Khiem Nguyen

Dr. Antonio Sanchez

Techniques to Programming

9/7/2018

Lab 1 Report

INTRUCTION TO USE THE PROGRAM:

* Type in number of desired row and col of each matrix. (top is row/ bottom is column).
* Hit “Create” to create 2 more panels for each matrix.
* Type in data for each Text Field in matrix panel. Remember to hit “CONFIRM” after finishing.
* Choose the desired math operator in combobox and hit “Execute”

1. The problem

* The problem requires to design an MVC model for Matrixes inputs and Matrixes Calculation (base on math operator add/subtract/transpose/multiplication…).
* The result need to have a nice GUI(VIEW), good interaction (CONTROL), and a good translation scheme (MODEL). Each of them will be in separate class.
* Data need to be validated to stop throwing exceptions => Use try catch.
* JTextField and matrix data should be displayed or recorded by 2 dimensional variable because of matrix.

1. How it was solved

* Base on MVC example code from lecture 2, I developed an MVC model for this matrixes purpose with my modified version with these classes (and purpose):
* 2 view classes: One for the main display (for row/col/math operator input). One for displaying and typing fields or matrixes.
* 4 controllers classes: Each one controls 1 view from the problem (main view, matrixX, matrixY, matrix result).
* 1 model: Heart of the MVC model, control all the button which is clicked and its function.
* matrixClass: define our matrix object and its methods
* PerMatrix: control the persistence object of matrix, save file and read file.

1. The most interesting class

* I believe it is the matrixModel class. I spent most of my time on this class.
* The class controls all the button, the interactions between each view and button.
* This is probably the heart of this program.