Access Data

Read or write data to array

C Functions

mxGetNumberOfDimensions	Number of dimensions in array
mxGetElementSize	Number of bytes required to store each data element
mxGetDimensions	Pointer to dimensions array
mxSetDimensions	Modify number of dimensions and size of each dimension
mxGetNumberOfElements	Number of elements in array
mxCalcSingleSubscript	Offset from first element to desired element
mxGetM	Number of rows in array
mxSetM	Set number of rows in array
mxGetN	Number of columns in array
mxSetN	Set number of columns in array

mxGetScalar	Real component of first data element in array
mxGetPr	Real data elements in array of type DOUBLE
mxSetPr	Set new real data elements in array of type DOUBLE
mxGetPi	Imaginary data elements in array of type DOUBLE
mxSetPi	Set new imaginary data elements in array of type DOUBLE
mxGetData	Pointer to real numeric data elements in array
mxSetData	Set pointer to real numeric data elements in array
mxGetImagData	Pointer to imaginary data elements in array
mxSetImagData	Set pointer to imaginary data elements in array

mxGetChars	Pointer to character array data

mxGetLogicals	Pointer to logical array data

mxGetClassID	Class of array
mxGetClassName	Class of array as string
mxSetClassName	Structure array to MATLAB object array

mxGetProperty	Value of public property of MATLAB object
mxSetProperty	Set value of public property of MATLAB object

mxGetField	Get field value from structure array, given index and field name
mxSetField	Set field value in structure array, given index and field name

==mxGetNumberOfFields==	Number of fields in structure array
==mxGetFieldNameByNumber==	Get field name from structure array, given field number
mxGetFieldNumber	Get field number from structure array, given field name
==mxGetFieldByNumber==	Get field value from structure array, given index and field number
mxSetFieldByNumber	Set field value in structure array, given index and field number
mxAddField	Add field to structure array
mxRemoveField	Remove field from structure array

mxGetCell	Get contents of cell array
mxSetCell	Set contents of cell array

mxGetNzmax	Number of elements in IR, PR, and PI arrays
mxSetNzmax	Set storage space for nonzero elements
mxGetIr	Sparse matrix IR array
mxSetIr	IR array of sparse array
mxGetJc	Sparse matrix JC array
mxSetJc	JC array of sparse array

Examples and How To

- **Handle Complex Data**
- **Handle Sparse Arrays**
- **Manipulate Multidimensional Numerical Arrays**