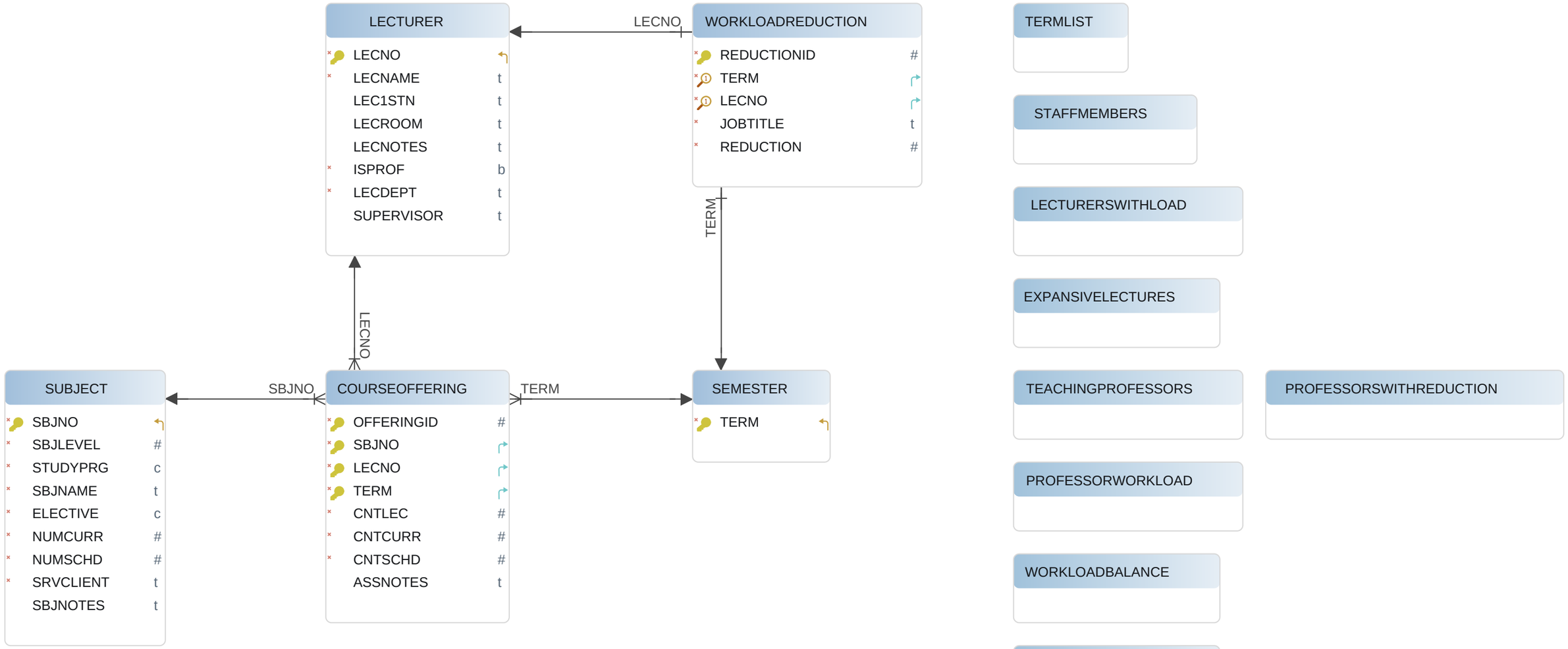
LECTURER
LECNO
LECNAME t
LEC1STN t
LECROOM t
LECNOTES t
ISPROF b
LECDEPT t
SUPERVISOR t
LECNO
WORKLOADREDUCTION
REDUCTIONID #
TERM
LECNO
JOBTITLE t
REDUCTION #
TERM
TERMLIST
STAFFMEMBERS
LECTURERSWITHLOAD
EXPANSIVELECTURES
SUBJECT
SBJNO
SBJLEVEL #
STUDYPRG c
SBJNAME t
ELECTIVE c
NUMCURR #
NUMSCHD #
SRVCLIENT t
SBJNOTES t
SBJNO
COURSEOFFERING
OFFERINGID #
SBJNO
LECNO
TERM
CNTLEC #
CNTCURR #
CNTSCHD #
ASSNOTES t
TERM
SEMESTER
TERM
TEACHINGPROFESSORS
PROFESSORSWITHREDUCTION
PROFESSORWORKLOAD
WORKLOADBALANCE
IMPORTLECTURERS
EXPORTEDSUBJECTS

