



-- Student Data Crunch SQL - Thomas Purcell

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-- What is the proportion of female students? 1.53
-- SELECT gender,
--     ROUND((SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE gender='Female') /
--           (SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE gender='Male'),2)
--     AS ratioMaleFemale
-- FROM cd.statcrunchsurvey
-- WHERE gender='Female'
-- GROUP BY gender;

-- "gender" "ratioMaleFemale"
-- "Female" 1.53

-- How are the students distributed across the classes of
-- --First Year, Sophomore, Junior, and Senior classes?

-- SELECT class,
--     (SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE class=1) as Freshman,
--     (SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE class=2) as Sophomore,
--     (SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE class=3) as Junior,
--     (SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE class=4) as Senior
-- FROM cd.statcrunchsurvey
-- GROUP BY class
-- ORDER BY class
-- LIMIT 1;

-- "class" "freshman" "sophomore" "junior" "senior"
-- 1 309.00 215.00 243.00 233.00

-- What is the distribution of credit hours?
-- --Is the mean number of credit hours per student less than 15?

-- SELECT DISTINCT class, sum(hours) as hrs
-- FROM cd.statcrunchsurvey
-- GROUP BY class
-- ORDER BY class;

-- "class" "hrs"
-- 1 4491
-- 2 3071
-- 3 3487
-- 4 3136

-- SELECT DISTINCT class, avg(hours) as hrs
-- FROM cd.statcrunchsurvey
-- GROUP BY class
-- ORDER BY class;

-- "class" "hrs"
-- 1 14.53
-- 2 14.28
-- 3 14.35
-- 4 13.46

-- What proportion of students work? 1.54 For students who work,
-- --describe the relationship between weekly hours worked and credit hours.

-- SELECT ROUND(avg(hours),2) as hours,
--     ROUND(avg(work),2) as work
-- FROM cd.statcrunchsurvey
-- WHERE work > 0;

-- What proportion of students have loans? Approx 1:1. Characterize the distribution of loan
-- amounts.
-- SELECT ROUND(count(loans),2) as loans
-- FROM cd.statcrunchsurvey
-- WHERE loans > 0;

-- --Check if gender and/or class impact this distribution.
-- SELECT SUM(loans) as Total_debt,
--     (SELECT ROUND(SUM(loans),2) FROM cd.statcrunchsurvey WHERE class=1) as Freshman,
--     (SELECT ROUND(SUM(loans),2) FROM cd.statcrunchsurvey WHERE class=2) as Sophomore,
--     (SELECT ROUND(SUM(loans),2) FROM cd.statcrunchsurvey WHERE class=3) as Junior,
--     (SELECT ROUND(SUM(loans),2) FROM cd.statcrunchsurvey WHERE class=4) as Senior,
--     (SELECT ROUND(SUM(loans),2) FROM cd.statcrunchsurvey WHERE gender='Male') as Male,
--     (SELECT ROUND(SUM(loans),2) FROM cd.statcrunchsurvey WHERE gender='Female') as Female
-- FROM cd.statcrunchsurvey
-- LIMIT 1;

-- "total_debt" "freshman" "sophomore" "junior" "senior" "male" "female"
-- 4871057 562017.00 927221.00 1590263.00 1783556.00 1800692.00 3070365.00

-- What proportion of students have credit card debt?
-- --For students with debt, check if debt is influenced by any of the other variables.

-- SELECT
--     ROUND((SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE ccdebt>0) /
--           (SELECT ROUND(COUNT(*),2) FROM cd.statcrunchsurvey WHERE ccdebt=0),2)
--     AS ccdebt_ratio
-- FROM cd.statcrunchsurvey
-- LIMIT 1;

-- "ccdebt_ratio"
-- 7.85

-- SELECT SUM(ccdebt) as Total_CCdebt,
--     (SELECT ROUND(SUM(ccdebt),2) FROM cd.statcrunchsurvey WHERE class=1) as Freshman,
--     (SELECT ROUND(SUM(ccdebt),2) FROM cd.statcrunchsurvey WHERE class=2) as Sophomore,
--     (SELECT ROUND(SUM(ccdebt),2) FROM cd.statcrunchsurvey WHERE class=3) as Junior,
--     (SELECT ROUND(SUM(ccdebt),2) FROM cd.statcrunchsurvey WHERE class=4) as Senior,
--     (SELECT ROUND(SUM(ccdebt),2) FROM cd.statcrunchsurvey WHERE gender='Male') as Male,
--     (SELECT ROUND(SUM(ccdebt),2) FROM cd.statcrunchsurvey WHERE gender='Female') as Female
-- FROM cd.statcrunchsurvey
-- LIMIT 1;

-- "total_ccdebt" "freshman" "sophomore" "junior" "senior" "male" "female"
-- 2983664 356806.00 524565.00 927087.00 1175206.00 1369667.00 1613997.00
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