

# ITC313-Assignment 2 Task 1

Ben Formosa 11429074

## Overview

GradingTool provides several functions for managing a database of grades. Grades are stored with one row per student, with one table per subject.

## Pre-requisites

I tested using OpenJDK 1.7 and MySQL 14.14 on Ubuntu:

```
$ java -version
java version "1.7.0_65"
OpenJDK Runtime Environment (IcedTea 2.5.2) (7u65-2.5.2-3~14.04)
OpenJDK 64-Bit Server VM (build 24.65-b04, mixed mode)
```

```
$ mysql -V
mysql Ver 14.14 Distrib 5.5.38, for debian-linux-gnu (x86_64) using readline 6.3
```

## Database

The application uses a properties file `db.properties`. Edit this file to select a database server. The default values are:

```
user=root
password=abc123
server=localhost
port=3306
database=ST11429074
```

## How to run

Extract

```
unzip 11429074_ass2.zip
cd ITC313-Ass2-master/task1
```

Create database

```
mysql -u root -p < createDatabase.sql
```

Compile and run using ant

```
ant
```

## Expected output

Initial screen with no tables.

The screenshot shows a window titled "Grading Tool". It has a "Tables" section at the top with a dropdown menu labeled "Using table null", a "Create:" label, and buttons for "Change table", "Drop table", and "Create table". Below this is a "Select" section with a "Column:" dropdown menu showing "ID", a "Value:" input field containing "0", an "Operator:" dropdown menu showing ">", and a "Select" button. At the bottom is an "Insert" section with input fields for "Name", "Assignment 1", "Assignment 2", "Assignment 3", and "Final", and an "Add Student" button. A status bar at the very bottom says "Loaded database ST11429074".

Clicking *Create table* without entering a table name gives an error

## EXPECTED OUTPUT

The screenshot shows the 'Grading Tool' window. At the top, there's a 'Tables' section with a dropdown menu labeled 'Using table null', a 'Change table' button, and a 'Drop table' button. Below this is a 'Create:' label followed by an empty text input field and a 'Create table' button. In the middle section, there's a 'Select' area with 'Column:' set to 'ID', 'Value:' set to '0', and an 'Operator:' dropdown set to '>'. A 'Select' button is to the right. At the bottom, there's an 'Insert' section with four input fields labeled 'Name', 'Assignment 1', 'Assignment 2', and 'Final'. The 'Name' field is empty, while the others contain placeholder text. An 'Add Student' button is to the right. A status bar at the very bottom displays the message 'Cannot create table with empty name'.

Type a table name and click *Create table* to create a new, empty table.

This screenshot shows the 'Grading Tool' window after a new table has been created. The 'Using table null' dropdown now shows 'ITC000'. The 'Create:' text input field also contains 'ITC000'. The 'Create table' button is still present. The 'Select' section remains unchanged with 'ID' as the column, '0' as the value, and '>' as the operator. The 'Insert' section at the bottom is also unchanged. The status bar at the bottom now displays the message 'Created new table ITC000'.

The new table appears in the drop-down menu and can be used by clicking *Change table*.

## EXPECTED OUTPUT

The screenshot shows the 'Grading Tool' window. At the top, under 'Tables', it says 'Using table ITC000'. There are dropdown menus for 'ITC000' and 'Create: ITC000', with buttons for 'Change table', 'Drop table', and 'Create table'. Below this is a 'Select' section with 'Column: ID', 'Operator: >', and 'Value: 0'. A 'Select' button is next to the value. In the center is a table with columns: ID, Name, Assignment 1, Assignment 2, Assignment 3, Final, and Final score. The table is currently empty. At the bottom is an 'Insert' section with input fields for 'Name', 'Assignment 1', 'Assignment 2', and 'Assignment 3', and a 'Final' label. There is an 'Add Student' button. A status bar at the bottom says 'Now using table ITC000'.

Add a student by entering their details and clicking *Add Student*. Inputs are checked:

Name is missing.

This screenshot shows the same 'Grading Tool' window as before, but with an error message. The 'Name' input field in the 'Insert' section is highlighted in red, and a red error message 'Enter a name' is displayed below it. The 'Add Student' button is still visible, and the rest of the interface remains the same.

## EXPECTED OUTPUT

Number is not between 0 and 100.

The screenshot shows the 'Grading Tool' window. At the top, the 'Tables' section shows 'Using table ITC000' with a dropdown menu set to 'ITC000' and buttons for 'Change table', 'Drop table', and 'Create table'. Below this, the 'Select' section has 'Column:' set to 'ID', 'Operator:' set to '>', and 'Value:' set to '0'. A 'Select' button is to the right. The main area is a table with columns: ID, Name, Assignment 1, Assignment 2, Assignment 3, Final, and Final score. The table is empty. At the bottom, the 'Insert' section has fields for 'Name' (janet), 'Assignment 1' (80), 'Assignment 2' (100), 'Assignment 3' (90), and 'Final' (9001). An 'Add Student' button is to the right. A red error message at the bottom reads: 'Enter grade between 0 and 100'.

A number was not entered into one of the grades.

