Transaction Language (TL) Expression

AGENDA

- TL Expressions overview
- How to write TL Expression
  - Syntax
  - Examples
- Using TL expression editor
  - Sample TL expressions

What are TL expressions

- IEL table is used for configuring master data and in most of the cases these master data is dependent upon some important policy attributes like LOB, state, Customer(System Columns of IEL table) etc.
- Also in some cases the master data to be selected is dependent upon other master data(user – defined columns of IEL Table)
- Hence system defined columns and in some cases user defined columns also plays a role in filtering out required master data.
- In order to ease filtering of data depending upon these columns a special type of expression was designed and named as ‘TL’(Transactional Language) expression.
- Majesco has proprietary rights on this TL expression
- TL expression is always used on IEL table as it helps in filtering out required master data.

How to write TL expression

- Syntax

SELECT <columnname> <col alias>

FROM <iel_table_name> <table alias>

WHERE {tl:<iel table name>~<table alias>~<col name>,<col name><~N>

};

<columnname> - Value(master Data) of column to be selected.

<col alias> - Alias name for column

<iel_table_name> - IEL table from where data needs to be selected

<table alias> - Alias name for IEL table

<~N> - Exclude adoption related column in filtering. Get un adopted data as well.

{tl:}– Applying TL expression for filtering data

How to write TL expression

Example: For populating policy type combo box:

```
SELECT outer.policy_type POLICY_TYPE
FROM iel_cf_policy_type outer
WHERE outer.entity_type = ‘field:INSURED_TYPE'
AND {tl:iel_cf_policy_type~outer~policy_type,entity_type~N}
```

- In above mentioned example tl: expression is applied on columns entity_type(Used in where clause) as well as Policy_type(Column from where data needs to be selected)
- If we replace the place holder ‘field:INSURED_TYPE‘ with value as ‘Government’ as mentioned in below mentioned query then we get results as mentioned in below attachment

```
SELECT outer.policy_type POLICY_TYPE
FROM iel_cf_policy_type outer
WHERE outer.entity_type = ‘Government'
AND {tl:iel_cf_policy_type~outer~policy_type,entity_type~N}
```

Microsoft Excel
97-2003 Worksheet

How to write TL expression

- Below mentioned is the resolved query After applying TL expression to the query in previous slide:

```
SELECT outer.policy_type POLICY_TYPE
FROM iel_cf_policy_type outer
WHERE outer.entity_type = 'Government'
AND  outer.rowid =  (SELECT rowid  FROM IEO_cf_policy_type WHERE ( NVL(state_code, '@@') = '@@' OR NVL(state_code, '@@') = '@@' )  AND( NVL(company_code, '@@') = '@@' OR NVL(company_code,'@@') = '@@' )  AND( NVL(customer_code, '@@') = SUBSTR(USER, -2) OR NVL(customer_code ,'@@') = '@@' )  AND( NVL(program_code, '@@') = '@@' OR program_code IS NULL )  AND( NVL(market_segment_code, '@@') = '@@' OR market_segment_code IS NULL )  AND( NVL(product_code, '@@') = '' OR product_code IS NULL )  AND( NVL(lob_code, '@@') = 'GL' OR lob_code IS NULL )  AND( TO_NUMBER(NVL2(product_version, product_version, 0))<= NVL2(customer_code, '0', '0' ) )  AND( NVL(effective_date, TO_DATE('01/01/1900', 'mm/dd/yyyy')) <= to_date('01/12/2017', 'MM/DD/YYYY') )  AND( NVL(expiration_date,TO_DATE('01/01/2000', 'mm/dd/yyyy')) > to_date('01/12/2017', 'MM/DD/YYYY') OR NVL(expiration_date,TO_DATE('01/01/2000', 'mm/dd/yyyy')) = TO_DATE('01/01/2000', 'mm/dd/yyyy'))  AND( TO_NUMBER(NVL2(exp_product_version, exp_product_version, 0)) > NVL2(customer_code, '0', '0' )  OR TO_NUMBER(NVL2(exp_product_version,exp_product_version, 0)) = 0  )  AND (NVL(policy_type, '-9.999999999999999') = NVL(outer.policy_type, '-9.999999999999999'))  AND (NVL(entity_type, '-9.999999999999999') = NVL(outer.entity_type, '-9.999999999999999'))  AND rownum < 2)
```

How to write TL expression

- Below mentioned result is retrieved from query of previous query(resolved query of TL)

