enterprise Manager • Oracle DBA Workshop II

6. NOTES FOR GUIDANCE

7. PART I ERP MIS REPORTS

TOPIC 1: PL/SQL VARIABLE AND CONSTANTS

- Candidates should be able to explain variables and constants, assign values to them, assign values to variables directly from a database
- They should use the Adjustments table to get the mobile money transactions of a typical telecom company in their country, to compute previous day summary transactions, previous week transactions, previous month and previous year transactions

TOPIC 2: PL/SQL CONTROL STRUCTURES

- **If Condition:** Candidates should be able to load data from employees table to a variable. If salary is greater than x value, then update the employee salary by 10% or if salary is lower than x value then update the salary by 12%.
- **Simple Loop:** Candidates should be able to use the if condition with Exit to stop the simple loop.
- **While Loop:** Candidates should be able to use While Loop to load data for the previous 180 days
- **For Loop:** Candidates should be able to understand For Loop and use to load records for the previous 180 days.
- **Case:** Use Case to write the scripts in the If Condition to update the employee's salary.

TOPIC 3: PL/SQL RECORDS

- Candidates should know how to use %type to declare variables and constants (`employee_salary employee.salary%type;`), using %ROWTYPE to declare record (`record_name table_name%ROWTYPE;`),
- Assign values to record using select statement (`SELECT col1, col2 INTO record_name.col_name1, record_name.col_name2 FROM table_name [WHERE clause];`)
- Assign values to ROWTYPE records (`SELECT * INTO record_name FROM table_name [WHERE clause];`)
- Retrieving values from Records (`var_name := record_name.col_name;`)

TOPIC 4: PL/SQL CURSORS

- Candidates should be able to use implicit and explicit cursors, use records with cursors, use cursors with For loop. They should know how to use SQL%FOUND, SQL%NOTFOUND, SQL%ROWCOUNT for implicit cursor
- **Implicit Cursor:** You have been employed by a Telecom company which uses Fingerprint machines to register the employees' attendance. You have been given the Employees table and the attendance table which contains employeid and attendancedate. Use Implicit cursor to write a procedure that loads the employees absent into a table called Absenteism. If x number of employees is absent on a particular day, then load the remarks into another table called TotalAbsent (Date, Remarks). The remark should be either: x employees absent or No employee absent.
- **Explicit Cursor:** How to declare record and explicit cursor (emp_rec emp_tbl%rowtype; CURSOR emp_cur IS SELECT * FROM WHERE salary > 10;) and how to open cursor, fetch cursor and close cursor (OPEN cursor_name; FETCH cursor_name INTO record_name or FETCH cursor_name INTO variable_list; and CLOSE cursor_name;), use explicit cursor attributes such as ISOPEN, cursor_name%FOUND; cursor_name%NOTFOUND, cursor_name%ROWCOUNT
- Candidates should be able to use the loops with Cursor but emphasis should be laid on using For Loop with cursor. The Absenteism assignment in the implicit cursor paragraph above should be reproduced for the previous 30 days using For Loop explicit cursor.

TOPIC 5: BANKING DATABASE AND REPORTS

- **Annuity Functions:** Future Value (FV), Interest Payment (IPmt), Number of Payments (NPer), Payment for an annuity (Pmt), Principal Payment (PPmt) for a given period of an annuity based on periodic, fixed payments and a fixed interest rate. Interest Rate (Rate), using Microsoft Excel or MS Jet Database.
- **Oracle Banking Reports:** Candidates should be able to prepare MIS Reports related to Deposits Liabilities, Primary and Secondary Reserves Assets: weekly and monthly and yearly for higher authority
- **MS Banking Database:** Candidates should be able to prepare reports from other banking applications built on Microsoft Jet Database, MS SQL Server, Foxpro, Dbase, Lotus, Paradox. Other Jet Functions: DatePart, DateAdd, DateDiff, Weekday, Month, Day, Year, Format; LTrim, RTrim, Trim, Len, Ucase, Lcase, Left, Right, Mid; Sum, Min, Max, Avg, Count; Primitives Data Types and conversions functions: Integer, Long,

Currency, Single, Double, Date, Datetime, LongBinary; Cint, CLng, CCur, CSng, Cdbl, Cdate, CBool, CStr

- **Insurance Reports:** Candidates should be able to use annuities functions to prepare MIS Reports related to Life Assurance (Educational Life Assurance).