The screenshot shows the 'Grading Tool' window. At the top, the 'Tables' section shows 'Using table ITC000' with a dropdown menu set to 'ITC000' and buttons for 'Change table', 'Drop table', and 'Create table'. Below this, the 'Select' section has 'Column:' set to 'ID', 'Operator:' set to '>', and 'Value:' set to '0'. A 'Select' button is to the right. The main area is a table with columns: ID, Name, Assignment 1, Assignment 2, Assignment 3, Final, and Final score. The table is empty. At the bottom, the 'Insert' section has fields for 'Name' (janet), 'Assignment 1' (80), 'Assignment 2' (100), 'Assignment 3' (90), and 'Final' (abc). An 'Add Student' button is to the right. A red error message at the bottom reads: 'Incorrect number format'.

Confirmation when student added:

Ben Formosa 11429074

## EXPECTED OUTPUT

The screenshot shows the 'Grading Tool' window. The 'Tables' section shows 'Using table ITC000' with a dropdown menu set to 'ITC000' and buttons for 'Change table', 'Drop table', and 'Create table'. The 'Create:' field also contains 'ITC000'. The 'Select' section has 'Column:' set to 'ID', 'Operator:' set to '>', and 'Value:' set to '0'. A 'Select' button is visible. Below this is a table with columns: ID, Name, Assignment 1, Assignment 2, Assignment 3, Final, and Final score. The table is currently empty. At the bottom, the 'Insert' section has fields for 'Name', 'Assignment 1', 'Assignment 2', and 'Assignment 3', with an 'Add Student' button. A status bar at the bottom says 'Added new Student Janet'.

ID	Name	Assignment 1	Assignment 2	Assignment 3	Final	Final score
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Click Select to display the new user, including the calculated final score.

The screenshot shows the 'Grading Tool' window after clicking the 'Select' button. The 'Select' section remains the same. The table now displays one row of data for Janet. The status bar at the bottom now says 'Selected 1 students'.

ID	Name	Assignment 1	Assignment 2	Assignment 3	Final	Final score
1	Janet	80	100	90	85	88

Change the column, operator and value to search by any column.

## EXPECTED OUTPUT

**Grading Tool**

**Tables**

Using table one: **one** Change table Drop table

Create:  Create table

**Select**

Column: **ID** Operator: **<=**

Value: **17** Select

ID	Name	Assignmen...	Assignmen...	Assignmen...	Final	Final score
1	Caleb	71	56	31	95	72
2	Miriam	22	11	26	1	10
3	Priscilla	22	68	71	94	77
4	Clay	57	60	94	73	73
5	Tricia	6	47	36	37	35
6	Harold	99	57	28	61	57
7	Sergio	75	31	23	67	51
8	Verna	43	5	5	22	17
9	Robyn	85	66	57	19	42
10	Carolyn	45	78	12	13	29
11	Cecilia	76	74	89	0	40
12	Robin	61	32	71	21	37
13	Roberto	14	95	50	89	74
14	Brent	46	8	32	96	60
15	Monique	49	98	40	76	70
16	Andy	99	0	50	70	54
17	Mathew	92	37	12	41	39

**Insert**

Name:  Assignment 1:  Assignment 2:

Assignment 3:  Final:  Add Student

Selected 17 students

Use % as a wild card when using like.

**Grading Tool**

**Tables**

Using table one: **one** Change table Drop table

Create:  Create table

**Select**

Column: **Name** Operator: **like**

Value: **%er%** Select

ID	Name	Assignmen...	Assignmen...	Assignmen...	Final	Final score
7	Sergio	75	31	23	67	51
8	Verna	43	5	5	22	17
13	Roberto	14	95	50	89	74
23	Sherry	66	89	33	6	34
27	Gerardo	60	5	74	31	37
33	Chester	78	53	32	64	56
36	Cameron	44	22	91	36	45
52	Sylvester	16	37	2	65	41
57	Christopher	52	17	38	38	35

**Insert**

Name:  Assignment 1:  Assignment 2:

Assignment 3:  Final:  Add Student

Selected 9 students

## EXPECTED OUTPUT

**Grading Tool**

**Tables**

Using table one: one Change table Drop table

Create:  Create table

**Select**

Column: Assignment 1 Operator: =

Value: 66 Select

ID	Name	Assignmen...	Assignmen...	Assignmen...	Final	Final score
23	Sherry	66	89	33	6	34

**Insert**

Name:  Assignment 1:  Assignment 2:

Assignment 3:  Final:  Add Student

Selected 1 students

**Grading Tool**

**Tables**

Using table one: one Change table Drop table

Create:  Create table

**Select**

Column: Final score Operator: >=

Value: 60 Select

ID	Name	Assignmen...	Assignmen...	Assignmen...	Final	Final score
1	Caleb	71	56	31	95	72
3	Priscilla	22	68	71	94	77
4	Clay	57	60	94	73	73
13	Roberto	14	95	50	89	74
14	Brent	46	8	32	96	60
15	Monique	49	98	40	76	70
26	Trevor	79	43	81	70	67
38	Lindsay	57	62	92	61	67
40	Seth	56	21	94	82	69
47	Alex	99	83	89	94	91
56	Sarah	89	94	17	98	80

**Insert**

Name:  Assignment 1:  Assignment 2:

Assignment 3:  Final:  Add Student

Selected 11 students