Student Number	Student Name	Exam Score	Support	Date of Birth	Course Name	Exam Boards	Teacher Name
1001	Bob Baker	78	No	8/25/2001	Computer Science	BCS	Mr Jones
					Maths	EdExcel	Ms Parker
					Physics	OCR	Mr Peters
1002	Sally Davies	55	Yes	10/2/1999	Maths	AQA	Ms Parker
					Biology	WJEC	Mrs Patel
					Music	AQA	Ms Daniels
1003	Mark Hanmill	90	No	6/5/1995	Computer Science	BCS	Mr Jones
					Maths	EdExcel	Ms Parker
					Physics	OCR	Mr Peters
1004	Anas Ali	70	No	8/3/1980	Maths	AQA	Ms Parker
					Physics	OCR	Mr Peters
					Biology	WJEC	Mrs Patel
1005	Cheuk Yin	45	Yes	5/1/2002	Computer Science	BCS	Mr Jones
					Maths	EdExcel	Ms Parker
					Music	AQA	Ms Daniels

Table is not atomic. 1st step is to make sure every row is atomic

Student Number	Student Name	Exam Score	Support	Date of Birth	Course Name	Exam Boards	Teacher Name
1001	Bob Baker	78	No	8/25/2001	Computer Science	BCS	Mr Jones
1001	Bob Baker	78	No	8/25/2001	Maths	EdExcel	Ms Parker
1001	Bob Baker	78	No	8/25/2001	Physics	OCR	Mr Peters
1002	Sally Davies	55	Yes	10/2/1999	Maths	AQA	Ms Parker
1002	Sally Davies	55	Yes	10/2/1999	Biology	WJEC	Mrs Patel
1002	Sally Davies	55	Yes	10/2/1999	Music	AQA	Ms Daniels
1003	Mark Hanmill	90	No	6/5/1995	Computer Science	BCS	Mr Jones

1003	Mark Hanmill	90	No	6/5/1995	Maths	EdExcel	Ms Parker
1003	Mark Hanmill	90	No	6/5/1995	Physics	OCR	Mr Peters
1004	Anas Ali	70	No	8/3/1980	Maths	AQA	Ms Parker
1004	Anas Ali	70	No	8/3/1980	Physics	OCR	Mr Peters
1004	Anas Ali	70	No	8/3/1980	Biology	WJEC	Mrs Patel
1005	Cheuk Yin	45	Yes	5/1/2002	Computer Science	BCS	Mr Jones
1005	Cheuk Yin	45	Yes	5/1/2002	Maths	EdExcel	Ms Parker
1005	Cheuk Yin	45	Yes	5/1/2002	Music	AQA	Ms Daniels

Table is now in atomic form. Next step is to eliminate dependencies to transform to 2NF
Student name, support and date of birth depend on student number
Teacher Name depends on Course Name

Student table

Student Number	Student Name	Support	Date of Birth
1001	**Bob Baker**	No	8/25/2001
1002	**Sally Davies**	Yes	10/2/1999
1003	**Mark Hanmill**	No	6/5/1995
1004	**Anas Ali**	No	8/3/1980
1005	**Cheuk Yin**	Yes	5/1/2002

Course table

CourseID	Course Name
C1	Biology
C2	Computer Science
C3	Maths
C4	Music
C5	Physics
C6	

Teacher Table

TeacherID	Teacher Name
T1	**Mr Jones**

T2	**Ms Parker**
T3	**Mr Peters**
T4	**Mrs Patel**
T5	**Ms Daniels**

Exam Board

EBID	Exam Boards
EB1	**BCS**
EB2	**EdExcel**
EB3	**OCR**
EB4	**AQA**
EB5	**WJEC**

Enrollments table

(a primary key consisting of a composite of course, student, teacher and exam board could be created. For simplicity we would use Z1,Z2)

GradeId	Score
Z1	**78**
Z2	**78**
Z3	**78**
Z4	**55**
Z5	**55**
Z6	**55**
Z7	**90**
Z8	**90**
Z9	**90**
Z10	**70**
Z11	**70**
Z12	**70**
Z13	**45**
Z14	**45**
Z15	**45**

To finish our 3NF table

Student Number	Student Name	Support	Date of Birth	Course Number	EB ID	Teacher ID	GradeId
1001	Bob Baker	No	8/25/2001	C2	EB1	T1	Z1
1001	Bob Baker	No	8/25/2001	C3	EB2	T2	Z2
1001	Bob Baker	No	8/25/2001	C5	EB3	T3	Z3
1002	Sally Davies	Yes	10/2/1999	C3	EB4	T2	Z4
1002	Sally Davies	Yes	10/2/1999	C1	EB5	T4	Z5
1002	Sally Davies	Yes	10/2/1999	C4	EB4	T5	Z6
1003	Mark Hanmill	No	6/5/1995	C2	EB1	T1	Z7
1003	Mark Hanmill	No	6/5/1995	C3	EB2	T2	Z8
1003	Mark Hanmill	No	6/5/1995	C5	EB3	T3	Z9
1004	Anas Ali	No	8/3/1980	C3	EB4	T2	Z10
1004	Anas Ali	No	8/3/1980	C5	EB3	T3	Z11
1004	Anas Ali	No	8/3/1980	C1	EB5	T4	Z12
1005	Cheuk Yin	Yes	5/1/2002	C2	EB1	T1	Z13
1005	Cheuk Yin	Yes	5/1/2002	C3	EB2	T2	Z14
1005	Cheuk Yin	Yes	5/1/2002	C4	EB4	T5	Z15