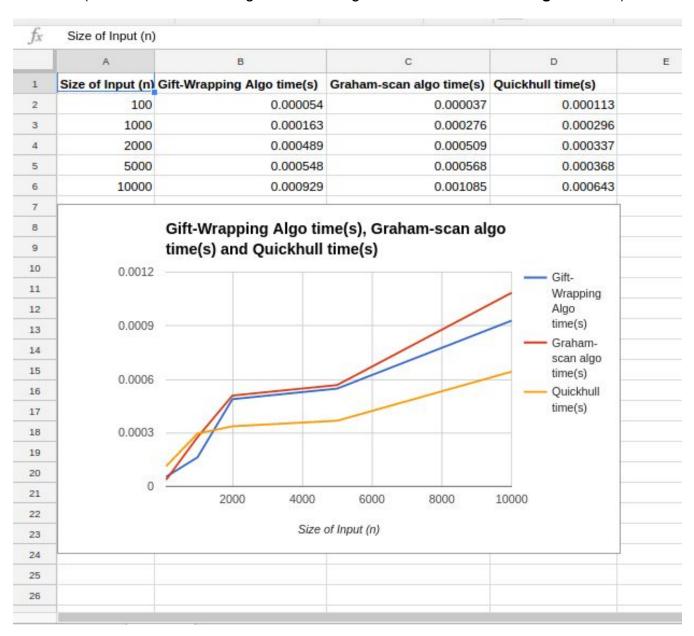
## Name = Shivam Jindal Enrollment No. = 15118079

A. <u>Performance chart for varying number of point of all the algorithms:</u>

( All the test cases are generated using **SPOJ Toolkit test case generator** )



Now for a fix input size and varying number of points on convex hull,
 Chart is given below:

## 1st Test case

10 points:

 $\{(17, 47), (98, 90), (84, 85), (64, 86), (12, 9), (66, 62), (93, 42), (99, 45), (59, 42), (51, 62)\}$ 

## 2nd Test Case:

10 points

 $\{(94, 84), (74, 51), (44, 56), (19, 82), (59, 99), (50, 80), (9, 86), (65, 15), (40, 58), (74, 73)\}$ 

## 3rd Test Case:

10 points

 $\{(0,1), (2,0), (4,0), (10,1), (11,3), (11,6), (10,10), (7,11), (3,11), (0,10)\}$ 

Test case number	Pts. on hull	Time of 1st(s) (gift-wrapping)	Time of 2nd(s) (graham-scan)	Time of 3rd(s) (quickhull)
1	6	0.000019	0.000024	0.000036
2	4	0.000020	0.000023	0.000021
3	10	0.000024	0.000029	0.000041