**TERM – WINTER 2023 **

| **Course & Section Code:** | **DBS501S1A** |
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| **Course Name:** | **Procedure Using Oracles PL/SQL** |
| **Course Start & End Dates:** |  |
| **Q&A / Virtual Office Hour:** | **6:30 PM – 9:30 PM** |
| **Instructor Name & Email:** | **Ersan Cam: ersan.cam@senecacollege.ca** |

Lab#9 (Functions)

1. Please work on CJ\_XXXX (City Jail system) tables for these questions

Develop a Function which accept Officer\_ID information and return Keyword Active or Inactive..

Function will perform additional checks.

If Officer ID is not in the system Function will return ‘Not existing Officer’

If Officer ID is exists in the system and If Officer Status is A in CJ\_OFFICERS table and also if Officer BADGE number’s last digit is in between 0-5 then Function must return ACTIVE-ONDESK keyword

Otherwise if status is Active but Officer BADGE’s last digit is grater than 5 then Function must return ACTIVE-ONDUTY.

, if Officer Status is I then for sure Function must return INACTIVE keyword.

All other (Everything else ) situations Function must return UNKNOWN-STATUS

**Perform several test for your function and capture all screen shots.**

For Officer\_ID 111112 you must return ACTIVE-ONDESK

111117 (inserted my own record) you must return ACTIVE-ONDUTY

For Officer\_ID 5555555 ‘Not existing Officer’

111116 INACTIVE

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| create or replace function officer\_lookup  (p\_officer\_id cj\_officers.officer\_id%type)  return varchar is  v\_status varchar(20);  begin  select status into v\_status from cj\_officers where officer\_id = p\_officer\_id;  if (v\_status = 'A' AND substr(p\_officer\_id,6,1) between 0 AND 5) then  v\_status := 'ACTIVE-ONDESK';  elsif (v\_status = 'A' AND substr(p\_officer\_id,6,1) > 5) then  v\_status := 'ACTIVE-ONDUTY';  elsif (v\_status = 'I') then  v\_status := 'INACTIVE';  else  v\_status := 'UNKNOWN-STATUS';  end if;  exception  when no\_data\_found then  v\_status := 'NOT EXISTING OFFICER';  return v\_status;  end officer\_lookup; |

1. Develop a function FN\_ Remaining\_Fine\_Amount) to calculate Remaining Fine amount . This function must accept Crime\_id and Crime\_code as input parameter and return number value.

If Pay\_Due\_Date is in 2009 then calculation must be such

**Remaining\_Fine\_Amount := ( Fine\_Amount+Court\_Fee-Amount\_Paid)**

For that particular Crime\_code=xxxx AND Crime\_code=yyyy combination …

P.S: Amount\_paid column is NULL for some records and if you do not convert Null values in above calculation , then entire calculation will be wrong. Use NVL(Amount\_Paid,0) foruma for that part.

Hint: Use this below formala and technique and return result at the enf of Funtion

**Remaining\_Fine\_Amount := ( Fine\_Amount+Court\_Fee-NVL(Amount\_Paid, xxx) )**

**WHERE** Crime\_code=parameter1 AND Crime\_code=parameter2

RETURN **Remaining\_Fine\_Amount;**

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| create or replace function FN\_Remaining\_Fine\_Amount  (p\_crimeid cj\_crime\_charges.crime\_id%type,  p\_crimecode cj\_crime\_charges.crime\_code%type)  return number is  v\_remaining\_amt cj\_crime\_charges.fine\_amount%type := 0;  v\_fine\_amt cj\_crime\_charges.fine\_amount%type;  v\_court\_fee cj\_crime\_charges.court\_fee%type;  v\_amt\_paid cj\_crime\_charges.amount\_paid%type;  begin  select fine\_amount, court\_fee, amount\_paid into v\_fine\_amt, v\_court\_fee, v\_amt\_paid  from cj\_crime\_charges  where crime\_id = p\_crimeid  and crime\_code = p\_crimecode;  v\_remaining\_amt := ((v\_fine\_amt + v\_court\_fee) - nvl(v\_amt\_paid,0));  return v\_remaining\_amt;  end FN\_Remaining\_Fine\_Amount; |

1. Use DH\_XXXX Dream Home Real Estate company database for this question

Develop a Function to return email service Provider for a given Private owner. This function will receive one parameter as Input (OwnerNo) . Once OwnerNo is provided, Function will search on DH\_PRIVATEOWNER table and extract email service provider..

For instance let’s imagine owner CO66 is given as input… Return will be character as. Result will be gmail

Hint: Please use SUBSTR function to extract gmail portion from [bw@gmail.com](mailto:bw@gmail.com) value for CO66. DO NOT return gmail as hard coded literal fixed value. SUBSTR will find the position of @ symbol with the help of INSTR and add 1 (+1) to start from 1 digit after @’s position and extract all the way to end.

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| create or replace function fn\_email\_service\_provider  (p\_ownerno dh\_privateowner.ownerno%type)  return varchar is  v\_email\_provider dh\_privateowner.email%type;  begin  select email into v\_email\_provider from dh\_privateowner where ownerno = p\_ownerno;  v\_email\_provider := SUBSTR(v\_email\_provider, INSTR(v\_email\_provider, '@') + 1,  INSTR(v\_email\_provider, '.') - INSTR(v\_email\_provider, '@') - 1);  return v\_email\_provider;  end fn\_email\_service\_provider; |