TOPIC 6: MANUFACTURING OPERATIONS

- **OEE:** Understanding Production and Operations Management (POM), What is OEE: (Overall Equipment Effectiveness) and how to apply OEE to Manufacturing industries, Oil and Gas, Mining, Agric and to the service industry (Banking, Telecom and Health Service).
- **Production Database:** Understanding Injection molding Production, Daily Raw Materials Report, Summary Raw Materials Report, Daily Production Summary Report, Assembly Report, Finished Products Reports, Warehouse Transfer Report, Inventory Report. Candidates should use **ROTO** molding industries, blow molding industries and **PET/PREFORM** industries as case study.

TOPIC 7: OTHER POM REPORTS

• HEALTH MIS REPORTS

1. Candidates should be able explain Health MIS and how Health Management Information System will help achieve the following development goals :
 - **Improved linkages between diagnostics and treatment**
 - **Improved quality and use of strategic information in decision making**
 - **Increased human resource capacity for service delivery and management**
 - **Strengthened Health Research Capacity**
 - **Strengthened, integrated healthcare referral systems**
2. Candidates should be able to produce health MIS Reports

• AGRIC ERP DATABASE

3. Candidates should be able explain Agric ERP and how Agric ERP can help farmers **Feed The Future** with
 - **Increased agricultural productivity,**
 - **Increased Market Access and**
 - **Increased Access to Credit**
4. Candidates should be able to produce Agric ERP Reports

- **OIL, GAS AND MINERAL RESOURCES**

5. Candidates should be able explain OGM ERP and how it can help to achieve:
 - **Improved governance in the energy sector**, (As an MIS Engineer, how can you improve the governance in the energy sector)
 - **What actions will you take to improve the local community management of natural resources**
6. Candidates should be able to produce OGM ERP Reports

TOPIC 8: INDUSTRIAL PAYROLL

- **Basic Pay and Normal Overtime Pay**

7. Setup the Overtime Rate, Yearly holidays, record hourly jobs done, employee database with daily rate or hourly rate
8. Calculate the basic pay or consolidated pay and normal overtime pay (overtime of working more than eight (8) hours from Monday to Friday)
9. Schedule the job

- **Saturday, Sunday and Holiday Overtime Pay**

10. Calculate the Off Day Overtime (Saturday), Weekly Holiday Overtime (Sunday), and the Yearly Holiday Overtime
11. Schedule the job

TOPIC 9: ORACLE DATABASE ADMINISTRATION

- Candidates should have thorough understanding of the Oracle Components and architecture, Oracle Networking (TNS, Net Manager, Client Configuration), Users Management and Administration.

ERP II PROJECTS

- 1. Project #: ERP201 – Variables**
- 2. Project #: ERP202 – Banking ATM Daily Summary (Variables)**

You have been employed by a Bank that has its ATM Data stored in a table called ATM_Operations with the following fields: Startdate, AccountNo, AccountName, AccountType, Bank, Branch, Country, Amount_Withdrawn.

You are required to write a PL/SQL Procedure which will summarize the total withdrawals and the number of withdrawals of previous day transactions for each customer per day and then loads them into a summary table called : ATM_Daily_Summary

3. Project #: ERP203 – IF...Then (Monthly ATM Report)

Mr. DOGO has been employed by Citi Bank. The bank has stored the ATM transactions in ATM_Operations table with the fields: Startdate, AccountNo, AccountName, AccountType, Bank, Branch, Country, Amount_Withdrawn.

You are required to write a PL/SQL Procedure which will summarize the total withdrawals and the number of withdrawals of current month transactions for each customer per month and loads them into **atm_month_sum_by_customer** (rptmonth, accountno, acountname, totalwithdrawals, countofwithdrawals) and into **atm_month_sum** (rptmonth, totalwithdrawals, countofwithdrawals)

Additional Information: The job will be scheduled to run on 23:59, on January 31, February 28, March 31, April 30, May 31, June 30, July 31, August 31, September 30, October 31, November 30, December 31. The job must be done with IF Statement.

```
Create Table atm_month_sum
(
  rptmonth Varchar(20),
  Atm_Total number(20,2),
  Atm_count number
)
```

```
Create Table atm_month_sum_by_cust
(
  rptmonth Varchar(20),
  AccountNo Varchar(12),
  AccountName Varchar(70),
  Atm_Total number(20,2),
  Atm_count number
)
```

4. Project #: ERP204 – IF...Then (Yearly ATM Report)

Mr. Ben was employed by Barclays Bank. The ATM data of the Bank was stored in ATM_Operations and the bank wants him to write a program that loads the yearly summary data on Dec_31 very year into the table **atm_year_sum** (rptyear,

accountType,countofwithdrawals, totalwithdrawals), and into another table called: **atm_year_sum_by_customer** (rptyear, accountno, accountname, countofwithdrawals, totalwithdrawals).

