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Date

(1), (2), (3) → Github link updated.

(4) Compare Graham scan and Gift_Wrap Algorithm along with Quick Hull for finding Convex Hull of n random input points taken.

(a) For n=5! → Time for clock_per_sec = 1000, avg case

range of coordinates	n	Gift_Wrap $O(n^2)$	Graham_scan $O(n \log n)$	Quickhull $O(n \log n)$
for all test cases the range is between $0 \le x \le 10^9$	100	1/1000 = 0.001	1/1000 = 0.001	1/1000
	1000	3/1000 = 0.003	1/1000 = 0.001	1/1000
	2000	7/1000 = 0.007	1/1000 = 0.001	1/1000
	5000	17/1000 = 0.017	4/1000 = 0.004	4/1000
	10000	21/1000 = 0.021	6/1000 = 0.006	4/1000 = 0.004

$O(n \log n)$ for worst case, actually $O(n \log h)$ otherwise Quickhull is best for avg cases through $O(n \log n)$.

(b) For Quick Hull :→ 3 diff^n n's. $n = 10^5$
$n = 10^6$
$n = 10^7$

n	Time
10^5	4/1000 = 0.004
10^6	40/1000 = 0.040
10^7	520/1000 = 0.520

* All the codes for these three random inputs of size 'n' are stored as
Gift_wrap_brute.cpp
Graham_scan_for_Hull.cpp
Quickhull_for_Hull.cpp