# Lab: Databases Basics

Problems for exercises and homework for the ["Technology Fundamentals" course @ SoftUni](https://softuni.bg/courses/technology-fundamentals).  
Please submit your solutions (source code) of all below described problems in the [Judge System.](https://judge.softuni.bg/Contests/1342/Databases-Basics-Lab)

## Create Database

CREATE DATABASE "softuni".

In judge copy the query that was executed to create the database.

## Create Table

Using HeidiSQL in database "softuni" create table "students". You should specify five columns:

Name: id, Datatype: INT, Autoincrement, Primary Key

Name: first\_name, Datatype: VARCHAR, Max Length: 50, Allow NULL: true

Name: last\_name, Datatype: VARCHAR, Max Length: 50, Allow NULL: true

Name: age, Datatype: INT, Allow NULL: true

Name grade, Datatype: Double, Allow NULL: true

## Insert Data

Insert 6 recordings in students table.

### Example

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Id** | **first\_name** | **last\_name** | **age** | **grade** |
| 1 | Guy | Gilbert | 15 | 4.5 |
| 2 | Kevin | Brown | 17 | 5.4 |
| 3 | Roberto | Tamburello | 19 | 6 |
| 4 | Linda | Smith | 18 | 5 |
| 5 | John | Stones | 16 | 4.25 |
| 6 | Nicole | Nelson | 17 | 5.50 |

## Find all Records

Write a query to find all records.

## Find Last Name, Age and Grade

Write a query to find last name, age and grade of each student.

|  |  |  |
| --- | --- | --- |
| **last\_name** | **age** | **grade** |
| Gilbert | 15 | 4.5 |
| Brown | 17 | 5.4 |
| Tamburello | 19 | 6 |
| Smith | 18 | 5 |
| Stones | 16 | 4.25 |
| Nelson | 17 | 5.50 |
| … | … | … |

## Find first 5 Records

Write a query to find first 5 records.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Id** | **first\_name** | **last\_name** | **age** | **grade** |
| 1 | Guy | Gilbert | 15 | 4.5 |
| 2 | Kevin | Brown | 17 | 5.4 |
| 3 | Roberto | Tamburello | 19 | 6 |
| 4 | Linda | Smith | 18 | 5 |
| 5 | John | Stones | 16 | 4.25 |

### Hint

Use **WHERE** clause.

**SELECT \* FROM table WHERE id = {some condition}.**

## Find first 5 Last Name and Grade

Write a query to find top 5 records. Select only last name and grade.

|  |  |
| --- | --- |
| **last\_name** | **grade** |
| Gilbert | 4.5 |
| Brown | 5.4 |
| Tamburello | 6 |
| Smith | 5 |
| Stones | 4.25 |

## Truncate Table

Remove all records in students table.

## Drop Table

Drop table students.

## Drop Database

Drop database softuni.