

Speed Comparison

Size	Lazy		Eager		Binary		Ternary	
	A	R	A	R	A	R	A	R
100	4	50	21	12	10	29	4	30
200	10	95	41	15	19	42	11	44
300	13	198	81	18	26	73	17	68
400	15	368	131	26	38	110	26	107
500	19	625	204	29	54	154	40	155
600	25	985	282	34	73	207	60	207
700	33	1468	388	40	88	283	88	276
800	41	2101	487	46	103	372	110	367
900	55	2874	602	53	127	460	134	465
1000	66	3801	745	64	164	565	162	566

A = Add, R = Remove

Analysis:

Ternary heap was faster at adding elements than binary heap for smaller sets, but slower for larger sets. This is likely due to the exception case of two elements in the heap that the ternary has to account.

Ternary heap was a little slower at removing elements because it has to complete an extra comparison to find the largest of the three children.