Joseph Skinner

Lab 5

CSC 424

USE university;

CREATE VIEW department AS

SELECT DISTINCT dept

FROM course

UNION

SELECT DISTINCT dept FROM prof

UNION

SELECT DISTINCT dept FROM student;

SELECT \* FROM department;

|  |
| --- |
| dept |
| EALC |
| CS |
| GOVT |
| MATH |
| CC |
| ENG |
| MUS |
| RUSS |
| ENGL |
| PE |

1. '10'

USE university;

CREATE VIEW govtSal AS

SELECT AVG(salary) AS govtSal, dept

FROM prof

WHERE dept="GOVT";

|  |  |
| --- | --- |
| govtSal | dept |
| 146500 | GOVT |

CREATE VIEW avgSal AS

SELECT AVG(salary) AS avgSal, dept

FROM prof

GROUP BY dept;

|  |  |
| --- | --- |
| avgSal | dept |
| 10000.54 | CC |
| 116501.1 | CS |
| 146500 | GOVT |
| 50004.94 | MATH |

SELECT dept, avgSal

FROM avgSal

WHERE avgSal < (SELECT govtSal FROM govtSal)

|  |  |
| --- | --- |
| dept | avgSal |
| CC | 10000.54 |
| CS | 116501.1 |
| MATH | 50004.94 |

USE university;

CREATE VIEW fail AS

SELECT r.term, r.secnum

FROM report AS r

GROUP BY grade, term, secnum

HAVING r.grade='F'

ORDER BY term;

|  |  |  |
| --- | --- | --- |
| count(r.grade) | term | secnum |
| 1 | F08 | 8765 |
| 1 | F09 | 4190 |
| 1 | F11 | 8765 |
| 1 | F35 | 2804 |
| 1 | S02 | 1234 |
| 1 | S03 | 2804 |
| 1 | S04 | 2804 |
| 1 | S08 | 9023 |
| 1 | S08 | 4937 |
| 1 | S08 | 7777 |

SELECT s.snum AS Student\_Number, s.lastName, c.cnum AS Course\_Number, sec.secnum AS Section\_Number, sec.term AS Term, r.grade

FROM student AS s, course AS c, section AS sec, report AS r

WHERE r.snum=s.snum

AND (r.grade='F' OR r.grade='D')

AND sec.secnum=r.secnum

AND sec.term=r.term

ORDER BY lastName;

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Student\_Number | lastName | Course\_Number | Section\_Number | Term | grade |
| 777777777 | Belaief | CSC231 | 7777 | S08 | F |
| 777777777 | Belaief | CSC424 | 4190 | F09 | F |
| 115327466 | Bush | GOV100 | 2804 | F35 | F |
| 456587847 | Mao | GOV100 | 2804 | S04 | F |
| 456587847 | Mao | CSC330 | 1234 | S02 | F |

USE university;

CREATE VIEW numStudents AS

SELECT dept, COUNT(\*) AS numStudents

FROM student

GROUP BY dept;

|  |  |
| --- | --- |
| dept | numStudents |
| CS | 3 |
| ENG | 1 |
| ENGL | 2 |
| GOVT | 5 |
| MATH | 1 |
| MUS | 1 |
| PE | 1 |
| RUSS | 1 |

CREATE VIEW numProfs AS

SELECT dept, COUNT(\*) AS numProfs

FROM prof

GROUP BY dept;

|  |  |
| --- | --- |
| dept | numProfs |
| CC | 1 |
| CS | 5 |
| GOVT | 2 |
| MATH | 2 |

SELECT DISTINCT p.dept, p.numProfs

FROM numStudents, numProfs AS p

WHERE numProfs > numStudents;

|  |  |
| --- | --- |
| dept | numProfs |
| CS | 5 |
| GOVT | 2 |
| MATH | 2 |

USE university;

SELECT s.snum, s.lastName

FROM student AS s

WHERE s.snum NOT IN

(SELECT r.snum FROM report AS r WHERE r.grade < 'F')

ORDER BY lastName

|  |  |
| --- | --- |
| snum | lastName |
| 115327466 | Bush |
| 456587847 | Mao |
| 123456789 | Mutai |
| 58938586 | Obama |
| 444555666 | Radcliffe |
| 684903033 | Zhao |



USE university;

SELECT s.snum, s.lastName

FROM student AS s

WHERE EXISTS(SELECT \* FROM course AS c WHERE c.dept = "CS"

AND EXISTS(SELECT \* FROM section AS sec WHERE sec.cnum=c.cnum

AND EXISTS (SELECT \* FROM report AS r WHERE s.snum=r.snum AND r.secnum=sec.secnum AND sec.term=r.term)));

|  |  |
| --- | --- |
| snum | lastName |
| 19385842 | Pierce |
| 20187673 | Hu |
| 111222333 | Belaief |
| 123456789 | Mutai |
| 345098765 | Ali |
| 456587847 | Mao |
| 555555555 | Springer |
| 777777777 | Belaief |
| 798783733 | Lincoln |
| 987654321 | Clinton |