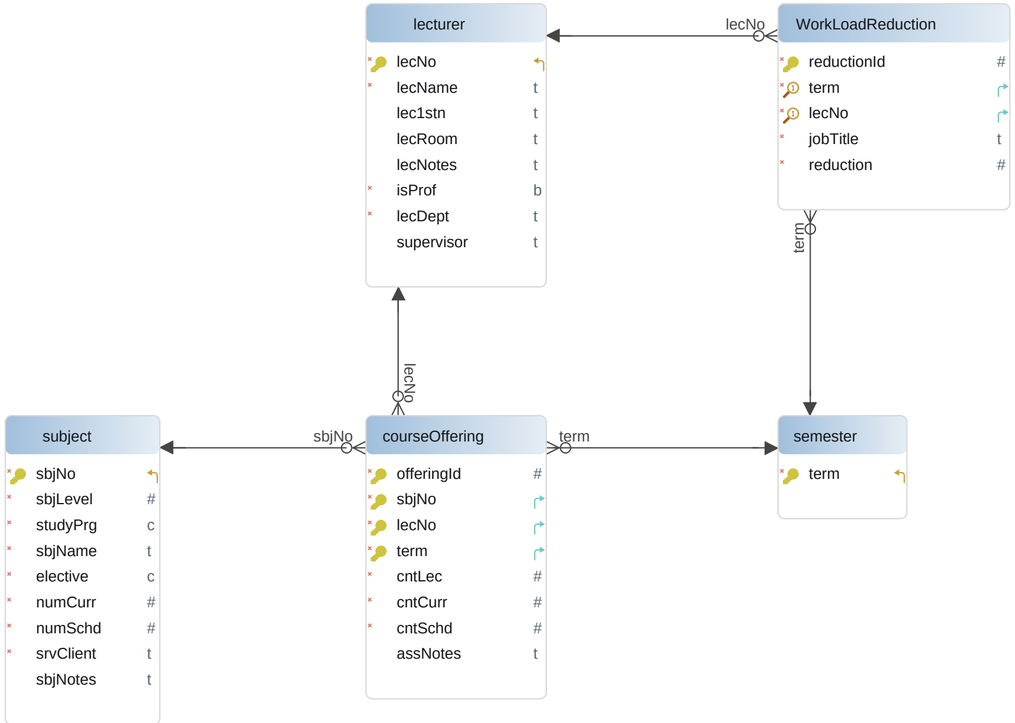

TermList

Counts all terms in database

StaffMembers

Differentiates between professors and contract teachers

LecturersWithLoad

Lists lecturers with 2 or 3 courses per term

ExpansiveLectures

Lists all the lectures which have more workload than hours given by the curriculum

TeachingProfessors

ProfessorsWithReduction

Lists all professors who are currently teaching

Lists professors with additional workload (positive or negative)

ProfessorWorkload

Shows the workload of each professor

WorkloadBalance

Shows the workload through out the terms including the reductions

ImportLecturers

Listing lecturers teaching a subject with different department

ExportedSubjects

Listing subjects taught by lecturers with different departments

Default Diagram

Entity WorkLoadReduction

Idx	Name	Data Type
* Pk	reductionId	INT AUTO_INCREMENT
* Unq	term	VARCHAR(20)
* Unq	lecNo	INT
*	jobTitle	VARCHAR(100)
*	reduction	INT

Indexes

Type	Name	On
Pk	pk_WorkLoadReduction	reductionId
Unq	unq_lec_no	lecNo
Unq	unq_term	term

Relationships

Type	Name	On
	fk_workloadreduction_lecturer (lecNo) ref lecturer (lecNo)	
	fk_workloadreduction_semester (term) ref semester (term)	

Entity courseOffering

Idx	Name	Data Type
* Pk	offeringId	INT AUTO_INCREMENT
* Pk	sbjNo	NVARCHAR(25)
* Pk	lecNo	INT
* Pk	term	VARCHAR(20)
*	cntLec	DECIMAL
*	cntCurr	INT
*	cntSchd	INT
	assNotes	VARCHAR(150)

Indexes

Type	Name	On
Pk	pk_courseOffering	offeringId, sbjNo, lecNo, term

Relationships

Type	Name	On
	fk_courseoffering_subject (sbjNo) ref subject (sbjNo)	
	fk_courseoffering_lecturer (lecNo) ref lecturer (lecNo)	
	fk_courseoffering_semester (term) ref semester (term)	

