

Query Type: Joins across multiple tables

1. Colleges and their Tuition Information

Insight: Basic overview of tuition costs by college across states.

```
SELECT c.name, c.state, t.in_state_tuition, t.out_of_state_tuition
FROM colleges c
JOIN tuition_info t ON c.college_id = t.college_id;
```

name	state	in_state_tuition	out_of_state_tuition
Aaniih Nakoda College	Montana	2380	2380
Abilene Christian University	Texas	34850	34850
Abraham Baldwin Agricultural College	Georgia	4128	12550
Academy College	Minnesota	17661	17661
Academy of Art University	California	27810	27810
Adams State University	Colorado	9440	20456
Adelphi University	New York	38660	38660
Adirondack Community College	New York	5375	9935
Adrian College	Michigan	37087	37087
Advanced Technology Institute	Virginia	13680	13680
Adventist University of Health Sciences	Florida	15150	15150
Agnes Scott College	Georgia	41160	41160
Aiken Technical College	South Carolina	5160	8010
Aims Community College	Colorado	2281	13018
Alabama Agricultural and Mechanical College	Alabama	9698	17918
Alabama Southern Community College	Alabama	4440	8880
Alabama State University	Alabama	11068	19396
Alamance Community College	North Carolina	2310	8070
Alaska Bible College	Alaska	9300	9300
Alaska Pacific University	Alaska	20830	20830
Albany College of Pharmacy and Health Sciences	New York	35105	35105
Albany State University	Georgia	6726	19802
Albany Technical College	Georgia	3246	5916
Albertus Magnus College	Connecticut	32060	32060
Albion College	Michigan	45775	45775
Albright College	Pennsylvania	45306	45306

Results:

- 2973 rows

2. Colleges and their Diversity Statistics

Insight: Identifies colleges with high or low minority enrollment rates.

```
SELECT c.name, d.total_enrollment, d.total_minority
FROM colleges c
JOIN diversity_stats d ON c.college_id = d.college_id;
```

name	total_enrollment	total_minority
Aaniih Nakoda College	291	258
Abilene Christian University	4427	1212
Abraham Baldwin Agricultural College	3458	680
Academy College	127	35
Academy of Art University	15212	3931
Adams State University	3154	1213
Adelphi University	7610	2587
Adirondack Community College	4247	395
Adrian College	1641	300
Advanced Technology Institute	717	343
Agnes Scott College	873	462
Aiken Technical College	2351	894
Aims Community College	5001	1911
Alabama Southern Community College	1398	645
Alabama State University	5519	5105
Alamance Community College	4437	1539
Alaska Bible College	46	5
Alaska Pacific University	579	170
Albany College of Pharmacy and He...	1563	372
Albany State University	3910	3534
Albany Technical College	3640	3001
Albertus Magnus College	1550	767
Albion College	1268	153
Albright College	2393	701
Alcorn State University	3639	3479
Alexandria Technical and Communit...	2604	183

Results:

- 2154 rows

3. Colleges and Salary Potential

Insight: Highlights colleges offering strong career earnings potential.

```
SELECT c.name, s.early_career_pay, s.mid_career_pay
FROM colleges c
JOIN salary_potential s ON c.college_id = s.college_id;
```

name	early_career_pay	mid_career_pay
Adams State University	44400	81400
Adventist University of Health Sciences	51600	89800
Agnes Scott College	46000	83600
Alabama State University	39800	71500
Alaska Pacific University	50300	90000
Albany College of Pharmacy and Health Sciences	81000	144800
Albertus Magnus College	49700	85900
Albion College	52100	99300
Alcorn State University	40900	69500
Alderson-Broaddus University	50600	90500
Allen College	51600	91300
Alma College	48400	89900
Amberton University	52800	93600
Amherst College	63800	116500
Amridge University	35700	65900
Anderson University	39900	70100
Andrews University	47600	85000
Appalachian State University	46600	82700
Arizona Christian University	42600	76600
Arizona State University	54500	100900
Arkansas State University	44600	81400
Arkansas Tech University	45000	76900
Armstrong State University	46600	81500
Asbury University	39400	70800
Athens State University	45000	78800
Auburn University	54400	104500

Results:

- 899 rows

Query Type: Joins across multiple tables, Aggregations (ordering)

