

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

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

Courses
Course Name
Computer Science
Maths
Physics
Biology
Music

primary key = student number

Already in 3NF

primary key = cour

Exam Boards
BCS
EdExcel
OCR
WJEC
AQA

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

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

use name

primary key = course name + teacher name

foreign key = course name

primary key = student number

foreign key = student number

Ent (2NF, 3NF)
Course Name
Computer Science
Maths
Physics
Maths
Biology
Music
Computer Science
Maths
Physics
Maths
Physics
Biology
Computer Science
Maths
Music

int 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

Courses
Course Name
Computer Science
Maths
Physics
Biology
Music

primary key = student number

Already in 3NF

primary key = cour

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

Co
VARCHAR (100)(PK)
VARCHAR(50)

Exam Boards
BCS
EdExcel
OCR
WJEC
AQA

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

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

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

course
course_name
exam_board

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

primary key = student number
foreign key = student number

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

Student ID	Course Name
S1	Computer Science
S2	Maths
S3	Physics
S4	Maths
S5	Biology
S6	Music
S7	Computer Science
S8	Maths
S9	Physics
S10	Maths
S11	Physics
S12	Biology
S13	Computer Science
S14	Maths
S15	Music

Student no. + course name

Student no, course name

Enrollment
student_ID
course_name