Philip Dumaresq

Programming V

Final Assignment

Ron Patterson

Matrix calculator

The app I’ve chosen to build will be a simple Matrix calculator. It will be able to perform basic matrix calculations such as solving a matrix by reducing it to REF or RREF. It will be able to calculate the inverses of matrixes, find their transpose, or calculate their determinants. This will all exist inside one basic activity. It will have a second activity that will be able to go and look back at previous calculations that have been done. It will store all equations entered in a SQLLite database, and then solve the matrix when retrieving the equation. All validation will be done using toast messages, so for example if someone tries to find the identity of a non-square matrix, it will give them a toast message saying it can’t be done. It will use shared preferences to keep a color-scheme for the user, so they can use the app in a regular white background/black text mode, or in a high contrast setting with black background. It will also allow the user to set how far back the database will save their equations, so that the user can prevent the application from eating up too much space on their hard drive.

If I find the time for it, I would also like to be able to display the equations in proper MathML, or store the equations in MathML files instead of in a SQLLite database. This is time permitting, but it would be very cool to have proper MathML storage.

Also time permitting, I would like to have another activity to do basic vector arithmetic. This is time permitting because I don’t know how long it will take me to figure out the core algorithms to perform the desired calculations on matrixes.

