Lab Project

Saturday, October 20, 2012
10:14 AM

Implement a program that multiplies a matrix times a vector.

- Min reqs.

$$\begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix} \cdot \begin{bmatrix} b_{11} \\ b_{21} \\ b_{31} \end{bmatrix} = \quad \text{* vect}$$

$$\begin{bmatrix} a_{11}b_{11} + a_{12}b_{21} + a_{13}b_{31} \\ a_{21}b_{11} + a_{22}b_{21} + a_{23}b_{31} \\ a_{31}b_{11} + a_{32}b_{21} + a_{33}b_{31} \end{bmatrix} = \begin{bmatrix} c_{11} \\ c_{21} \\ c_{31} \end{bmatrix}$$

- Matrix and vector defined in code.
- Use functions.
  - getrow (int rownumber)
  - multiplyrowvect (int rownum, *vect)
  - printmatrix();
  - printvector();
  - printresult();
- Extra points.

- read matrix, vector from file.
- Use of classes.

```
float  mat[3][3] = { 1,2,3 ---- ---- };
float  rowM[3]
       getrow (int row) {
          // row = mat(row, :);
           for (i=0; i < SIZE ; i++) {
                rowM[i] = mat(row, i);

}
```