Cutoff to Insertion Sort

1. ***Cutoff Quicksort to Insertion Sort:*** Implement quicksort with a cutoff to insertion sort for subarrays with less than M elements. Ignore the initial Shuffle and take the first element of the array as the pivot element.

**Input Format:**

* The first line of the input contains the number of test cases.
* The first line of each test case’s input contains the value m.
* The second line of each test case’s input contains the array values that are separated by spaces.

**Output Format:**

* Print the array at the end of partition method as shown in the output.
* Print “insertionSort called” when insertionsort method is called.
* Print the output of the array elements after sorting as shown in the sample output.

**Sample Input #1:**

**2**

**3**

**S O R T E X A M P L E**

**4**

**E A S Y Q U E S T I O N**

**Sample Output #1:**

**[P, O, R, E, E, L, A, M, S, X, T]**

**[A, O, M, E, E, L, P, R, S, X, T]**

**[A, O, M, E, E, L, P, R, S, X, T]**

**insertionSort called**

**[A, L, M, E, E, O, P, R, S, X, T]**

**[A, E, E, L, M, O, P, R, S, X, T]**

**insertionSort called**

**insertionSort called**

**insertionSort called**

**insertionSort called**

**insertionSort called**

**[A, E, E, L, M, O, P, R, S, T, X]**

**[E, A, E, Y, Q, U, S, S, T, I, O, N]**

**insertionSort called**

**[A, E, E, N, Q, U, S, S, T, I, O, Y]**

**[A, E, E, I, N, U, S, S, T, Q, O, Y]**

**insertionSort called**

**[A, E, E, I, N, O, S, S, T, Q, U, Y]**

**[A, E, E, I, N, O, S, S, T, Q, U, Y]**

**insertionSort called**

**insertionSort called**

**insertionSort called**

**insertionSort called**

**[A, E, E, I, N, O, Q, S, S, T, U, Y]**