4. Highest Mid-Career Salaries

Insight: Find top 10 colleges producing high-earning alumni later in their careers.

```
SELECT c.name, s.mid_career_pay
FROM colleges c
JOIN salary_potential s ON c.college_id = s.college_id
ORDER BY s.mid_career_pay DESC
LIMIT 10;
```

name	mid_career_pay
Harvey Mudd College	158200
Massachusetts Institute of Technology	155200
California Institute of Technology	151600
Harvard College	146800
Stanford University	145200
Albany College of Pharmacy and Health Sciences	144800
Webb Institute	141800
SUNY Maritime College	140700
Stevens Institute of Technology	139900
Colorado School of Mines	139600

Results:

- 10 rows

15. Colleges with Largest Pay Growth (Mid vs Early Career)

Insight: Where your long-term income grows the most after graduating.

```
SELECT c.name, (s.mid_career_pay - s.early_career_pay) AS pay_growth
FROM colleges c
JOIN salary_potential s ON c.college_id = s.college_id
ORDER BY pay_growth DESC
LIMIT 10;
```

name	pay_growth
Harvard College	72000
Harvey Mudd College	69400
Massachusetts Institute of Technology	68900
Yale University	68000
California Institute of Technology	67500
Stanford University	66200
SUNY Maritime College	65800
Santa Clara University	64800
Stevens Institute of Technology	64800
Lehigh University	64600

Results:

- 10 rows

Query Type: View creation for simplified analysis

5. Create a View: College Summary

Note: The college_summary view simplifies repeated salary and tuition analysis.

```
CREATE OR REPLACE VIEW college_summary AS
SELECT
    c.name,
    c.state,
    t.institution_type,
    t.degree_length,
    t.in_state_tuition,
    t.out_of_state_tuition,
    s.early_career_pay,
    s.mid_career_pay,
    s.stem_percent
FROM colleges c
JOIN tuition_info t ON c.college_id = t.college_id
JOIN salary_potential s ON c.college_id = s.college_id;
```

```
CREATE OR REPLACE VIEW college_summary AS
SELECT
    c.name,
    c.state,
    t.institution_type,
    t.degree_length,
    t.in_state_tuition,
    t.out_of_state_tuition,
    s.early_career_pay,
    s.mid_career_pay,
    s.stem_percent
FROM colleges c
JOIN tuition_info t ON c.college_id = t.college_id
JOIN salary_potential s ON c.college_id = s.college_id;
```

Query Type: View usage, Aggregations (ordering)

6. Colleges with Lowest In-State Tuition (Using View)

Insight: Lists the most affordable colleges for in-state students.

```
SELECT name, state, in_state_tuition
FROM college_summary
ORDER BY in_state_tuition ASC
LIMIT 10;
```

name	state	in_state_tuition
Brigham Young University-Idaho	Idaho	4118
Western Carolina University	North Carolina	4220
Bellevue College	Washington	4258
Clark College	Washington	4287
Middle Georgia State University	Georgia	4608
Fort Hays State University	Kansas	5133
University of Wyoming	Wyoming	5400
University of New Mexico	New Mexico	5445
Oklahoma State University Institute of Technolo...	Oklahoma	5550
Brigham Young University-Hawaii	Hawaii	5560

Results:

- 10 rows

7. Colleges with Highest Early Career Pay (Using View)

Insight: Highlights colleges providing the best starting salaries.

```
SELECT name, early_career_pay
FROM college_summary
ORDER BY early_career_pay DESC
LIMIT 10;
```

name	early_career_pay
Harvey Mudd College	88800
Massachusetts Institute of Technology	86300
California Institute of Technology	84100
Albany College of Pharmacy and Health Sciences	81000
Webb Institute	80800
Stanford University	79000
Charles R Drew University of Medicine and Science	78300
Carnegie Mellon University	75900
Colorado School of Mines	75600
Princeton University	75200

Results:

- 10 rows

8. Colleges with Highest STEM Graduate Percentage (Using View)

Insight: Find colleges specializing in STEM fields.

```
SELECT name, stem_percent  
FROM college_summary  
ORDER BY stem_percent DESC  
LIMIT 10;
```

name	stem_percent
Webb Institute	100
California Institute of Technology	97
Rose-Hulman Institute of Technology	96
Colorado School of Mines	93
South Dakota School of Mines and Technology	92
New Mexico Institute of Mining and Technology	91
Capitol Technology University	88
Worcester Polytechnic Institute	86
Harvey Mudd College	85
Michigan Technological University	81

Results:

- 10 rows

Query Type: View usage, Aggregations (filtering and ordering)

