



UCOP Data Users Group

March 28, 2018

Group Exercise

▶ Project Goal 1 (UAD: System wide)

□ Write a SQL query to find total number of undergraduate applicants who are freshman, domestic and first generation. The applicants are grouped by the following elements:

- Academic Year (2017)
- Term Name(Fall)
- Residency Status
- Source School Type

Execution Steps

- ▶ Find the required fact and dimension tables
- ▶ Find the joining surrogate key columns
- ▶ Find the fact and dimension non key columns required in the query
- ▶ Build the query by joining the fact table with all the required dimensions using surrogate keys.
- ▶ Add the filter conditions on the dimension columns based on the required values.
- ▶ Finally group the data set based on the mentioned columns and generate the aggregated result set.

Technical Requirements – Exercise 1

▶ Schema:

- UAD_BI

▶ Table Name:

- APPLICATION_F
- TERM_D
- APPLICANT_D
- CAMPUS_ELIGIBILITY_D
- ATP_SCHOOL_D
- RESIDENCY_D

▶ Column Names:

- APPL_ID
- T_ACAD_YR(2017) , T_NAM ('Fall')
- AL_CTZN_STAT_ADM_2CAT_DESC('Domestic')
- APPL_FST_GENERATN_CG_CD('1')
- CMP_ELGBLTY_AL_LVL_3CAT_DESC('Freshman')
- ATP_SCH_DRVD_TY_DESC
- RSDNCY_RSDNT_STAT_DESC

Expected result set– Exercise 1

T_ACAD_YR	T_NAM	RSDNCY_RSDNT_STAT_DESC	ATP_SCH_DRVD_TY_DESC	Count
2017	Fall	California Resident Student	California Private High School	2543
2017	Fall	California Resident Student	California Public High School	49502
2017	Fall	California Resident Student	Foreign Institution	47
2017	Fall	California Resident Student	Non-California Institution (US)	114
2017	Fall	California Resident Student	Other (not to include unknown)	15
2017	Fall	Non-California Resident Student	California Public High School	32
2017	Fall	Non-California Resident Student	Foreign Institution	179
2017	Fall	Non-California Resident Student	Non-California Institution (US)	4757
2017	Fall	Non-California Resident Student	Other (not to include unknown)	1

SQL – Exercise 1

```
SELECT T_ACAD_YR, T_NAM, RSDNCY_RSDNT_STAT_DESC, ATP_SCH_DRVD_TY_DESC, count(APPL_ID)
FROM (
SELECT
    a_f.APPL_ID, a_f.APPL_FST_GENERATN_CG_CD, t_d.T_ACAD_YR, t_d.T_NAM,
    a_d.AL_CTZN_STAT_ADM_2CAT_DESC, r_d.RSDNCY_RSDNT_STAT_DESC,
    ce_d.CMP_ELGBLTY_AL_LVL_3CAT_DESC, src_atp_d.ATP_SCH_DRVD_TY_DESC
FROM UAD_BI.APPLICATION_F a_f
    INNER JOIN UAD_BI.APPLICANT_D a_d           ON a_f.AL_KEY = a_d.AL_KEY
    INNER JOIN UAD_BI.TERM_D t_d              ON a_f.T_KEY = t_d.T_KEY
    INNER JOIN UAD_BI.CAMPUS_ELIGIBILITY_D ce_d ON a_f.CMP_ELGBLTY_KEY = ce_d.CMP_ELGBLTY_KEY
    INNER JOIN UAD_BI.ATP_SCHOOL_D src_atp_d  ON a_f.SRC_SCH_KEY = src_atp_d.ATP_SCH_KEY
    INNER JOIN UAD_BI.RESIDENCY_D r_d        ON a_f.RSDNCY_KEY = r_d.RSDNCY_KEY
WHERE t_d.T_ACAD_YR IN ('2017')
AND t_d.T_NAM = 'Fall'
AND a_d.AL_CTZN_STAT_ADM_2CAT_DESC = 'Domestic'
AND ce_d.CMP_ELGBLTY_AL_LVL_3CAT_DESC = 'Freshman'
AND a_f.APPL_FST_GENERATN_CG_CD = 1
ORDER BY t_d.T_ACAD_YR DESC, t_d.T_NAM DESC
)
GROUP BY T_ACAD_YR, T_NAM, RSDNCY_RSDNT_STAT_DESC, ATP_SCH_DRVD_TY_DESC
ORDER BY T_ACAD_YR, T_NAM, RSDNCY_RSDNT_STAT_DESC, ATP_SCH_DRVD_TY_DESC
```