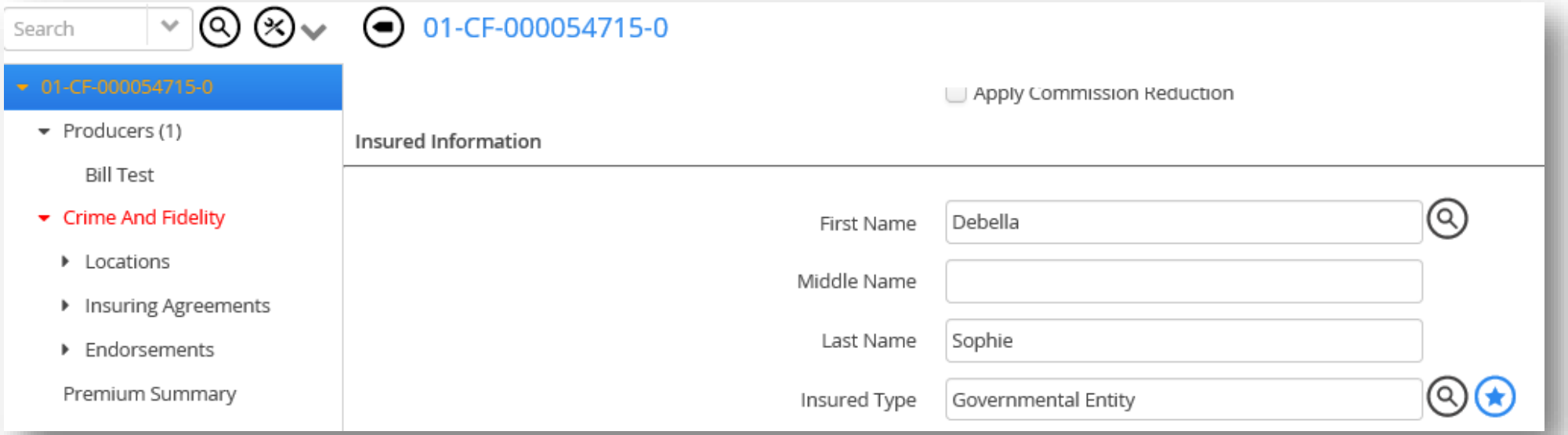
POLICY_TYPE
Kidnap/Ransom and Extortion
Government Crime and Fidelity

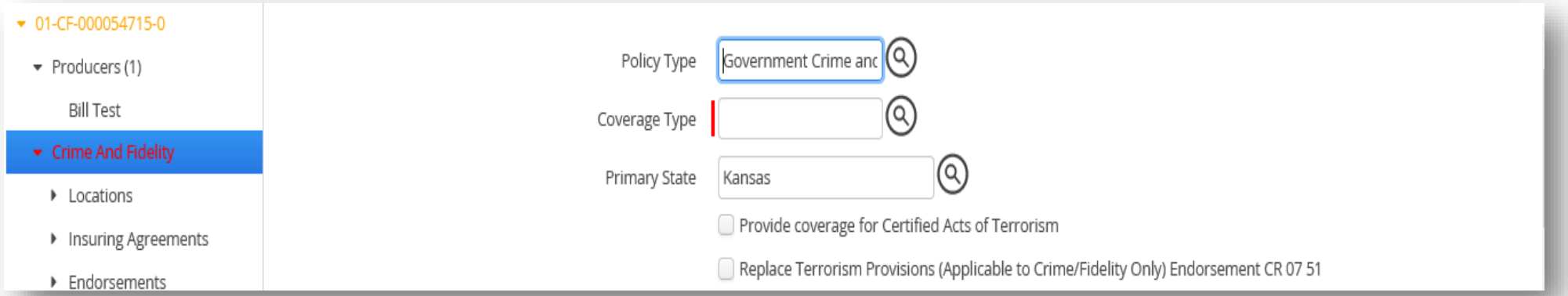
How to write TL expression

- The outer query of resolved query returned 54 records whereas the inner query returned 2 records matching the outer one.
- Hence 2 values for Policy type is returned which is to be displayed on combo box.
- While creating Policy for Crime and Fidelity LOB if user selects Insured of type ‘Government Type’ then Policy Type field on Crime and fidelity gets ’ Kidnap/Ransom and Extortion’ and ‘Government Crime and Fidelity’ data available on drop down.