9. 2-Year Colleges with High Mid-Career Earnings (Using View)

Insight: Identifies strong career payoff for shorter degree programs.

```
SELECT name, mid_career_pay
FROM college_summary
WHERE degree_length = '2 Years'
ORDER BY mid_career_pay DESC
LIMIT 10;
```

name	mid_career_pay
IBMC College: Fort Collins	96100
Oklahoma State University Institute of Technolo...	92300
Bellevue College	88500
Clark College	78400
West Virginia University at Parkersburg	65200

Results:

- 5 rows

Query Type: Joins across multiple tables, Aggregations (grouping, ordering)

10. Average Tuition by State

Insight: Understands tuition differences across states.

```
SELECT c.state,  
       AVG(t.in_state_tuition) AS avg_in_state,  
       AVG(t.out_of_state_tuition) AS avg_out_state  
FROM colleges c  
JOIN tuition_info t ON c.college_id = t.college_id  
GROUP BY c.state  
ORDER BY avg_out_state DESC;
```

state	avg_in_state	avg_out_state
Wyoming	3455.25	8914.5
Wisconsin	15368.4328	19170.4328
West Virginia	12299.0667	17102.3667
Washington	13953.0167	17920.4167
Virginia	17965.3165	23265.9747
Vermont	29993.4737	34604
Utah	10387.9286	17259
Texas	11841.4467	16825.6533
Tennessee	18034.9516	22694.6935
South Dakota	12093.8333	13202.7778
South Carolina	14708.193	19941.3509
Rhode Island	33246.6364	36617.4545
Pennsylvania	25262.65	28180.0688
Oregon	18949.8	24240.3
Oklahoma	11261.675	16356.65
Ohio	18092.5118	21606.7874
North Dakota	7987.6111	10334.0556
North Carolina	12183.1282	16884.8205
New York	22168.1991	24858.8643
New Mexico	6218.4167	10513.9583
New Jersey	17642.5185	21402.5926
New Hampshire	21308.1429	26403.5714
Nevada	11723	18534.4
Nebraska	15174.1515	17153.2424
NA	9973.3654	10489.3846
Montana	8156	13668.6364
Missouri	15750.0822	18202.0411
Mississippi	7957.8125	10878.9375
Minnesota	16858.6056	17844.0704
Michigan	15608.0641	19072.359
Massachusetts	30499.8172	33231.6667
Maryland	18017.6222	23884.3111
Maine	19286.1481	23068.4444
Louisiana	12464.8824	17270.5588
Kentucky	15852.4545	22423.7727
Kansas	12673.9038	15081.0577
Iowa	20740.5192	22034.7692
Indiana	20187.8065	24191.6774
Illinois	18022.944	21725.488
Idaho	10485.3077	16707
Hawaii	8934.1429	15582.1429
Georgia	12806.1139	17831.9241
Florida	14816.8864	19783.3182
Delaware	13713.7778	19252.6667
Connecticut	22107.0556	26968.4444
Colorado	13419.3684	22057.2105
California	14721.626	20166.937
Arkansas	9454.3261	12132.2609
Arizona	8226.3529	13875.6471
Alaska	9549.5	16991.5
Alabama	10460.1296	14848.8148

Results:

- 51 rows

11. Average Early Career Pay by Institution Type

Insight: Compare public vs private institution career outcomes.

```
SELECT t.institution_type, AVG(s.early_career_pay) AS avg_early_pay
FROM tuition_info t
JOIN salary_potential s ON t.college_id = s.college_id
GROUP BY t.institution_type
ORDER BY avg_early_pay DESC;
```

institution_type	avg_early_pay
For Profit	53500.0000
Private	51807.6482
Public	50328.0000

Results:

- 3 rows

12. States with Highest Average Minority Enrollment

Insight: Identify states supporting diverse college environments.

```
SELECT c.state, AVG(d.total_minority) AS avg_minority_percent
FROM colleges c
JOIN diversity_stats d ON c.college_id = d.college_id
GROUP BY c.state
ORDER BY avg_minority_percent DESC
LIMIT 5;
```

state	avg_minority_percent
Utah	6917.5000
Florida	6237.4219
California	5608.1082
Arizona	5027.7931
Texas	4701.2177

Results:

