public class Matrix

The *Matrix* class provides static methods to calculate multiplication between vector and vector, vector and matrix, matrix and vector and matrix and matrix.

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Method Summary:

Modifier and Type	Method and Description
static double	dot(double[ ] x, double[ ] y) Returns the multiplication between two vectors.
static double[ ][ ]	mult(double[ ][ ] a, double[ ][ ] b) Returns the multiplication between two matrices.
static double[ ][ ]	transpose(double[ ][ ] a) Returns the transpose of the input matrix.
static double[ ]	mult(double[ ][ ] a, double[ ] x) Returns the multiplication between a matrix and a vector.
static double[ ]	mult(double[ ] y, double[ ][ ] x) Returns the multiplication between a vector and a matrix.
static void	main(String[ ] args) Interactive unit test for the class.

Method Detail:
dot
public static double dot(double[ ] x, double[ ] y)
returns the dot product of two vectors.
Parameters:
x - the first vector
y - the second vector
Returns:
the dot product of two vectors

mult
public static double[ ][ ] mult(double[ ][ ] a, double[ ][ ] b)
returns the product of two matrices.
Parameters:
a - the first matrix
b - the second matrix
Returns:
the product of two matrices

transpose
public static double[ ][ ] transpose(double[ ][ ] a)
returns the transpose of the input matrix.
Parameters:
a - the input matrix
Returns:

the transpose of the input matrix

mult
public static double[ ] mult(double[ ][ ] a, double[ ] x)
returns the multiplication of a matrix and a vector.
Parameters:
a - the input matrix
x - the input vector (n x 1)
Returns:
the multiplication of a matrix and a vector

mult
public static double[ ] mult(double[ ] y, double[ ][ ] a)
returns the multiplication of a vector and a matrix.
Parameters:
y - the input vector (1 x n)
a - the input matrix
Returns:
the multiplication of a vector and a matrix

main
public static void main(String[ ] args)
Interactive unit test for the class.
Parameters:
args - the commmand-line arguments