How to write TL expression

- Example





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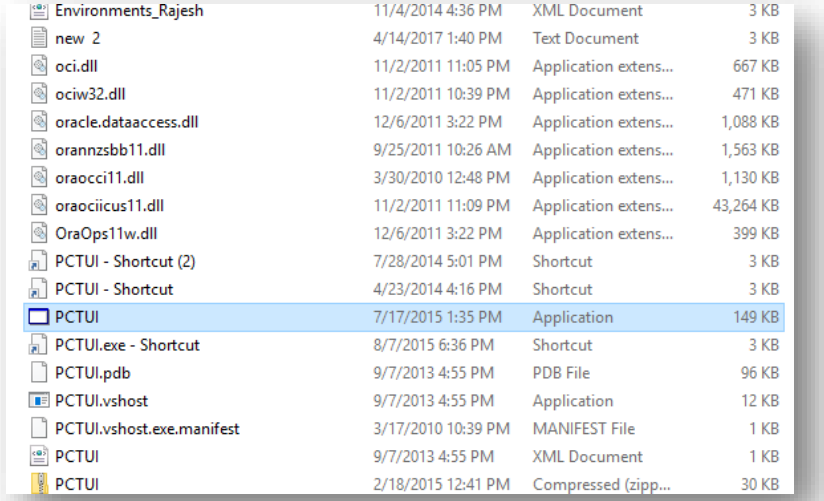
Using TL Tool

- Open PCTUI application available under TL Tool folder:



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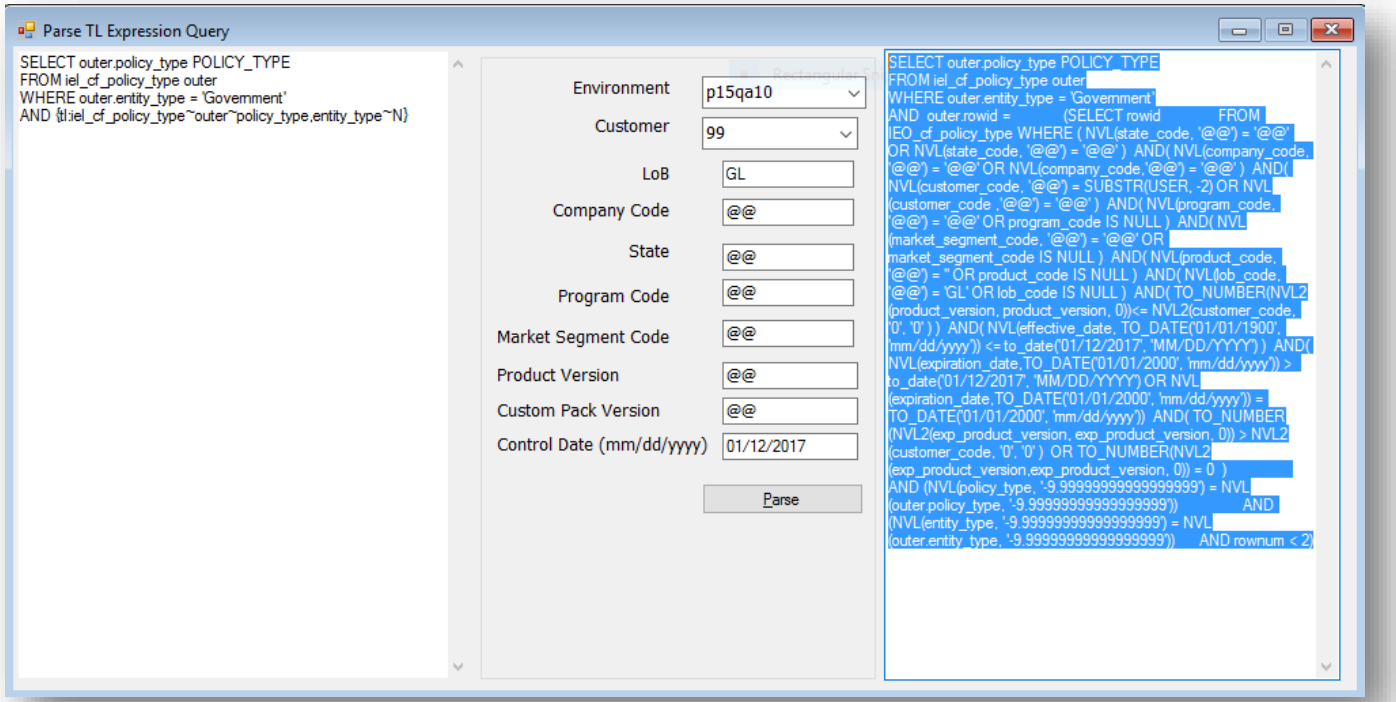
Using TL Tool

