

COMPSCI 280

Tutorial 9

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Agenda

- No Exercises in this tutorial
- Instead we will do a hands on to create windows form application
- Learn how to use Datagridview
- Learn about Exceptions
- Learn File IO

The Student Database Application

- Create a form with one DataGridView and two buttons to Add and Remove Rows to/from the DataGridView.
- The database used here will be files.
- The application should be able to:
 - Create New Database.
 - Edit and Save present database.
 - Edit and Save As current database that is opened.
 - Open a existing database
 - Exit the application

Step 1

- Create a New Windows forms Application.
- Add a MenuStrip Widget/UI Control.
- Add a DataGridView widget/UI Control to the form.
- Add two buttons.
- Inside the MenuStrip, add the following
 - New.
 - Open.
 - Save.
 - SaveAs.
 - Exit.

Step 2

- Add the following piece of code as a skeleton to your .cs file.

```
private void createColumns()
```

```
{
```

```
}
```

```
private void saveToFile()
```

```
{
```

```
}
```

```
private void openFile()
```

```
{
```

```
}
```

```
private void saveAsFile(string saveAsFileName)
```

```
{
```

```
}
```

Step 3

- The database has five fields
 - Student ID
 - FirstName
 - LastName
 - Faculty
 - Department
- Add Click Event Handlers for all UI Controls
 - 2 Buttons
 - 5 different Menustrip Items.

Step 4

- The Format of storing data in file will be
 - Each line in the file will have
Student ID | FirstName | LastName | Faculty | Department
 - Note the use of ‘|’ as the delimiter character.

Step 5

- Now write code to do the following
 - “New” will create a New datagrid.
 - Add Row button when clicked will add a row to the grid.
 - Delete Row button when clicked will remove a row from the grid.
 - “Save” will save the grid entries into a file.
 - “Save As” will give different Name to the file.
 - “Open” will open a existing file.
 - “Exit” will terminate the application.

Step 6

- Add Exception Handling to your code to handle wrong format of the input file.
- Run and check your application if it behaves the way you want it to.