

Assignment-2

Suraj Telugu

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Summary

- **NOTE:** The Ascending Order, Random order of array are only given the table , Descending order is the reverse of Ascending Order.

Insertion Sort C program					
	Original Array	Ascending	Descending	Random Array	Comparisons
N=10 ,a=1, r=2	[1 2 4 8 16 32 64 128 256 512]	9	54	[16 4 64 256 512 2 8 1 32 128]	31
N=10 ,a=4, r=3	[4 12 36 108 324 972 2916 8748 26244 78732]	9	54	[108 2916 4 36 972 78732 12 8748 26244 324]	26
N=10 ,a=2, r=5	[2 10 50 250 1250 6250 31250 156250 781250 3906250]	9	54	[3906250 6250 250 156250 781250 10 2 50 1250 31250]	37

Table 1: Insertion Sort in C

Insertion Sort MIPS program					
	Original Array	Ascending	Descending	RandomArray	Comparisons
N=10 ,a=1, r=2	[1 2 4 8 16 32 64 128 256 512]	9	45	[128 256 16 1 32 2 4 8 64 512]	28
N=10 ,a=4, r=3	[4 12 36 108 324 972 2916 8748 26244 78732]	9	45	[12 8748 972 324 4 108 36 26244 2916 78732]	24
N=10 ,a=2, r=5	[2 10 50 250 1250 6250 31250 156250 781250 3906250]	9	45	[781250 250 10 31250 1250 156250 6250 50 2 3906250]	30

Table 2: Insertion Sort in MIPS using MARS Simulator