- Edit Environments.xml and tnsnames.ora available under TL Tool folder for your target environment details.
- Then select Main Menu -> prepare/paste query and then click on Parse TL. This would prepare corresponding query of tl: expression



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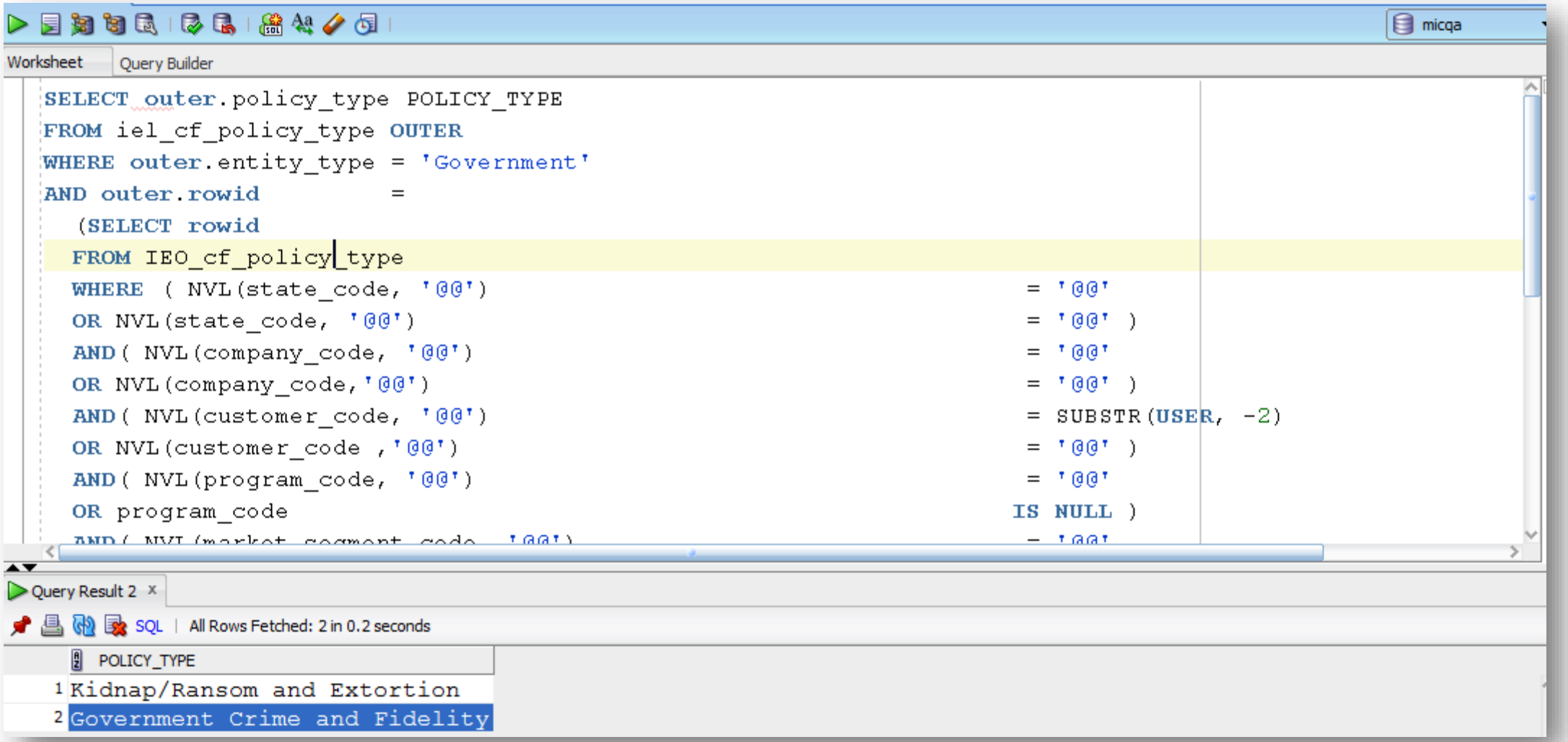
Using TL Tool

- ~N option: This syntax in TL expression is used to exclude adoption related conditions.
- It actually include data which are not adopted as well for selection.
- The right sided resolved query can be executed on target environment database to see the data that would be fetched during run time