- 5 rows

Query Type: Joins across multiple tables, Subquery

13. Colleges with Above-Average Early Career Pay

Insight: Focus on schools that beat the national early career average.

```
SELECT c.name, s.early_career_pay
FROM colleges c
JOIN salary_potential s ON c.college_id = s.college_id
WHERE s.early_career_pay > (SELECT AVG(early_career_pay) FROM salary_potential);
```

name	early_career_pay
Adventist University of Health Sciences	51600
Albany College of Pharmacy and Health Sciences	81000
Albion College	52100
Allen College	51600
Amberton University	52800
Amherst College	63800
Arizona State University	54500
Auburn University	54400
Babson College	72000
Baptist College of Health Sciences	55700
Barnard College	59200
Bates College	59500
Baylor University	55500
Bellin College	55800
Bentley University	66600
Boston College	63600
Boston University	61400
Bowdoin College	61300
Bradley University	55600
Brandeis University	60600
Brigham Young University	59200
Brigham Young University-Hawaii	51700
Brigham Young University-Idaho	53700
Brown University	68200
Bryant University	60500
Bucknell University	66700
Butler University	51800
California Institute of Technology	84100
California Maritime Academy	70500
California Polytechnic State University: San Luis...	65600

Results:

- 388 rows

14. Colleges with Above-Average Minority Enrollment

Insight: Highlights colleges excelling in minority student representation.

```
SELECT c.name, d.total_minority
FROM colleges c
JOIN diversity_stats d ON c.college_id = d.college_id
WHERE d.total_minority > (SELECT AVG(total_minority) FROM diversity_stats);
```

name	total_minority
Academy of Art University	3931
Adelphi University	2587
Alabama State University	5105
Albany State University	3534
Albany Technical College	3001
Alcorn State University	3479
Allan Hancock College	7116
Alvin Community College	2287
Amarillo College	4905
American River College	14336
Angelo State University	2666
Anne Arundel Community...	4660
Antelope Valley College	11010
Arapahoe Community Coll...	2762
Arizona State University	15746
Arizona Western College	5745
Ashford University	26590
Atlanta Metropolitan Stat...	2884
Atlanta Technical College	4135
Atlantic Cape Community ...	2821
Auburn University	3269
Augusta Technical College	2386
Augusta University	2960
Austin Community College	18878
Austin Peay State Univer...	3207
Azusa Pacific University	4591
Bakersfield College	14389
Ball State University	2746
Baltimore City Community...	4359
Barry University	4431

Results:

- 573 rows

Query Type: Joins across multiple tables, Aggregations (filtering, ordering)

16. Public Colleges with Highest Diversity

Insight: Best public colleges for diversity.

```
SELECT c.name, d.total_minority
FROM colleges c
JOIN tuition_info t ON c.college_id = t.college_id
JOIN diversity_stats d ON c.college_id = d.college_id
WHERE t.institution_type LIKE '%Public%'
ORDER BY d.total_minority DESC
LIMIT 10;
```

name	total_minority
Miami Dade College	56561
Florida International University	39763
Broward College	31955
East Los Angeles College	29427
Northern Virginia Community College	28937
South Texas College	28644
El Paso Community College	25229
University of Central Florida	24941
Valencia College	24707
University of Houston	24647

Results:

- 10 rows

17. Private Colleges with Lowest Total Cost

Insight: Affordable private institutions.

```
SELECT c.name, t.in_state_total
FROM colleges c
JOIN tuition_info t ON c.college_id = t.college_id
WHERE t.institution_type LIKE '%Private%'
ORDER BY t.in_state_total ASC
LIMIT 10;
```

name	in_state_total
Little Big Horn College	3200
White Earth Tribal and Community College	3830
God's Bible School and College	4270
Atlantic University College	4525
Global University	4770
Shiloh University	4800
Commonwealth Institute of Funeral Service	5130
Inter American University of Puerto Rico: Ponce...	5220
Huntsville Bible College	5390
Bayamon Central University	5775

Results:

- 10 rows

Query Type: Joins across multiple tables, Aggregations (filtering)

