TABLES

Enrollment	SSN	CourseNumber	Quarter	Grade
	123456789	4550	Spring 2005	B
	794631528	3700	Winter 2008	NULL
	123456789	4550	Fall 2006	C
	159264837	3250	Winter 2009	A
	987654321	4550	Fall 2006	A

Section	CourseNumber	Quarter	RoomNumber	DayTime
	3600	Winter2011	34	TH 7:0-9:50PM
	4550	Summer2012	34	MW 2:0-3:15PM
	3700	Fall 2006	723	TTH 8:0-8:50AM
	3250	Winter2009	713	F 3:0-5:50PM

Course	CourseN	PrerequisiteCourseNumber	Course Title	NumberUnits
	4550	3700	Computer Architechture	4
	3700	3600	Computers and Society	4
	3250	3000	Artificial Intelligence	4
	3600	3250	Software Engineering	4

Student	SSN	Name	Major
	123456789	Ron Smith	Computer Science
	987654321	David Weidman	Architecture
	159264837	David Weidman	Business
	794631528	Leslie Aleman	Physics

QUERIES

SQL File 3*

```sql
1  SELECT
2      s.Name,
3      s.SSN,
4      COUNT(*) as NumberOfCourses
5  FROM
6      Student s,
7      Enrollment e
8  WHERE
9      s.SSN = e.SSN
10 GROUP BY
11     s.Name,
12     s.SSN;
```

Result Grid | Filter Rows:

Name	SSN	NumberOfCourses
Ron Smith	123456789	2
David Weidman	159264837	1
Leslie Aleman	794631528	1
David Weidman	987654321	1

Query 1

```sql
1  SELECT
2      S.Name,
3      S.SSN,
4      COUNT(*)
5  FROM
6      Student S,
7      (SELECT
8          SSN,
9          CourseNumber
10     FROM Enrollment
11     GROUP BY
12         SSN,
13         CourseNumber
14     ) AS E
15 WHERE
16     S.SSN = E.SSN
17 GROUP BY
18     S.SSN,
19     S.Name;
20
```

Result Grid | Filter Rows:

Name	SSN	COUNT(*)
Ron Smith	123456789	1
David Weidman	159264837	1
Leslie Aleman	794631528	1
David Weidman	987654321	1

Query 1 ×

```sql
1   SELECT
2       s.Name,
3       s.SSN,
4       COUNT(*)
5   FROM
6       STUDENT s,
7       ENROLLMENT e
8   WHERE
9       s.SSN = e.SSN
10      AND e.GRADE is NOT NULL
11  GROUP BY
12      s.Name,
13      s.SSN;
```

Result Grid | Filter Rows:

Name	SSN	COUNT(*)
Ron Smith	123456789	2
David Weidman	159264837	1
David Weidman	987654321	1

Query 1 ×

Limit to 1000

```sql
1   SELECT
2       s.Name,
3       s.SSN,
4       s.SSN,
5       COUNT(*) AS NumberOfCourses
6   FROM
7       Student s,
8       Enrollment e
9   WHERE
10      s.SSN = e.SSN
11      AND e.GRADE IN(
12          SELECT
13              Grade
14          From
15              Enrollment
16          WHERE
17              Grade = 'A'
18              or Grade = 'B'
19              OR Grade = 'C'
20      )
21  GROUP BY
22      S.Name,
23      S.SSN;
```

Result Grid | Filter Rows: Export:

Name	SSN	SSN	NumberOfCourses
Ron Smith	123456789	123456789	2
David Weidman	159264837	159264837	1
David Weidman	987654321	987654321	1

Query 1 ×

```sql
1   SELECT
2       CourseTitle,
3       CourseNumber
4   FROM
5       Course
6   WHERE
7       PrerequisiteCourseNumber is NULL;
```

Result Grid | Filter Rows:

CourseTitle	CourseNumber
NULL	NULL

Query 1 ×

```sql
1   SELECT
2       s.Name,
3       S.SSN
4   FROM
5       Student s,
6       Enrollment e
7   WHERE
8       s.SSN = e.SSN
9       AND s.Name NOT IN (
10          SELECT
11              s1.Name
12          FROM
13              Enrollment e1,
14              Student s1
15          WHERE
16              e1.SSN = s1.SSN
17              AND e1.Grade NOT LIKE 'A'
18      );
```

