# EXAM 2

Give data as in the file below: (open file: Right click: choose Worksheet Object 🡪 Open)



Question:

1. Create tables (Khachhang, tietkiem, chinhanh, kyhạn) with customerid, contractid, termed, bracnchcode is primery key and insert data into database.

2. Rank customers and store them in the database according to the total amount of money that each customer has deposited.

* Less than 5.000.000.000 -> Grade C.
* 5.000.000.000 to 10.000.000.000 -> Grade B.
* 10.000.000.000 and above -> Grade A.

**UPDATE** khach\_hang kh

SET kh.phanloai =

(**SELECT**

**CASE**

**WHEN** **sum**(tk.sotien) < 5000000000 **THEN** 'C'

**WHEN** **sum**(tk.sotien) >= 5000000000 **AND** **sum**(tk.sotien) <= 10000000000 **THEN** 'B'

**WHEN** **sum**(tk.sotien) > 10000000000 **THEN** 'A'

**ELSE** 'Unknown'

**END**

**FROM** tiet\_kiem tk

**WHERE** kh.makh = tk.makh)

**WHERE** **EXISTS** (**SELECT** 1 **FROM** tiet\_kiem tk **WHERE** tk.makh = kh.makh);

3. Assuming the customers have not yet withdrawn their money, the term deposit will be charged with interest rate. If at the end of the term, the Customer has not withdrawed the deposit, then they will combine the interest into the principal and calculate the interest with the old term (if continuing according to the remaining term, if not with interest of TK0).

For example: Mr.A has saved 50,000,000 with TK12 (5.6%) from from 27- 12-2017 to: 25/03/2020 the date of withdrawal Mr.A has saved 819 days. So, up to the date of withdrawal Mr.A will be maturity 2 times with the term TK12 and 3 months calculated with the interest rate of the term TK0 (0.3%).

T1 = 50,000,000 \* (1+ 0.056 / 365 \* 365) = 52,800,000

T2 = 52,800,000 \* (1+ 0.056 / 365 \* 365) = 55,756,800

T3 = 55,756,800 \* (1+ 0.003 / 365 \* 89) = 55,797,586

M= T1+T2+T3.

Write a program to calculate the amount of money to be paid to each customer when they come to withdraw money from each savings book with the date of withdrawal always sysdate then store it in the database.

**CREATE OR PEBLACE PROCEDURE** Rut\_tien (

p\_makh **in** **varchar2**,

p\_maso **in** **varchar2**,

p\_sotien **out** **number**)

**as**

v\_sotien **number**;

v\_ngaygui **date**;

v\_laisuat **number**;

v\_kyhan **varchar2**(20);

v\_songaychuki **number**;

v\_songayrut **number**;

**begin**

**select** k.laisuat

**into** v\_laisuat

**from** tiet\_kiem tk **left** **join** ky\_han k **on** tk.kyhan = k.ma

**where** tk.makh = p\_makh **and** tk.maso = p\_maso;

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**select** t.ngaygui, t.kyhan, **ADD\_MONTHS**(t.ngaygui,**substr**(kyhan,3))-t.ngaygui **as** songaychuky , **trunc**(**sysdate**) - t.ngaygui **as** songayrut,t.sotien

**into** v\_ngaygui,v\_kyhan,v\_songaychuki,v\_songayrut,v\_sotien

**from** tiet\_kiem t

**where** t.makh = p\_makh **and** t.maso = p\_maso;

**if** v\_songayrut - v\_songaychuki < 0 **then**

v\_sotien := **ROUND**(v\_sotien \* (1+0.003/365\*v\_songayrut));

**elsif** v\_songayrut - v\_songaychuki = 0 **then**

v\_sotien := **ROUND**(v\_sotien \* (1+(v\_laisuat/365)\*v\_songaychuki));

**elsif** v\_songayrut - v\_songaychuki > 0 **then**

**loop**

**exit** **when** v\_songayrut - v\_songaychuki <0;

v\_sotien := v\_sotien \* (1+(v\_laisuat/365)\*v\_songaychuki);

v\_songayrut := v\_songayrut - v\_songaychuki;

**end** **loop**;

v\_sotien := **ROUND**(v\_sotien \* (1+0.003/365\*v\_songayrut));

**end** **if**;

p\_sotien := v\_sotien;

**update** tiet\_kiem t

**set** t.sotiennhan = p\_sotien

**where** t.makh = p\_makh **and** t.maso = p\_maso;

**end**;

4. Write a program search customer and show informations: id, name, saving-book Id, rank,

Branch name, Manager of branch, interest rate. Input data: Id or customer Name or phone number.

**CREATE** **OR** **REPLACE** **FUNCTION** search\_customer(

p\_id **IN** **NUMBER** **DEFAULT** **NULL**,

p\_name **IN** **VARCHAR2** **DEFAULT** **NULL**,

p\_phone **IN** **VARCHAR2** **DEFAULT** **NULL**

)

**RETURN** SYS\_REFCURSOR

**AS**

v\_cursor SYS\_REFCURSOR;

**BEGIN**

**OPEN** v\_cursor **FOR**

**SELECT** kh.makh **as** ID, kh.hoten **as** Ho\_Ten, tk.maso **AS** saving\_book\_id, kh.phanloai **as** Rank,

cn.ten\_cn **AS** branch\_name, cn.phutrach **AS** manager\_name, t.laisuat **AS** interest\_rate

**FROM** khach\_hang kh **LEFT** **JOIN** tiet\_kiem tk **ON** kh.makh = tk.makh

**LEFT** **JOIN** chi\_nhanh cn **ON** tk.noi\_gui = cn.ma\_cn

**LEFT** **JOIN** ky\_han t **ON** t.ma = tk.kyhan

**WHERE** (p\_id **IS** **NULL** **OR** kh.makh = p\_id)

**AND** (p\_name **IS** **NULL** **OR** kh.hoten **LIKE** '%' || p\_name || '%')

**AND** (p\_phone **IS** **NULL** **OR** kh.sodienthoai = p\_phone);

**RETURN** v\_cursor;

**END**;