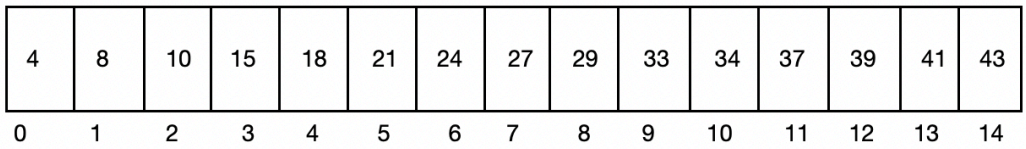
Functions on Array

- The following is an example of different functions working on a given array



1. Get(index)

- It is used when we want to know the element at a particular index
- The index value must be in the given range itself and not beyond it
- The value can be checked as follows
- The time taken is constant

Ex :

```
if( index > = 0 && index < length )
```

2. set(index , x)

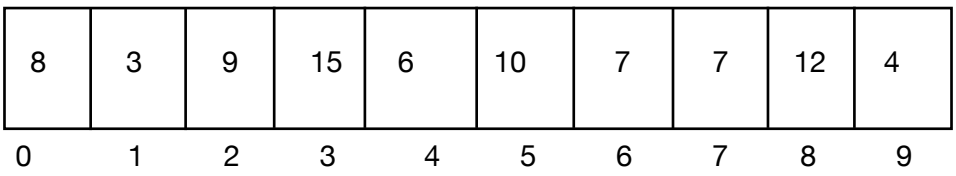
- This method is used to change a value at a particular index
- The index value must be in the given range itself and not beyond it
- It is used for writing a value
- The time taken is constant

Ex :

```
if( index > = 0 && index < length )
A[ index ] = x ;
```

- Lets take another example for understanding different functions on array

Size = 10
Length = 10



3. Max( )

- Unless you check the entire list you cannot tell the max value in an unsorted list
- In a sorted list its the last element which is of max value
- The time function for this is 0(n)
- To check the max value in unsorted list we do the following

Ex :

```
max = A[ 0 ];
for( i =1; i < length ; i++ )
{
        if( A[ i ] > max)
                max = A[ i ];
}
return max;
```

4. Min( )

- It is similar to maximum

Ex :

```
min = A[ 0 ];
for( i =1; i < length ; i++ )
{
        if( A[ i ] < min )
                min = A[ i ];
}
return min;
```

5. Sum( )

- For finding the sum of all element we should traverse through all element and add those variables and store them

- The time complexity for this is 0(n)

Ex :

```
Total =  0 ;
for( i =1; i < length ; i++ )
{
        Total = Total + A[ i]
}
return Total;
```