18. Colleges Where Women Enrollment is Below 50%

Insight: Gender imbalance insight.

```
SELECT c.name, d.women
FROM colleges c
JOIN diversity_stats d ON c.college_id = d.college_id
WHERE d.women < 50;
```

name	women		
Academy College	28	Mid-America College of Funeral Service	30
Advanced Technology Institute	29	Mirrerr Yeshiva Central Institute	0
Alaska Bible College	25	Morehouse College	1
Allegheny Wesleyan College	37	Morrison Institute of Technology	8
American Baptist College	47	Myotherapy Institute	13
American Indian College of the Assemblies of God	49	Ner Israel Rabbinical College	0
Austin Graduate School of Theology	15	Pittsburgh Institute of Aeronautics	20
Baptist Missionary Association Theological Seminary	16	Pontifical College Josephinum	1
Beis Medrash Heichal Dovid	0	Providence Christian College	43
Beth Hatalmud Rabbinical College	0	Rabbi Jacob Joseph School	0
Beth Medrash Govoha	0	Rabbinical Academy Mesivta Rabbi Chaim Berlin	0
Boston Baptist College	44	Rabbinical College Beth Shraga	0
California Christian College	4	Rabbinical College Bobover Yeshiva B'nei Zion	0
Carolina Christian College	27	Rabbinical College of America	0
Carver College	46	Rabbinical College of Long Island	0
Clear Creek Baptist Bible College	34	Rabbinical College of Telshe	0
Colorado School of Trades	1	Rabbinical Seminary of America	0
Conception Seminary College	2	Refrigeration School	18
Divine Word College	35	Rosedale Bible College	27
Family of Faith College	17	Schiller International University	26
Hampden-Sydney College	2	Shasta Bible College and Graduate School	22
Heritage Christian University	5	Southeastern Baptist College	14
Horizon University	7	Southern California Institute of Technology	26
International College of Broadcasting	12	St. John Vianney College Seminary	1
Island Drafting and Technical Institute	11	Talmudical Academy of New Jersey	0
JNA Institute of Culinary Arts	30	Talmudical Seminary Oholei Torah	0
Kehilath Yakov Rabbinical Seminary	0	Talmudical Yeshiva of Philadelphia	0
Kentucky Mountain Bible College	45	Torah Temimah Talmudical Seminary	0
Machzikei Hadath Rabbinical College	0	Tri-State Bible College	28
Manthano Christian College	5	Virginia Baptist College	42
Mesivta Torah Vodaath Seminary	0	Visible Music College	37

Results:

- 74 rows

Query Type: Joins across multiple tables, Aggregations (filtering, aggregation)

19. Large Colleges (20,000+ Enrollment) and Average Mid-Career Pay

Insight: See if bigger colleges correlate with higher mid-career earnings.

```
SELECT AVG(s.mid_career_pay) AS avg_mid_pay_large_colleges
FROM colleges c
JOIN salary_potential s ON c.college_id = s.college_id
JOIN diversity_stats d ON c.college_id = d.college_id
WHERE d.total_enrollment > 20000;
```

avg_mid_pay_large_colleges
99344.7059

Results:

- 1 row

Query Type: Joins across multiple tables, Subquery, Aggregations (ordering)

20. Colleges with Tuition Lower Than State Average

Insight: Colleges that are cheaper than their state's average cost for their institution type.

```
SELECT c.name, c.state, t.in_state_tuition
FROM colleges c
JOIN tuition_info t ON c.college_id = t.college_id
WHERE t.in_state_tuition < (
    SELECT AVG(t2.in_state_tuition)
    FROM tuition_info t2
    WHERE t2.institution_type = t.institution_type
)
ORDER BY c.state;
```

name	state	in_state_tuition
Huntsville Bible College	Alabama	5390
Jefferson State Community College	Alabama	4800
Calhoun Community College	Alabama	4840
Coastal Alabama Community College	Alabama	4740
Concordia College	Alabama	10120
Judson College	Alabama	18510
Heritage Christian University	Alabama	12312
Alabama Southern Community College	Alabama	4440
Faulkner University	Alabama	21690
Miles College	Alabama	11604
Lawson State Community College	Alabama	4760
Southern Union State Community Coll...	Alabama	4440
Snead State Community College	Alabama	4800
Tuskegee University	Alabama	22170
Birmingham-Southern College	Alabama	17650
Huntingdon College	Alabama	27400
Bishop State Community College	Alabama	4740
George C. Wallace Community Colleg...	Alabama	4680
Gadsden State Community College	Alabama	4800
Chattahoochee Valley Community Col...	Alabama	4560
Bevill State Community College	Alabama	4770
Oakwood University	Alabama	16720
Northwest-Shoals Community College	Alabama	4695
Columbia Southern University	Alabama	6785
Talladega College	Alabama	12510
Central Alabama Community College	Alabama	4740
Northeast Alabama Community College	Alabama	4740
Shelton State Community College	Alabama	4467
United States Sports Academy	Alabama	12210
University of Mobile	Alabama	22820

Results:

- 1678 rows