Databases Lab week 1

# Step 1: Normalisation

List all data into a single table to store all attributes i.e. 8 columns in this case.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| COURSE | lecName | courseName | StudentNo | studentName | address | Grade | classNo |
| C1 | Btreacey | databases | s100 | j.bloggs | willton | 40 | b2231 |
| C2 | mdavin | moddeling | s100 | jbloggs | willton | 45 | f2.1 |

## List the primary and candidate key\*

This in this cause is the Course and studentNo key.

# Step 2: Break up tables.

One for the lector and one for the student.

# Lector Information

|  |  |  |  |
| --- | --- | --- | --- |
| COURSE | lecName | courseName | classNo |
| C1 | Btreacey | databases | s100 |

# Student Details

|  |  |  |
| --- | --- | --- |
| StudentNo | studentName | address |
| s100 | j.bloggs | willton |

# Index Data (Results)

|  |  |  |
| --- | --- | --- |
| COURSE | StudentNo | Grade |
| C1 | s100 | 40 |

To confirm that the keys are the following foren keys are Course in

Student is Student No and lector is COURSE.

List of dependecenices:

* Course ,StudenNo -> Grade
* StudentNo -> StudentName ,address
* Course -> lecName , courseName,classNo.

List of problems

Updating

There would be repeats and make it hard for updating

Inserting

There would be null values if you wanted to just want to insert for the lectors.

It would leave the students black (null)

Deleting

There would be null values if you wanted to just do the delete for the lectors.

It would leave the students blank(null)

|  |  |  |  |
| --- | --- | --- | --- |
| COURSE | lecName | courseName | classNo |
| C1 | Btreacey | databases | s100 |

|  |  |  |
| --- | --- | --- |
| StudentNo | studentName | address |
| s100 | j.bloggs | willton |

|  |  |  |
| --- | --- | --- |
| COURSE | StudentNo | Grade |
| C1 | s100 | 40 |

**|-----------------------------------------------College Records----------------------------------------------------|**

|-------------------------Lector----------------------------| |------------------------Student--------------------|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| COURSE | lecName | classNo | courseName | StudentNo | studentName | address | Grade |
| C1 | Btreacey | b2231 | databases | s100 | j.bloggs | willton | 40 |
| C2 | mdavin | f2.1 | moddeling | s100 | jbloggs | willton | 45 |

A candidate key is a column, or set of columns, in a table that can uniquely identify any database record without referring to any other data.

Primary key is just one key for all tables.