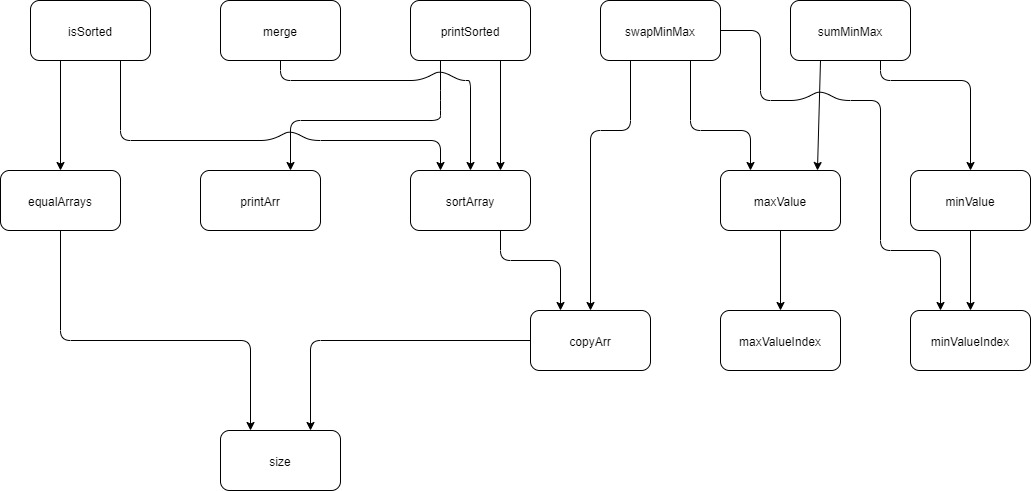
* היררכיית הפונקציות



* עבור כל אחת מהשיטות יש לפרט באיזה סדר בצעתם בדיקות של הפונקציות.

עבור Bottom-Up:

1. Size, MaxValueIndex, MinValue Index, PrintArr.
2. (EqualArrays, Size), (CopyArr, Size), (MaxValue, MaxValueIndex), (MinValue, MinValueIndex)
3. (SortArray, CopyArr, Size), (SwapMinMax, CopyArr, MaxValue, MaxValueIndex, MinValueIndex), (SumMinMax, MaxValue, MinValue, MaxValueIndex, MinValueIndex)
4. (PrintSorted, PrintArr, SortArray, CopyArr, Size), (Merge, SortArray, CopyArr, Size), (isSorted, EqualArrays, Size, SortArray, CopyArr)

עבור Top-Down:

1. SumMinMax, SwapMinMax, PrintSorted, Merge, IsSorted.
2. (SumMinMax, MaxValue), (SwapMinMax, CopyArr), (PrintSorted, PrintArr), (Merge, SortArray), (IsSorted, EqualArrays)
3. (SumMinMax, MaxValue, MinValue), (SwapMinMax, CopyArr, MaxValue), (PrintSorted, PrintArr, CopyArr), (Merge SortArray, CopyArr), (IsSorted, EqualArrays, SortArray)
4. (SumMinMax, MaxValueIndex, MinValue) , (SwapMinMax, CopyArr, MaxValue, MinValueIndex), (PrintSorted, PrintArr, SortArray, CopyArr), (Merge, SortArray, CopyArr, Size), (IsSorted, EqualArrays, Size, SortArray)
5. (SumMinMax, MaxValueIndex, MinValueIndex), (SwapMinMax, CopyArr, Size, MaxValue, MinValueIndex), (PrintSorted, PrintArr, SortArray, CopyArr, Size), (IsSorted, EqualArrays, Size, SortArray, CopyArr)
6. (SwapMinMax, CopyArr, Size, MaxValueIndex, MinValueIndex), (IsSorted, EqualArrays, Size, SortArray, CopyArr)

