ARRAYS:

1) Store elements in an array and print them

```
Start of the program
Input: Enter size of array and elements
Processing: FOR (i = 0 to size-1  )
                READ arr[i]
            END FOR
Output: PRINT each element of the array
End of the program
```

2) Read n values and display them in reverse order

```
Start of the program
Input: Enter size of array and elements
Processing: FOR (i = 0 to size-1  )
                READ arr[i]
            END FOR
Output: FOR (i = size-1 to 0 )
                PRINT arr[i]
        END FOR
End of the program
```

3) Find the sum of all elements of the array

```
Start of the program
Input: Enter size of array and elements
Processing:    SET sum = 0
               FOR (i = 0 to size-1  )
                  sum = sum + arr[i]
               END FOR
Output: PRINT sum
End of the program
```

4) Copy elements of one array into another

```
Start of  the program
Input: Enter size of array and elements
Processing: FOR (i = 0 to size-1  )
                copy[i] = arr[i]
            END FOR
Output: PRINT elements of copy array
End of the program
```

5) Count total number of duplicate elements

```
Start of the program
Input: Enter array elements
Processing:    SET count = 0
               FOR (i = 0 to size-1 )
                 FOR ( j = i+1 to size-1  )
                   IF (arr[i] == arr[j] AND not already counted )
                        count = count + 1
                   END IF
                 END FOR
               END FOR
Output: PRINT count
End of the program
```

6) Print all unique elements in the array

```
Start of the program
Input: Enter array elements
Processing: FOR ( i = 0 to size-1  )
                SET isUnique = true
                FOR ( j = 0 to size-1 )
                  IF ( i != j AND arr[i] == arr[j]  )
                    SET isUnique = false
                  END IF
                END FOR
                IF isUnique
                  PRINT arr[i]
                END IF
              END FOR
End of the program
```

7) Merge two arrays and sort in descending order

```
Start of the program
Input: Enter two arrays of same size
Processing: Merge both arrays into one
        Sort merged array in ascending order
        Reverse the array elements using swap to obtain descending order
Output: PRINT sorted array
End of the program
```

8) Count frequency of each element

```
Start of the program
Input: Enter array elements
Processing: FOR (i = 0 to size-1  )
                SET count = 1
                FOR (j = i+1 to size-1  )
                  IF (arr[i] == arr[j] )
                    count++
                    mark arr[j] as visited
                  END IF
                END FOR
                IF arr[i] not visited
                  PRINT arr[i], count
                END IF
              END FOR
End of the program
```

9) Find maximum and minimum element

```
Start of the program
Input: Enter array elements
Processing:   SET max = arr[0], min = arr[0]
              FOR ( i = 1 to size-1  )
                IF (arr[i] > max), THEN max = arr[i]
                IF (arr[i] < min), THEN min = arr[i]
              END FOR
Output: PRINT max and min
End of the program
```

10) Separate odd and even integers

```
Start of the program
Input: Enter array elements
Processing: FOR ( i = 0 to size-1  )
        IF (arr[i] % 2 == 0  )
          add to even array
        ELSE
          add to odd array
      END FOR
Output: PRINT odd array and even array
End of the program
```

11) Sort array in ascending order

```
Start of the program
Input: Enter array elements
Processing: Use sorting algorithm ( bubble sort, Insertion sort) to sort in ascending order
            Time complexity (n^2)
Output: PRINT sorted array
End of the program
```

12) Sort array in descending order

```
Start of the program
Input: Enter array elements
Processing: Use sorting algorithm ( bubble sort, Insertion sort) to sort in ascending order
            Time complexity (n^2)
            Reverse the sorted array using swap method
Output: PRINT descending sorted array
End of the program
```