own 6 almoration to low with If defines a function qch-sht about takes four parameters, data, 1, n and k. The June performs quickesont algo on the array 3 data, from index 1 to index 1, and returns the 6th smallest element, It I and a are equal it means the array has one element, so it returns that element as the the mother exement. It calls another further alled partition, which taker 3 paratheters data, 1, and n. It arright the pivot elmont to the variable put. If initializes 14 va variable is to 1-1, which decepts track of the index of the last element that is smaller than or equal to the pivot. It loops from index I to index med, For each index i, if the element at judes i in smaller there or equal to

6 the fivot, it increments is by one and sueps The elements at index i and index 9. It increments is by one and rough 0 the elements at index 5+7 and index v. It returns the varle of 5+1, which in the index of the pivot elem in the array. If & in equal to put, pivot = kths 0 smallest epens and neturn it. If he in smaller than put it recursively calls the geles of function with data, I prt-1 and k, ofhiwine with datay prt+2, whand be try oldoner at and hariable is to (-1, which thereps track of the index of the last element that is moulder than on equal to the private I soppose from taker I so inder a good the to two and inder i, if the element at looks in ander the lateraged to