

DAA lab-3 Outputs

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Q1)

```
kshitij@kshitij: ~/Documents/DAA/lab3
kshitij@kshitij:~/Documents/DAA/lab3$ g++ 1_insertation_sort.cpp
kshitij@kshitij:~/Documents/DAA/lab3$ ./a.out

Enter the size of the array : 500
For n= 500
Step count for random : 196527
Time taken for random : 0.000337sec
Step count for sorted : 1497
Time taken for sorted : 0.000003sec
Step count for reverse sorted : 375777
Time taken for reverse sorted : 0.000631sec

Enter the size of the array : 1000
For n= 1000
Step count for random : 739899
Time taken for random : 0.001145sec
Step count for sorted : 2997
Time taken for sorted : 0.000006sec
Step count for reverse sorted : 1501529
Time taken for reverse sorted : 0.002310sec

Enter the size of the array : 1500
For n= 1500
Step count for random : 1699980
Time taken for random : 0.002650sec
Step count for sorted : 4497
Time taken for sorted : 0.000008sec
Step count for reverse sorted : 3377307
Time taken for reverse sorted : 0.005147sec

Enter the size of the array : 2000
For n= 2000
Step count for random : 3046909
Time taken for random : 0.004646sec
Step count for sorted : 5997
Time taken for sorted : 0.000011sec
Step count for reverse sorted : 6003074
Time taken for reverse sorted : 0.009352sec
kshitij@kshitij:~/Documents/DAA/lab3$
```

Q2)

```
kshitij@kshitij: ~/Documents/DAA/lab3
kshitij@kshitij:~/Documents/DAA/lab3$ ./a.out
Enter the position of the magic no : 2
The magic no. is : 1
No. of recursions : 2
kshitij@kshitij:~/Documents/DAA/lab3$ ./a.out
Enter the position of the magic no : 5
The magic no. is : 5
No. of recursions : 5
kshitij@kshitij:~/Documents/DAA/lab3$ ./a.out
Enter the position of the magic no : 10
The magic no. is : 55
No. of recursions : 15
kshitij@kshitij:~/Documents/DAA/lab3$ ./a.out
Enter the position of the magic no : 15
The magic no. is : 610
No. of recursions : 25
kshitij@kshitij:~/Documents/DAA/lab3$ ./a.out
Enter the position of the magic no : 20
The magic no. is : 6765
No. of recursions : 35
kshitij@kshitij:~/Documents/DAA/lab3$
```