Using TL Tool



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Sample TL expressions

- Sample 1:

```
SELECT
  outer.rtc_loss_cost
FROM
  iel_gl_rtc_res_fuel outer
WHERE
  outer.state_code = '{field:RISK_STATE}'
  AND outer.class_code = '{field:CLASS_CODE}'
  AND {tl:iel_gl_rtc_res_fuel~OUTER~class_code,rtc_loss_cost}
```

Sample TL expressions

- Sample 2: TL expression with CP expression using range of data

```
SELECT
  outer.factor special_veh_type_factor
FROM
   iel_ca_mtorcycle_liab outer
WHERE
   ({CP:
 o1 = LOB_CA_VEHICLES/;
 s1 = o1.engine_size ~alias=ENGINE_SIZE;
}) BETWEEN outer.size_of_engine_min AND outer.size_of_engine_max
  AND {tl:iel_ca_mtorcycle_liab~outer~size_of_engine_min,size_of_engine_max}
```

Sample TL expressions

- Sample 3: TL expression with CP expression simple compare

```
SELECT   loss_cost
 FROM
   iel_ca_liability_lc llc
 WHERE
   UPPER(major_class) = UPPER('23.Trucks, Tractors And Trailers Classifications')
 AND
   UPPER(coverage)  = UPPER('Personal Injury Protection')
 AND
  ({CP:
  o1=LOB_CA_VEHICLES/;
  s1= o1.TERRITORY_CODE ~alias =TERRITORY;
   }) = territory
  AND {tl:iel_ca_liability_lc~llc~territory,major_class,coverage}
```

Sample TL expressions

- Sample 4:

```
SELECT   NVL2(
      (SELECT 1 FROM
         ({CP:
            o1 = LOB_CA_ADDL_INTRST/ADDNL_RATING_DET/~alias  = ad_rt;
            s1 = ad_rt.form;
         }) add_rtn,
         iel_ca_adnl_int_form_name  outer
       WHERE
         add_rtn.form = outer.form
         AND outer.is_name_req = 'Y'
         AND {tl:iel_ca_adnl_int_form_name~outer~form,form_name}
         AND ROWNUM < 2
     ),'Y','N'
    )
FROM dual WHERE 1=1
```

Sample TL expressions

- Sample 5:

```
SELECT rate base_rate
FROM
  iel_ca_ma_nol iel
WHERE
   ({CP:
     o1=LOB_CA_ADDL_COV/NON_OWNED_LIAB_COV/;
     s1=NVL(o1.TOT_EMP_ALL_LOC,0)~alias=TOT_EMP_ALL_LOC;
}) BETWEEN emp_from and emp_to
AND
  UPPER(COVERAGE) = 'NON OWNED OTHER THAN SOCIAL BI'
 AND  {tl:iel_ca_ma_nol ~iel~coverage,emp_from,emp_to}
```

Sample TL expressions

- Sample 6:

```
SELECT  CASE WHEN
          ({CP:
     o1=LOB_CA_ADDL_COV/NON_OWNED_LIAB_COV/;
     s1=NVL(o1.EXT_COV_IND_LIAB,'N')~alias=EXT_COV_IND_LIAB;
}) = 'Y'
    THEN
      (SELECT
         FACTOR
      FROM
         IEL_CA_MA_FACTORS  iel
      WHERE UPPER(coverage) = 'NON OWNED EXTENDED'
       AND  {tl:IEL_CA_MA_FACTORS ~iel~coverage})
    ELSE
       0
    END NON_OWNED_EXT_FACTOR
   FROM DUAL
```

Sample TL expressions

- Sample 7:

```
SELECT
  NVL2((
      SELECT 1
      FROM
        (SELECT min(bi_limits_each_person) min_bi_limit_each_pers
          FROM iel_ca_unins_split_limits iel
          WHERE {tl:iel_ca_unins_split_limits~iel~bi_limits_each_person}
        ) iel
      WHERE ({CP:
            o1= LOB_CA_STATE_COV_LIMITS[state_code='{global:RISK_STATE}']/
                  CA_VEHICLE_COVERAGES/VEH_UNINSURED_MOTORIST_COV/;
            s1 = NVL(o1.bi_each_person_limit,0)~alias=bi_each_person_limit;
           }) > iel.min_bi_limit_each_pers
      AND ROWNUM < 2) ,'Y','N')
FROM DUAL
```