Entity lecturer

Idx	Name	Data Type
* Pk	lecNo	INT
*	lecName	VARCHAR(100)
	lec1stn	VARCHAR(100)
	lecRoom	VARCHAR(20)
	lecNotes	VARCHAR(150)
*	isProf	BOOLEAN
*	lecDept	VARCHAR(5)
	supervisor	VARCHAR(100)

Indexes

Entity lecturer

Type	Name	On
Pk	pk_lecturer	lecNo

Entity semester

Idx	Name	Data Type
* Pk	term	VARCHAR(20)

Indexes

Type	Name	On
Pk	pk_semester	term

Entity subject

Idx	Name	Data Type
* Pk	sbjNo	VARCHAR(25)
*	sbjLevel	INT
*	studyPrg	CHAR(10)
*	sbjName	VARCHAR(100)
*	elective	CHAR(10)
*	numCurr	INT
*	numSchd	INT
*	srvClient	VARCHAR(10)
	sbjNotes	VARCHAR(150)

Indexes

Type	Name	On
Pk	pk_subject	sbjNo

View ExpansiveLectures

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT SBJNO, SBJNAME, NUMSCHD, NUMCURR
FROM DB2INST1.SUBJECT
WHERE NUMSCHD > NUMCURR;
```

View ExportedSubjects

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT *
FROM (
    SELECT L.LECDEPT AS department, COUNT(*) AS export_count
    FROM DB2INST1.LECTURER as L
    JOIN DB2INST1.COURSEOFFERING as C on L.LECNO = C.LECNO
    JOIN DB2INST1.SUBJECT as S on C.SBJNO = S.SBJNO
    WHERE L.LECDEPT != S.SRVCLIENT
    GROUP BY L.LECDEPT
    ORDER BY L.LECDEPT
) as SUB;
```

View ImportLecturers

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT *
FROM (
    SELECT S.SRVCLIENT AS department, COUNT(*) AS import_count
    FROM DB2INST1.SUBJECT as S
    JOIN DB2INST1.COURSEOFFERING as C on C.SBJNO = S.SBJNO
    JOIN DB2INST1.LECTURER as L on L.LECNO = C.LECNO
    WHERE S.SRVCLIENT != L.LECDEPT
    GROUP BY S.SRVCLIENT
    ORDER BY S.SRVCLIENT
) as SUB;
```

View LecturersWithLoad

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT LECNO, TERM, COUNT(*) AS offerings
FROM DB2INST1.COURSEOFFERING
GROUP BY LECNO, TERM
HAVING COUNT(*) IN (2,3);
```

View ProfessorWorkload

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT LECNO, TERM, SUM(CNTLEC) AS total_lec_hrs
FROM DB2INST1.COURSEOFFERING
GROUP BY LECNO, TERM;
```

View ProfessorsWithReduction

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT DISTINCT L.LECNO
FROM DB2INST1.LECTURER AS L
JOIN DB2INST1.WORKLOADREDUCTION AS R ON R.LECNO = L.LECNO
WHERE L.ISPROF = TRUE;
```

View StaffMembers

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT ISPROF, COUNT(*) AS cnt
FROM DB2INST1.LECTURER
GROUP BY ISPROF;
```

View TeachingProfessors

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT DISTINCT L.LECNO
FROM DB2INST1.LECTURER AS L
JOIN DB2INST1.COURSEOFFERING AS C ON C.LECNO = L.LECNO
WHERE L.ISPROF = TRUE
AND NOT EXISTS (
    SELECT 1
    FROM DB2INST1.WORKLOADREDUCTION AS R
    WHERE R.LECNO = L.LECNO
);
```

View TermList

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT COUNT (DISTINCT term) AS term_count
FROM COURSEOFFERING G;
```

View WorkloadBalance

```
CREATE VIEW ${nameWithSchemaName} AS
SELECT *
FROM (
    SELECT C.LECNO, C.TERM, SUM(C.CNTLEC) AS teach_hours, COALESCE(SUM(R.REDUCTION), 0) AS reduction_hours,
SUM(C.CNTLEC) + COALESCE(SUM(R.REDUCTION), 0) AS total_workload
    FROM DB2INST1.COURSEOFFERING AS C
    LEFT JOIN DB2INST1.WORKLOADREDUCTION AS R ON C.LECNO = R.LECNO
    AND C.TERM = R.TERM
    GROUP BY C.LECNO, C.TERM
    ORDER BY C.LECNO, C.TERM
) as SUB;
```