Approach:-

    A shared memory region is created using syscall so that it can be accessed by different
 processes.
    Fork is used to create multiple processes at each step of quicksort.
    Threads are used to create multiple threads at each step for bonus part.
    And another is normal quicksort function.
    Time is measured for all of them and them they are compared.

Implementation:-

    Shared memory region is created using syscall.
    A struct for threads have been made.

    In Main function:-

        Function has been called which will run different types of quicksort function and c
ompare time taken by each one of them.

    In diffSorts Function:-

        Two duplicates of original array which is taken through input are created.
        One of them will be provided to normal quicksort function, other will be provided t
o threaded quicksort function and other one will be provided to multiprocess quicksort func
tion.
        Time is measured before call is made to any of these function and it is also measur
ed when it returns back from the function and this difference is the time for which it rema
ined in this function.

    In Normal Quicksort function:-

        Normal quicksort function is implemened by taking a pivot and placing it at it's ri
ght position in sorted order.
        Same is done for left subarray and right subarray.
        When elements which needs to be sorted are less than 5 then insertion sort is imple
mented.

    In Threaded Quicksort function:-

        Thread is created for each subarray i.e is different thread is created for left suba
rray and for right subarray. Then pthread_join function is used to combine result from both
 thread.
        When elements which needs to be sorted are less than 5 then insertion sort is imple
mented.

    In Multiprocess Quicksort function:-

        Forking is done for each subarray which means that left subarray will go on sorting
 itself and right subarray will go on sorting itself and after that waitpid is used to comb
ine result from both subarrays before progressing ahead.
        When elements which needs to be sorted are less than 5 then insertion sort is imple
mented.