The Bank added that they want to load the summary of the previous 12 years data into each of the tables.

Required: Write the PL/SQL procedure for yearly data loading and another procedure with For...Loop to load the previous 12 years summary into the two tables.

```
Create Table atm_year_sum
(
  rptyear Varchar(20),
  AccountType Varchar(24),
  TotalWithdrawals number(20,2),
  CountOfWithdrawals number
)

Create Table atm_year_sum_by_cust
(
  rptyear Varchar(20),
  Accountno varchar(30),
  AccountName Varchar(70),
  TotalWithdrawals number(20,2),
  CountOfWithdrawals number
)
```

5. Project #: ERP205 – For X in 1..6 loop---End Loop

Assuming you've been employed in July and the company wants you to write a procedure that will loads the January to June monthly summary data into the ATM_Month_sum table. Write the code using For Loop

1. Project #: ERP206 – Simple Loop and While Loop

Use Simple Loop and While Loop to calculate the monthly ATM summary from January to June of this year.

6. Project #: ERP206 – 12 months

Compute the ATM Summary from January to December of the current year. Use For Loop

7. Project #: ERP207 – CASE Statements

Like the IF statement, the CASE statement selects one sequence of statements to execute. However, to select the sequence, the CASE statement uses a selector rather than multiple Boolean expressions. A selector is an expression whose value is used to select one of several alternatives.

To compare the IF and CASE statements, consider the outputs descriptions of project # ERP202. In each instance, we test whether the same variable, **endofmonth**, is equal to one of 12 values: 'January_31', 'February_28', 'Mar_31', 'April_30', or 'May_31', or 'June_30', 'July_31', 'Aug_31', 'Sep_30', or 'Oct_31', or 'Nov_30', 'Dec'

8. Project #: ERP208 – Using Records, single value

9. Project #: ERP209 – Using Records, multiple values, For Loop

Mr. Roger Smith has been employed by AT Telecom as an ERP MIS Engineer to work with Human Resource Manager. The Boss asked you to run the payroll database for the 700 employees of the company. The tables to use are as follows: Employees(Empid, Empname), Tax(EmpID, taxvalue), SSNIT(Empid, ssnitamout), salary(Empid, salaryamount).

Write the scripts that will run the payroll and load the data into the table PAYROLL which has Empid, EmpName, Salary, Tax, Ssnit as fields. Use Records with For Loop.

```
create table payroll
(
  Empid varchar(30),
  empName varchar(70),
  Salary number(20,2),
  Tax number(20,2),
  Ssnit number(20,2)
)
create table tax(empid varchar(30), tax number(20,2))
create table ssnit(empid varchar(30), amount number(20,2))
Create table Salary(empid varchar(30), Salary number(20,2))
Create table Employees(empid varchar(30), EmpName varchar(70))
```

10. Project #: ERP210 – Records with implicit Cursor, Absenteeism project

11. Project #: ERP211 – Records with Explicit Cursor / Absenteeism Project

12. Project #: ERP212 – ATM Daily Summary with Cursor

Mr Jerry, an MIS Engineer of Barclays Bank has developed Oracle PL/SQL Procedure that summarizes daily, the total withdrawals and the number of withdrawals of previous day transactions for each customer and then loads them into the table: ATM_Daily_Summary.

The Bank is requesting the MIS Engineers team to update the code to ensure that:

- When the job run successfully, a remark should be put into a joblevel table as 'successful'
- When failed, it should also be notified in the table so that appropriate measures could be taken to correct the problem.

You are required to rewrite the PL/SQL Procedure. Use Implicit Cursor

13. Project #: ERP213 – Banking, Annuity (Loans Management)

Annuity Functions: An annuity is a series of fixed cash payments made over a period of time. An annuity can be a loan (such as a home mortgage) or an investment (such as a monthly savings plan).

