**ICT02 – LIBRARY MANAGEMENT**

**Description**

**Instruction:**

1.if you are using TLAB\*\*, Sample compile and run JCL is available in "TLABADM.LAB.SYS.COMPRUN". Please go in view mode and copy the members to your deliverable dataset.

2. if you are using TLAB\*\*,the IP address  is 10.142.149.210 and the Port is 623 to connect to Mainframe Terminal

**Please do not EVALUATE and just SUBMIT the code for Evaluation  - CC/MOCK/ICT assessments.**

**Objective:**

 Create a COBOL DB2 application for LIBRARY MANAGEMENT

**Using ISPF**

-         Create a PDS with the following parameters given below.

NOTE: **USERID**must be your Mainframe ID.

For the MF ID provided for the Lab Assessment, use the below specified details

* **DATABASE**: DBLAB01
* **TABLESPACE:**Use the below details for Table space name based on the provided MF ID.

|  |  |
| --- | --- |
| **ID Range** | **Table space** |
| TLAB001-TLAB030 | TSLAB1 |
| TLAB031-TLAB060 | TSLAB2 |
| TLAB061-TLAB090 | TSLAB3 |
| TLAB091-TLAB120 | TSLAB4 |
| TLAB120-TLAB140 | TSLAB5 |

Ø  **PLAN:**LABPL<yyy>, PACKAGE: LABPK<yyy>.

<yyy> - Denotes last 3 digits of your Lab Assessment MF ID.

**Using SPUFI**

**1.**Create a member DBICT2SC inside USERID.MYLIB.DB2.ICT02 and write SQL to create the below tables using SPUFI

**MEM\_DET** - To hold all details about the orders.

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**BOOK\_DET TABLE**- To hold book lending details

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**2.**Create a member DBICT2SI  inside USERID.MYLIB.DB2.ICT02 and write SQL to load the below tables using SPUFI

**MEM\_DET**

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**BOOK\_DET**A white paper with black text and numbers

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**1.    DCLGEN:**

-         Use DCLGEN option to generate host variable for the table MEM\_DET, and BOOK\_DET

-         Store the host variable in the members MEMDCL and BOOKDCL in the PDS USERID.MYLIB.DB2.DCLGEN

**2.    COBOL Program**

1. Create a Member name DBICT2CB inside the PDS.  (USERID.MYLIB.DB2.ICT02).

-         Write a COBOL program to perform the following functions.

**Input                                                    : Data fetched from table MEM\_DET & BOOK\_DET**

**Table to be updated                          :  MEM\_DET**

**Output file                                           : USERID.DB2.ICT02.OUTPUT.PS1**

**DD name to be used for output file : OUTMEM**

*Note: Please use only the***above mentioned DD names***.***Do not use COPYBOOKs***for declaring input or output file layout in COBOL program.*

1. Using a cursor01.
2. Select all order records from table **MEM\_DET** table order by **MEMBER\_ID**.
3. Using null value handling technique, verify whether the field **DATE\_REGISTER** holds any null value. If any null values present, **Do not** process that record and continue processing the next record. For records without null values in **DATE\_REGISTER** field, continue processing the next step

* Calculate **DATE\_EXPIRE** using following formula.
  + Add **2 years** to the **DATE\_REGISTER**
  + Ex: if **DATE\_REGISTER** is **2020-01-01** then  **DATE\_EXPIRE is 2022-01-01**

5.     Update **DATE\_EXPIRE**for each recordsin the **MEM\_DET** table

6.     Using a cursor02 ,

7.      Join the **MEM\_DET** and **BOOK\_DET**table to select BOOK\_ID, MEMBER\_ID, MEMBER\_NAME, PHONE\_NO, CITY, DATE\_ISSUE, DATE\_REGISTER, DATE\_TO\_BE\_RETURN ,DATE\_RETURNED  and order the result by MEMBER\_ID

1. Using null value handling technique, verify whether the field DATE\_REGISTER holds any null value. If any null values present, do not process that record and continue processing the next record. For records without null values in DATE\_REGISTER field, continue processing the calculate FINE\_AMT.

9.     Use the below steps to calculate **FINE\_AMT** for the members

-         Calculate

**LENDING\_PERIOD = DATE\_RETURNED   -  DATE\_TO\_BE\_RETURN**

§  Use below table to calculate **FINE\_AMT**

A table with numbers and letters

AI-generated content may be incorrect.

Ex: 1. If **LENDING\_PERIOD IS -34**then **FINE\_AMT**is 0

      2. If **LENDING\_PERIOD IS  25**then **FINE\_AMT**is 100

10.     Write the updated details into the PS1 file

-         Allocate a PS1 dataset in the RUNJCL with record length 100 and with naming convention as below.

**USERID.DB2.ICT02.OUTPUT.PS1**

**OUTPUT**

11.     **LAYOUT :**



NOTE: One space filler is to be inserted between each field.

12.     Declare the necessary input and output variables as per the coding standards.

13.    Please follow coding Standards and paragraph should be written in order.

14.    Verify and confirm the output using SPUFI.

Note: Sample compile and run JCL is available in "TLABADM.LAB.SYS.COMPRUN". Open the PDS in view mode and copy the members to your deliverable dataset.

**Evaluation Procedure:**

1)    Use your JCL to pre compile and run and test your program with the necessary inputs and make sure you get the return code MAXCC 00 before Submitting for the Evaluation.

2)    Download your dataset (USERID.MYLIB.DB2.ICT02 (DBICT2SC), (DBICT2SI) and (DBICT2CB) to your system and name the file as DBICT2SC.txt, DBICT2SI.txt and DBICT2CB.txt.

3)    Download your dataset (USERID.MYLIB.DCLGEN (MEMDCL) and (BOOKDCL) to your system and name the file as MEMDCL.txt and BOOKDCL.txt

4)    Download your run JCL with the necessary inputs as per the QB Requirement and name it as RUNJCL.txt

5)    Drag the file into the code Editor.

6)      Then Press Evaluate button for Evaluation.

**Kudos!**You have earned some XP points.