

Student Number	Student Name	Exam Score	Support	Date of Birth	Course Name
1001	Bob Baker	78	No	25/08/2001	Computer Science
					Maths
					Physics
1002	Sally Davies	55	Yes	02/10/1999	Maths
					Biology
					Music
1003	Mark Hanmill	90	No	05/06/1995	Computer Science
					Maths
					Physics
1004	Anas Ali	70	No	03/08/1980	Maths
					Physics
					Biology
1005	Cheuk Yin	45	Yes	01/05/2002	Computer Science
					Maths
					Music

Exam Boards	Teacher Name
BCS	Mr Jones
EdExcel	Ms Parker
OCR	Mr Peters
AQA	Ms Parker
WJEC	Mrs Patel
AQA	Ms Daniels
BCS	Mr Jones
EdExcel	Ms Parker
OCR	Mr Peters
AQA	Ms Parker
OCR	Mr Peters
WJEC	Mrs Patel
BCS	Mr Jones
EdExcel	Ms Parker
AQA	Ms Daniels

Student Course (1NF)					
Student Number	Course Name	Student Name	Exam Score	Support	Date of Birth
1001	Computer Science	Bob Baker	78	No	25/08/2001
1001	Maths	Bob Baker	78	No	25/08/2001
1001	Physics	Bob Baker	78	No	25/08/2001
1002	Maths	Sally Davies	55	Yes	02/10/1999
1002	Biology	Sally Davies	55	Yes	02/10/1999
1002	Music	Sally Davies	55	Yes	02/10/1999
1003	Computer Science	Mark Hanmill	90	No	05/06/1995
1003	Maths	Mark Hanmill	90	No	05/06/1995
1003	Physics	Mark Hanmill	90	No	05/06/1995
1004	Maths	Anas Ali	70	No	03/08/1980
1004	Physics	Anas Ali	70	No	03/08/1980
1004	Biology	Anas Ali	70	No	03/08/1980
1005	Computer Science	Cheuk Yin	45	Yes	01/05/2002
1005	Maths	Cheuk Yin	45	Yes	01/05/2002
1005	Music	Cheuk Yin	45	Yes	01/05/2002

Primary key = student number + course name

Exam Boards	Teacher Name
BCS	Mr Jones
EdExcel	Ms Parker
OCR	Mr Peters
AQA	Ms Parker
WJEC	Mrs Patel
AQA	Ms Daniels
BCS	Mr Jones
EdExcel	Ms Parker
OCR	Mr Peters
AQA	Ms Parker
OCR	Mr Peters
WJEC	Mrs Patel
BCS	Mr Jones
EdExcel	Ms Parker
AQA	Ms Daniels

Student (2NF,3NF)				
Student Number	Student Name	Exam Score	Support	Date of Birth
1001	Bob Baker	78	No	25/08/2001
1002	Sally Davies	55	Yes	02/10/1999
1003	Mark Hanmill	90	No	05/06/1995
1004	Anas Ali	70	No	03/08/1980
1005	Cheuk Yin	45	Yes	01/05/2002

primary key = student number

Course Name
Computer Science
Maths
Physics
Biology
Music

primary key = course name

Course Name (2NF)	
Exam Boards	Teacher Name
BCS	Mr Jones
EdExcel	Ms Parker
OCR	Mr Peters
WJEC	Mrs Patel
AQA	Ms Daniels

ame

Enrollment (2NF, 3NF)	
Student Number	Course Name
1001	Computer Science
1001	Maths
1001	Physics
1002	Maths
1002	Biology
1002	Music
1003	Computer Science
1003	Maths
1003	Physics
1004	Maths
1004	Physics
1004	Biology
1005	Computer Science
1005	Maths
1005	Music

primary key = student no. + course name

foreign key = student no, course name

Student (2NF, 3NF)				
Student Number	Student Name	Exam Score	Support	Date of Birth
1001	Bob Baker	78	No	25/08/2001
1002	Sally Davies	55	Yes	02/10/1999
1003	Mark Hanmill	90	No	05/06/1995
1004	Anas Ali	70	No	03/08/1980
1005	Cheuk Yin	45	Yes	01/05/2002

primary key = student number  
Already in 3NF

Course
Course Name
Computer Science
Maths
Physics
Biology
Music

primary key = course name

Exam Boards
BCS
EdExcel
OCR
WJEC
AQA

course name

Teacher Assignment (3NF)	
Course Name	Teacher Name
Computer Science	Mr Jones
Maths	Ms Parker
Physics	Mr Peters
Biology	Mrs Patel
Music	Ms Daniels

primary key = course name + teacher name  
foreign key = course name

Enrollment
Student Number
1001
1001
1001
1002
1002
1002
1003
1003
1003
1004
1004
1004
1005
1005
1005

primary key = student number  
foreign key = student number



ent (2NF, 3NF)
<b>Course Name</b>
Computer Science
Maths
Physics
Maths
Biology
Music
Computer Science
Maths
Physics
Maths
Physics
Biology
Computer Science
Maths
Music

ent no. + course name

nt no, course name

Student (2NF, 3NF)				
Student Number	Student Name	Exam Score	Support	Date of Birth
1001	Bob Baker	78	No	25/08/2001
1002	Sally Davies	55	Yes	02/10/1999
1003	Mark Hanmill	90	No	05/06/1995
1004	Anas Ali	70	No	03/08/1980
1005	Cheuk Yin	45	Yes	01/05/2002

primary key = student number  
Already in 3NF

Student	
INT (primary key)	student_ID
VARCHAR(100)	student_name
INT	exam_score
ENUM('Yes', 'No')	support
DATE	birth_date

Course
Course Name
Computer Science
Maths
Physics
Biology
Music

primary key = course name

Course
VARCHAR (100)(PK)
VARCHAR(50)

Exam Boards
BCS
EdExcel
OCR
WJEC
AQA

course name

course
course_name
exam_board

Teacher Assignment (3NF)	
Course Name	Teacher Name
Computer Science	Mr Jones
Maths	Ms Parker
Physics	Mr Peters
Biology	Mrs Patel
Music	Ms Daniels

primary key = course name + teacher name  
foreign key = course name

Teacher Assignment	
VARCHAR (100)(PK)	course_name
VARCHAR (100)(PK)	teacher

Enrollment
Student Number
1001
1001
1001
1002
1002
1002
1003
1003
1003
1004
1004
1004
1005
1005
1005

primary key = student number  
foreign key = student number

Enrollment
INT (PK)
VARCHAR (100)(PK)

ent (2NF, 3NF)
<b>Course Name</b>
Computer Science
Maths
Physics
Maths
Biology
Music
Computer Science
Maths
Physics
Maths
Physics
Biology
Computer Science
Maths
Music

ent no. + course name  
 nt no, course name

rollment
student_ID
course_name