The rate and nper arguments must be calculated using payment periods expressed in the same units. For example, if rate is calculated using months, nper must also be calculated using months. Annuity functions are Microsoft based functions and can be used in Microsoft Excel and PowerEngine Database. They are FV, IPMT, NPER, PMT, PPMT, PV

14. Project # ERP214: Annuity Payments – PowerEngine Cloud ERP or Excel

Barclays is giving loans to its customers and has asked the MIS Engineers to extract customers' monthly deposits data for a period of two years. The Annual Percentage Rate (APR) is 12% per annum and the bank is giving the loans to its customers for five years.

You are required to prepare a report to calculate the monthly deposit and the loan value that can be awarded to each customer and the monthly payments that each customer will pay as Loan Repayment monthly. The Customer_Deposits has the fields: Startdate Date, AccountNo Varchar, AccountName Varchar, Deposit Number). The Loan_Awards (with the RptMonth varchar, AccountNo varchar, AccountName varchar, MonthDeposit varchar, LoanAwarded Number, MonthlyLRPMT number) is the reporting table. Use PowerEngine Cloud ERP or SQL Server to write the scripts.

15. Project #: ERP215 – Annuity – FV, IPMT, PPMT

Calculate the Future Value (FV) of the LoanAwarded, Interest Payment (IPMT) and Principal Payment (PPMT) for the 1st period, 2nd period and the 59th period. Use the **LoanPresentValue** view

16. Project #: ERP216 – Banking / Loan Customers Accounts

- Customers Actual Loan Repayment data (IncomingPayments)
- Customers Actual Loan Awarded Data (Credit Sales)
- Customers Loan Account

17. Project #: ERP218 – Educational Life Insurance

Mr. Gordon was employed by American Life Insurance Company. The company receives payments from thousands of its policy holders monthly.

The Company is asking Mr. Gordon to write a PL/SQL Procedure that will summarize the contributors' payment monthly and loads them into the ALife_Monthly_Summary table at the end of every month on one hand and load the yearly total contributions and number of payments per members into ALife_Yearly_Summary.

The **ALife_Contributions** table has these fields (Startdate date, PolicyID varchar, PolicyHolder varchar, Bank varchar, PolicyHolderBankAccountNo varchar, Contribution number). **ALife_Month_Summary** (RptMonth, PolicyID, PolicyHolder, BankACNo, TotalContribution). **ALife_Yearly_Summary** (RptYear, PolicyID, PolicyHolder, BankACNo, TotalContribution, NberOfPayments)

18. Project #: ERP218 – Central Bank Weekly Report

19. Project #: ERP219 – Central Bank Monthly Report

20. Project #: ERP220 – Central Bank Yearly Report

21. Project #: ERP221 – Production: Shift Reports

22. Project #: ERP222 – Production: Summary Report

23. Project #: ERP223 – Production: Raw Materials Report

24. Project #: ERP224 – Production: Inventory Report

25. Project #: ERP225 – OEE: Availability Report

26. Project #: ERP226 – OEE: Performance Report (Weight and Quantity)

27. Project #: ERP227 – OEE: Quality Report (Weight and Quantity)

28. Project #: ERP228 – OEE Report: Availability X Performance X Quality

29. Project #: ERP229 – Production: Operators Performance Report

30. Project #: ERP230 – Production: Machine Contribution to total Output

31. Project #: ERP231 – Production: Monthly and Yearly Production Report

32. Project #: ERP232 – AGRIC ERP: Production Reports

33. Project #: ERP233 – AGRIC ERP: Sales and Accounts Receivables

34. Project #: ERP234 – HEALTH MIS: Patient Folder Database

35. Project #: ERP235 – HEALTH MIS: Theatre Database

36. Project #: ERP236 – HEALTH MIS: Endoscopy Database

37. Project #: ERP237 – HEALTH MIS: Maternity Database

38. Project #: ERP238 – HEALTH MIS: Mortality Reports

39. Project #: ERP239 – OIL AND GAS: Crude Oil Production Database

40. Project #: ERP240 – OIL AND GAS: Oil Field Efficiency

41. Project #: ERP241 – HRM Payroll: Employees and Attendance Database

- 42. Project #: ERP242 – HRM Payroll: Normal / Overtime Pay**
- 43. Project #: ERP243 – HRM Payroll: Off Day Overtime Pay**
- 44. Project #: ERP244 – HRM Payroll: Weekly Holiday Overtime Pay**
- 45. Project #: ERP245 – HRM Payroll: Yearly Holiday Overtime Pay**