Result Grid | Filter Rows:

Name	SSN
David Weidman	159264837
Leslie Aleman	794631528
David Weidman	987654321

Query 1

```sql
1   SELECT
2       s.Name,
3       E.SSN,
4       E.CourseNumber
5   FROM
6       Student AS s,
7       Enrollment AS e
8   WHERE
9       s.SSN = e.SSN
10  GROUP BY
11      s.Name,
12      E.SSN,
13      e.CourseNumber
14  HAVING
15      COUNT(*) >= 3;
```

Result Grid | Filter Rows:

Name	SSN	CourseNumber

Query 1 — Limit to 1

```sql
1   SELECT
2       s.Name,
3       S.SSN,
4       e.Quarter,
5       COUNT(*)
6   FROM
7       Student S,
8       Enrollment e
9   WHERE
10      s.SSN = e.SSN
11  GROUP BY
12      s.Name,
13      s.SSN,
14      e.Quarter
```

Result Grid | Filter Rows: | Export:

Name	SSN	Quarter	COUNT(*)
Ron Smith	123456789	Winter2011	1
Ron Smith	123456789	Fall 2006	1
David Weidman	159264837	Winter2009	1
Leslie Aleman	794631528	Summer2012	1
David Weidman	987654321	Fall 2006	1

Query 1 — Limit to 1000 ro

```sql
1   SELECT
2       S.Name,
3       S.SSN
4   FROM
5       Student S
6   WHERE
7       S.Name NOT IN (
8           SELECT
9               S2.Name
10          FROM
11              Student S2,
12              Enrollment E1,
13              Enrollment E2
14          WHERE
15              S2.SSN = E1.SSN
16              AND E1.SSN = E2.SSN
17              AND E1.CourseNumber = E2.CourseNumber
18              AND E1.Quarter != E2.Quarter
19      );
20
```

Result Grid | Filter Rows: | Edit:

Name	SSN
David Weidman	159264837
Leslie Aleman	794631528
David Weidman	987654321
NULL	NULL

Query 1 — Limit to 1000 rows

```sql
1   SELECT
2       S.Name,
3       S.SSN,
4       COUNT(*) AS NumberOfCourses,
5       Sum(If(Grade IS NOT NULL, 1, 0)) AS NumberOfCoursesCom
6   FROM
7       Student S,
8       Enrollment E
9   WHERE
10      S.SSN = E.SSN
11  GROUP BY
12      S.Name,
13      S.SSN;
14
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Name	SSN	NumberOfCourses	NumberOfCoursesCompleted
Ron Smith	123456789	2	2
David Weidman	159264837	1	1
Leslie Aleman	794631528	1	0
David Weidman	987654321	1	1

Query 1

```sql
1   SELECT
2       C.CourseNumber,
3       C.CourseTitle
4   FROM
5       Course C,
6       Course C1,
7       Course C2
8   WHERE
9       C1.CourseNumber <> C2.CourseNumber
10      AND C1.PrerequisiteCourseNumber = C2.PrerequisiteCou
11  GROUP BY
12      C.CourseNumber,
13      C.CourseTitle;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Conte

CourseNumber	CourseTitle

Query 1

```sql
1   SELECT
2       DISTINCT S.Name,
3       S.SSN
4   FROM
5       Student S,
6       Enrollment E
7   WHERE
8       S.SSN = E.SSN
9       AND E.Grade IS NOT NULL
10      AND S.Name NOT IN (
11          SELECT
12              SS.Name
13          FROM
14              Enrollment EE,
15              Student SS
16          WHERE
17              EE.SSN = SS.SSN
18              AND EE.Grade NOT LIKE 'A');
```

Result Grid | Filter Rows: | Exp

Name	SSN
David Weidman	159264837
David Weidman	987654321

Query 1

```sql
1   SELECT
2       DISTINCT S.Name,
3       S.SSN
4   FROM
5       Student S,
6       Enrollment E
7   WHERE
8       S.SSN = E.SSN
9       AND E.Grade IS NOT NULL
10      AND S.Name NOT IN (
11          SELECT
12              SS.Name
13          FROM
14              Enrollment EE,
15              Student SS
16          WHERE
17              EE.SSN = SS.SSN
18              AND EE.Grade LIKE 'A'
19      );
20
```

