



## Use cases

### Put value at 0

Put a value at index position 0 in the array by overwriting existing value. If the array does not exist, create it.

#### Exceptions

The array does not exist or the entry is not an integral type.

### Put value at index

Put a value at designated index position in the array. If the array does not exist, create it. If the index position is less than the size of the array, overwrite the existing value at index. Otherwise, expand the array to sufficient size to accommodate the new entry. Fill any open positions with 0.

Note, however, this may not be the best choice since 0 is a legal integral value.

#### Exceptions

The array does not exist or the entry is not an integral type. The index position is negative.

### Get value at index

Get a value at designated index position in the array. Return the value through the passed in argument.

### Exceptions

The array does not exist; the index position is negative or out of bounds.

### Remove value at index

Remove the entry at designated index position in the array and shrink the array by 1.  
There is no return value.

### Exceptions

The array does not exist; the index position is negative or out of bounds.

### Show

Print the array to standard out

### Exceptions

The array does not exist.

## Class Diagram