Sample TL expressions

- Sample 8:

```
SELECT   factor deductible_factor  FROM   iel_ca_liability_deductibles outer  WHERE
      deductible = ({CP:
                  o1=LOB_CA_LOCATIONS/LOCATION_CA_COVERAGE/LOC_COV_CA_LIAB/;
       s1=o1.deductible;})
  AND UPPER(coverage) = DECODE(({CP:
                  o1=LOB_CA_LOCATIONS/LOCATION_CA_COVERAGE/LOC_COV_CA_LIAB/;
       s1=UPPER(o1.deductible_type)~alias=deductible_type;}), 'CSL', UPPER('Combined Single
Limit'), 'PD', UPPER('Property Damage Per Accident'))
  AND UPPER(zone_rated_switch) = UPPER ('Non-Zone Rated')
  AND {tl:iel_ca_liability_deductibles~outer~factor,coverage}
UNION
SELECT
  1.0 deductible_factor
FROM   dual  WHERE   ({CP:
   o1=LOB_CA_LOCATIONS/LOCATION_CA_COVERAGE/LOC_COV_CA_LIAB/;
   s1=o1.deductible;})= 0
```

Sample TL expressions

- Sample 9:

```
SELECT
  NVL2((
      SELECT 1
      FROM
        (SELECT min(bi_limits_each_person) min_bi_limit_each_pers
          FROM iel_ca_unins_split_limits iel
          WHERE {tl:iel_ca_unins_split_limits~iel~bi_limits_each_person}
        ) iel
      WHERE ({CP:
            o1=
LOB_CA_STATE_COV_LIMITS[state_code='{global:RISK_STATE}']/CA_VEHICLE_CO
VERAGES/VEH_UNINSURED_MOTORIST_COV/;
            s1 = NVL(o1.bi_each_person_limit,0)~alias=bi_each_person_limit;
          }) > iel.min_bi_limit_each_pers
      AND ROWNUM < 2) ,'Y','N')
FROM DUAL
```

Sample TL expressions

- Sample 10:

```
SELECT   CASE    WHEN (UPPER('{global:VEHICLE_SPECIAL_TYPE}')=UPPER('Snowmobiles')) THEN
     (SELECT  limit  FROM
        iel_ca_snowmob_medpay iel
      WHERE
        {tl:iel_ca_snowmob_medpay~iel~coverage}
     )
   ELSE
    (SELECT   limit_each_person
 FROM ({CP:

o1=LOB_CA_STATE_COV_LIMITS[state_code='{global:RISK_STATE}']/CA_VEHICLE_COVERAGES/VEH_MEDICAL
_PAYMENTS_COV;
   s1=o1.limit_each_person;
   }
    )
 WHERE ROWNUM < 2
 )
  END LIMIT_EACH_PERSON
FROM   DUAL
```

Sample TL expressions

- Sample 11:

```
SELECT DECODE(COUNT(*), 0, 'Y', 'N')  FROM dual,
(SELECT MAX_OCCURANCE FROM IEL_WK_OFFICER_MAX_OCC iwomo
    WHERE 1=1 AND excl_inc = 'EXCLUSION'
    AND state = '{field:STATE}'
    AND type = '{field:TYPE}'
    AND {tl:IEL_WK_OFFICER_MAX_OCC~iwomo~state,type~N}
) tab
WHERE tab.MAX_OCCURANCE <
(
  {CP:
     o1 = LOB_OFFICER_EXCL;
     s1 = COUNT(*) ~ alias=actual_instances;
     startingPoint=parent~reason=Needs to skip Officer Exclusion gid;
     cond = o1.state='{field:STATE}';
     cond = o1.type='{field:TYPE}';
  }  )
```

Sample TL expressions

- Sample 12:

```
SELECT
  loss_cost
 FROM
  iel_ca_liability_lc llc
 WHERE
  UPPER(major_class) = UPPER('23.Trucks, Tractors And Trailers Classifications')
AND
  UPPER(coverage)  = UPPER('Personal Injury Protection')
AND
 ({CP:
 o1=LOB_CA_VEHICLES/;
 s1= o1.TERRITORY_CODE ~alias =TERRITORY;
  }) = territory
 AND {tl:iel_ca_liability_lc~llc~territory,major_class,coverage}
```

Assignment

- Identify and write all system column name and purpose.
- Create a tl expression with adoption and without adoption and compare the difference.

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THANK YOU!