NAME = RIYAN SINGH
ROLL-NO = 22901305
CENTER FOR ARTIFICIAL INTELLIGENCE

S no.	Sort Method	Random			Ascending order	Descending order
1	BUBBLE SORT	19.1 sec	19.6 sec	19.6 sec	0.4 sec	29.4 sec
2	SELECTION SORT	11.2 sec	9.9 sec	9.9 sec	9.2sec	10.5sec
3	MERGE SORT	2.1 sec	1.8 sec	1.8 sec	1.8 sec	1.8 sec
4	INSERTION SORT	8.1 sec	8.4 sec	8.3 sec	0.1 sec	16.8 sec
5	HEAP SORT	1.4 sec	1.2 sec	1.1 sec	1.2 sec	1.2 sec

@ In this project i calculated the run time of my system processor on different sorting algorithm which are BUBBLE SORT, SELECTION SORT, MERG SORT, INSERCTION SORT,HEAP SORT

 PROCESSOR= Intel(R) Core(TM) i5-8300H CPU @ 2.30GHz, 2304 Mhz, 4 Core(s), 8 Logical Processor(s)

@BUBBLE SORT TIME COMPLEXITY FOR BEST CASE IS O(N) AND FOR WORST CASE IS O(N^2)
@SELECTION SORT TIME COMPLEXITY FOR BEST CASE IS O(N^2) AND FOR WORST CASE IS O(N^2)
@MERGE SORT TIME COMPLEXITY FOR THE BEST CASE IS O(nLOG(n)) AND FOR THE WORST CASE IS O(nLOG(n))
@INSERCTION SORT TIME COMPLEXITY FOR BEST CASE IS O(n) AND FOR THE WORST CASE IS O(N^2)
@HEAP SORT TIME COMPLEXITY FOR THE BEST CASE IS O(nLOG(n)) AND FOR THE WORST CASE IS O (nLOG(n))