* עבור כל אחד מהפונקציות שבדקתם (בכל שיטה) יש לפרט בקובץ pdf את כל מקרי בדיקה ובדיקות יחידה (unit tests) שביצעתם, ואת כל ה-drivers ו/או stubs שיצרתם.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Strategy | Function | TestCase | UnitTest | Drivers & Stubs | Expected Result | Actual Result | Pass/Fail |
| Bottom-Up | Size | Null array | V | Test is driver | -1 | NullPointerException | Fail |
| Array size 0 | V | Test is driver | 0 | 0 | Pass |
| Array size 1 | V | Test is driver | 1 | 1 | Pass |
| MaxValueIndex | Null array | V | Test is driver | -1 | NullPointerException | Fail |
| Array size 0 | V | Test is driver | -1 | -1 | Pass |
| Array size 1 – {3, -2} | V | Test is driver | 0 | 3 | Fail |
| MinValueIndex | Null array | V | Test is driver | -1 | -1 | Pass |
| Array size 0 | V | Test is driver | -1 | ArrayIndexOutOfBounds | Fail |
| Array size 1 – {3, -2} | V | Test is driver | 1 | -2 | Fail |
| PrintArr | Null array | V | Test is driver | “\r\n” | NullPointerException | Fail |
| Array size 0 | V | Test is driver | “\r\n” | “\r\n” | Pass |
| Array size 1 – {1, 2} | V | Test is driver | “1 2 \r\n” | “1 2 \r\n” | Pass |
| EqualArrays | Null Arrays | X | Test is driver | true | True | Pass |
|  | Null, size 0 | X | Test is driver | false | False | Pass |
|  | Size 0 arrays | X | Test is driver | true | False | Fail |
|  | {3, 0, -2}, {3, 0, -2} | X | Test is driver | true | true | Pass |
|  | {3, 0, -2}, {3, -2, 0} | X | Test is driver | false | True | Fail |
|  | {3, 0}, {3, -2, 0} | X | Test is driver | false | False | Pass |
| CopyArr | Null | X | Test is driver | Null | Null | Pass |
| {} | X | Test is driver | {} | {} | Pass |
| {3, -2} | X | Test is driver | {3, -2} | {3, 3} | Fail |
| {3, -2} | X | Test is driver | Different address than original array | Different address | Pass |
| MaxValue | Null | X | Test is driver | No exception | NullPointerException | Fail |
| {} | X | Test is driver | No exception | ArrayIndexOutOfBounds: -1 | Fail |
| {3, -2} | X | Test is driver | 3 | ArrayIndexOutOfBounds: 3 | Fail |
| MinValue | Null | X | Test is driver | No exception | NullPointerException | Fail |
| {} | X | Test is driver | No exception | ArrayIndexOutOfBounds: -1 | Fail |
| {3, -2} | X | Test is driver | -2 | ArrayIndexOutOfBounds: 3 | Fail |
| SortArray | Null | X | Test is driver | Null | Null | Pass |
| {} | X | Test is driver | {} | {} | Pass |
| {3, 0, -2} | X | Test is driver | {-2, 0, 3} | {3, 0, -2} | Fail |
| {0, 0} | X | Test is driver | Different address than original array | Different address than original array | Pass |
| SumMinMax | null | X | Test is driver | 0 | NullPointerException | Fail |
| {} | X | Test is driver | 0 | ArrayIndexOutOfBounds: -1 | Fail |
| {3, -2} | X | Test is driver | 1 | ArrayIndexOutOfBounds: 3 | Fail |
| SwapMinMax | Null | X | Test is driver | Null | NullPointerException | Fail |
| {} | X | Test is driver | {} | ArrayIndexOutOfBounds: 0 | Fail |
| {3, -2} | X | Test is driver | {-2, 3} | ArrayIndexOutOfBounds: 3 | Fail |
| {0, 0} | X | Test is driver | Different address than original array | Different address than original |  |
| IsSorted | Null | X | Test is driver | True | True | Pass |
| {} | X | Test is driver | True | False | Fail |
| {3, 0, -2} | X | Test is driver | False | True | Fail |
| {-2, 0, 3} | X | Test is driver | true | True | Pass |
| Merge | Null, Null | X | Test is driver | Null | Null | Pass |
| null, {} | X | Test is driver | {} | {} | Pass |
| {},{} | X | Test is driver | {} | {} | Pass |
| {3, 0 , -2}, {3, 0, -2} | X | Test is driver | {-2, -2, 0, 0, 3, 3} | {3…} | Fail |
| {3}, {-2} | X | Test is driver | {-2, 3} | {3…} | Fail |
| PrintSorted | Null | X | Test is driver | No Array | NullPointerException | Fail |
|  | {} | X | Test is driver | “\n\n\n” |  | Fail |
| {3, 0, -2} | X | Test is driver | “3 0 -2 \n-2 0 3 \n3 0 -2” |  | Fail |
| {3, 0, -2 | X | Test is driver | Original array is unchanged | Original array is unchanged | Pass |