Result Grid | Filter Rows:

Name	SSN
Ron Smith	123456789

Query 1

```sql
1   SELECT
2       DISTINCT S.Name,
3       S.Major
4   FROM
5       Student S
6   WHERE
7       S.Name NOT IN(
8           SELECT
9               S2.Name
10          FROM
11              Student S2,
12              Section SE,
13              Enrollment E
14          WHERE
15              S2.SSN = E.SSN
16              AND E.CourseNumber = SE.CourseNumber
17              AND SE.DayTime NOT LIKE ' MW % PM '
18      );
19
20
```

Result Grid | Filter Rows: | Export: | W

Name	Major

Query 1 ×

```sql
1  SELECT
2      DISTINCT S.Name,
3      S.Major
4  FROM
5      Student S
6  WHERE
7      S.Name NOT IN(
8          SELECT
9              S2.Name
10          FROM
11              Student S2,
12              Section SE,
13              Enrollment E
14          WHERE
15              S2.SSN = E.SSN
16              AND E.CourseNumber = SE.CourseNumber
17              AND SE.DayTime NOT LIKE 'MW % PM'
18      );
19
20
```

Result Grid | Filter Rows: | Export: |

Name	Major

Query 1 ×

```sql
1  SELECT
2      DISTINCT S.Name,
3      S.Major
4  FROM
5      Student S
6  WHERE
7      S.Name NOT IN(
8          SELECT
9              S2.Name
10          FROM
11              Student S2,
12              Section SE,
13              Enrollment E
14          WHERE
15              S2.SSN = E.SSN
16              AND E.CourseNumber = SE.CourseNumber
17              AND SE.DayTime LIKE 'MW % PM'
18      );
19
20
```

Result Grid | Filter Rows: | Export: | W

Name	Major
Ron Smith	Computer Science
David Weidman	Business
Leslie Aleman	Physics
David Weidman	Architecture

Query 1 ×

```sql
1  SELECT
2      E.CourseNumber,
3      E.Quarter
4  FROM
5      Enrollment E
6  GROUP BY
7      E.CourseNumber,
8      E.Quarter
9  HAVING
10      COUNT(*) >= ALL(
11          SELECT
12              COUNT(*)
13          FROM
14              Enrollment
15          GROUP BY
16              CourseNumber,
17              Quarter
18      );
19
20
```

Result Grid | Filter Rows:

CourseNumber	Quarter
4550	Fall 2006

Query 1 ×

```sql
1  SELECT
2      C.CourseNumber,
3      C.CourseTitle
4  FROM
5      Course C,
6      Enrollment E
7  WHERE
8      C.CourseNumber = E.CourseNumber
9  GROUP BY
10      C.CourseNumber,
11      C.CourseTitle
12  HAVING
13      COUNT(*) >= ALL(
14          SELECT
15              COUNT(*)
16          FROM
17              Enrollment
18          GROUP BY
19              CourseNumber,
20              CourseTitle
21      );
22
```

Result Grid | Filter Rows:

Name	Major

```sql
1  • SELECT  S.Name,
2        S.Major
3     FROM  Student S,
4        Course C,
5        Enrollment E
6     WHERE  S.SSN = E.SSN
7        AND E.CourseNumber = C.CourseNumber
8     GROUP BY S.Name,
9        S.Major
10    HAVING
11       SUM(C.NumberUnits) >= (
12          SELECT
13             SUM(CC.NumberUnits)
14          FROM Course CC,
15             Student SS,
16             Enrollment EE
17          WHERE
18             SS.SSN = EE.SSN
19             AND EE.CourseNumber = CC.CourseNumber
20          );
```

Result Grid | Filter Rows: | Export:

Name	Major

```sql
1  • SELECT
2        C.CourseTitle
3     FROM
4        Course C
5     GROUP BY
6        C.CourseTitle
7     HAVING
8        COUNT(C.PrerequisiteCourseNumber) >= ALL(
9           SELECT
10             COUNT(C2.PrerequisiteCourseNumber)
11          FROM
12             Course C2
13          GROUP BY
14             C2.CourseTitle
15       );
16
17
18
19
20
```

Result Grid | Filter Rows: | Export: | Wr

CourseTitle
Artifical Intelligence
Software Engineering
Computers and Society
Computer Architecture