SQL ACCOUNTS REPORTS

1. AIMS

The aims of this syllabus are:

- e) to develop the basic use of SQL Accounts Technology to solve accounting problems for business organizations
- f) to lay a good foundation in Enterprise Resource Planning (ERP) System implementation
- g) to equip candidates with technical knowledge in generating financial reports with the Structured Query Language

2. TARGET POPULATION

- d) This syllabus is designed for candidates who have passed the Higher National Diploma certificate examination or university degrees or equivalent diplomas in Telecom, Marketing, Management, Accounting, Human Resource Management, Information Technology, Project Management, and Business Studies.
- e) Mature employees with or without any of the qualifications specified in (2.a) above but who need to acquire qualification in SQL Accounts Reports to manage to manage their business finance with SQL Accounts Technology
- f) Candidates with HND or degrees but not in the discipline specified in (2.a) may also apply.

3. FORM OF THE EXAMINATION

The examination will consist of three (3) hour paper. Candidates will be expected to answer four (4) questions out of seven (7) questions. Question 1 carries 40 marks while others carry 20 marks each

4. DURATION OF STUDY

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5. DETAILED SYLLABUS

ID	TOPIC	COURSE OBJECTIVES
1	SQL Accounts Technology	<ul style="list-style-type: none">• Business Organizations• Explain Bookkeeping and SQL Accounts

		<ul style="list-style-type: none"> • Explain the double Entry system (trading Accounts) <ul style="list-style-type: none"> ○ Relating to Purchasing and Sales of Goods ○ Relating to Incomes and expenses accounts ○ Relating to Balance Sheet Accounts
2	Managing Companies Accounts with SQL Accounts Technology	<ul style="list-style-type: none"> • Introduction to PowerEngine Accounting Structure • Implementing ERP for Manufacturing Industries (Products) <ul style="list-style-type: none"> ○ Injection and Blow Molding, ○ ROTO Molding, ○ Plastic Extrusion Printing Cutting Industries, • Implement ERP for Health Care and Pharmaceutical Companies (Services) <ul style="list-style-type: none"> ○ Patients Records ○ Theater Records ○ Endoscopy ○ Mortality data ○ Maternity Data ○ Business Records • Implementing ERP for the Agric sector and Agro-Processing Industries <ul style="list-style-type: none"> ○ Cereals (maize, rice, millet) ○ Starchy Crops (yam, cassava, sweet potato, plantain) ○ Legumes (Carrots, Cabbage, garden eggs, tomato) ○ Fruits (pineapple, pawpaw, banana, mango) ○ Industrial Crops (rubber, sugarcane, cotton, oil palm, coconut, cocoa, coffee) ○ Livestock (cattle, pigs, poultry, sheep) ○ Fisheries (tuna, tilapia, catfish)
3	Proactive Financial Management	<ul style="list-style-type: none"> • Raising Money for your Business <ul style="list-style-type: none"> ○ Introductory Stage ○ Growth Stage ○ Maturity Stage ○ Decline Stage • Managing Your Financial Requirements <ul style="list-style-type: none"> ○ Long-term and Short term Plans

		<ul style="list-style-type: none"> ○ Balance Sheet ○ Forecasted monthly sales ○ Cash flow analysis ○ Monthly income statement ○ Yearly Income statement ○ Break-even analysis ● Forecast and Actual ERP Reports <ul style="list-style-type: none"> ○ Forecasted Vs. Actual Monthly Sales ○ Forecasted Vs. Actual Yearly Sales ○ Web ERP Reports
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4	Payroll and Income Tax	<ul style="list-style-type: none"> ● Building the Consolidated Pay (Normal, Off Day, Weekly Holiday and Yearly Holiday) ● Base Rate Tax and Overtime Tax ● Add Allowances ● Other Deductions ● Running the Pay ● Employees Pay Slip
5	SQL Accounts Reports	<ul style="list-style-type: none"> ● Tangible and Intangible Assets; Depreciation calculation using SYD,SLN and DDB) ● Current Assets (Stock, Debtors and Accounts Receivables, Cash and Bank, Prepayments) ● Capital Accounts and Shareholders' equity ● Accounts Payables and Accruals ● Income and Expenditures Account or Income Statement
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