Default Diagram

Table COURSEOFFERING

Idx	Name	Data Type
* Pk	OFFERINGID	INTEGER QAUTO_INCREMENTE
* Pk	SBJNO	VARCHAR(25)
* Pk	LECNO	INTEGER
* Pk	TERM	VARCHAR(20)
*	CNTLEC	DECIMAL
*	CNTCURR	INTEGER
*	CNTSCHD	INTEGER
	ASSNOTES	VARCHAR(150)

Indexes

Type	Name	On
Pk	PK_COURSEOFFERING	OFFERINGID, SBJNO, LECNO, TERM

Foreign Keys

Type	Name	On
	FK_COURSEOFFERING_SUBJECT (SBJNO) ref SUBJECT (SBJNO)	
	FK_COURSEOFFERING_LECTURER (LECNO) ref LECTURER (LECNO)	
	FK_COURSEOFFERING_SEMESTER (TERM) ref SEMESTER (TERM)	

Table LECTURER

Idx	Name	Data Type
* Pk	LECNO	INTEGER
*	LECNAME	VARCHAR(100)
	LEC1STN	VARCHAR(100)
	LECROOM	VARCHAR(20)
	LECNOTES	VARCHAR(150)
*	ISPROF	BOOLEAN
*	LECDEPT	VARCHAR(5)
	SUPERVISOR	VARCHAR(100)

Indexes

Type	Name	On
Pk	PK_LECTURER	LECNO

Table SEMESTER

Idx	Name	Data Type
* Pk	TERM	VARCHAR(20)

Indexes

Type	Name	On
Pk	PK_SEMESTER	TERM

Table SUBJECT

Idx	Name	Data Type
* Pk	SBJNO	VARCHAR(25)
*	SBJLEVEL	INTEGER
*	STUDYPRG	CHAR(10)
*	SBJNAME	VARCHAR(100)
*	ELECTIVE	CHAR(10)

Table SUBJECT

*	NUMCURR	INTEGER
*	NUMSCHD	INTEGER
*	SRVCLIENT	VARCHAR(10)
	SBJNOTES	VARCHAR(150)

Indexes

Type	Name	On
Pk	PK_SUBJECT	SBJNO

Table WORKLOADREDUCTION

Idx	Name	Data Type
* Pk	REDUCTIONID	INTEGER GENERATED ALWAYS AS IDENTITY (START WITH 1 INCREMENT BY 1)
* Unq	TERM	VARCHAR(20)
* Unq	LECNO	INTEGER
*	JOBTITLE	VARCHAR(100)
*	REDUCTION	INTEGER

Indexes

Type	Name	On
Pk	PK_WORKLOADREDUCTION	REDUCTIONID
Unq	UNQ_LEC_NO	LECNO
Unq	UNQ_TERM	TERM

Foreign Keys

Type	Name	On
	FK_WORKLOADREDUCTION_LECTURER (LECNO) ref LECTURER (LECNO)	
	FK_WORKLOADREDUCTION_SEMESTER (TERM) ref SEMESTER (TERM)	

View EXPANSIVELECTURES

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

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

View EXPORTEDSUBJECTS

Listing subjects taught by lecturers with different departments

```
CREATE VIEW ${nameWithSchemaName} AS
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;
```

View IMPORTLECTURERS

Listing lecturers teaching a subject with different department

```
CREATE VIEW ${nameWithSchemaName} AS
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;
```

View LECTURERSWITHLOAD

Lists lecturers with 2 or 3 courses per term

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

View PROFESSORSWITHREDUCTION

Lists professors with additional workload (positive or negative)

```
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 PROFESSORWORKLOAD

Shows the workload of each professor

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

View STAFFMEMBERS

Differentiates between professors and contract teachers

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

View TEACHINGPROFESSORS

Lists all professors who are currently teaching

```
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

Counts and lists all the terms stored in the database

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

View WORKLOADBALANCE

Shows the workload through out the terms including the reductions

```
CREATE VIEW ${nameWithSchemaName} AS
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.LEC_NO
AND C.TERM  = R.TERM
GROUP BY C.LECNO, C.TERM
ORDER BY C.LECNO, C.TERM;
```