We chose to do too extensive testing and was un-able to finish all test cases within the alloted time for all people but have attached all testing files and necessary scripting

To test we had seven test cases:

Case	Input
1	``abra.txt''
2	``bible.txt''
3	``chromosome11-human.txt''
4	``moby1.txt''
5	``muchado.txt''
6	``pi-1million.txt''
7	``pi-10million.txt''
8	``sedgewick-algc.txt''
9	``world192.txt''

The reasoning behind each case is as follows:

1. Base case

2. 2

3. Check for many repeating characters

4. 4

5. 5

6. Check for random characters

7. Should be proportional to Case 6 for random chars

8. 8

9. 9

1   Compression

1.1   Correctness:

The results were:

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brenda & Josh	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brendan & Christian	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Colin & Derek	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Jiri & Ronak	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Lyle & Jonathan	Passed	Failed	Failed	Passed	Passed	Failed	Failed	Passed	Failed
Parker & Rafael									
Trung & Viet									
Tudo									

1.2   Timing:

The results were (seconds):

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	0.533	23.664	43.733	1.059	1.679	5.784	57.538	1.147	14.485
Brenda & Josh	0.582	25.680	47.456	0.748	1.366	5.329	55.258	1.897	15.865
Brendan & Christian	——	——	——	——	——	——	——	——	——
Colin & Derek	——	——	——	——	——	——	——	——	——
Jiri & Ronak	0.442	25.974	59.538	1.662	1.439	7.638	74.603	1.593	18.068
Lyle & Jonathan	0.552	——	——	1.555	80.578	——	——	53.415	——
Parker & Rafael									
Trung & Viet									
Tudo									

1.3 Memory:

The results were (percent used of total memory CSA:Burrows:MTF):

Group name	Class	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	CSA	1.04%	49.73%	70.92%	2.08%	7.90%	36.11%	64.71%	6.86%	48.06%
	Burrows	1.04%	49.73%	71.00%	2.10%	8.42%	36.38%	64.80%	7.38%	48.06%
	MTF	1.04%	1.63%	10.67%	2.08%	6.25%	14.54%	22.69%	5.21%	19.25%
Brenda & Josh	CSA	1.56%	73.62%	64.83%	2.55%	9.45%	46.88%	83.21%	8.27%	52.38%
	Burrows	1.56%	67.91%	60.25%	2.55%	10.37%	50.25%	68.01%	8.59%	55.32%
	MTF	1.04%	29.44%	87.08%	1.56%	3.06%	15.30%	82.18%	2.92%	32.40%
Brendan & Christian	CSA	——	——	——	——	——	——	——	——	——
	Burrows	——	——	——	——	——	——	——	——	——
	MTF	——	——	——	——	——	——	——	——	——
Colin & Derek	CSA	——	——	——	——	——	——	——	——	——
	Burrows	——	——	——	——	——	——	——	——	——
	MTF	——	——	——	——	——	——	——	——	——
Jiri & Ronak	CSA	——	——	——	——	——	——	——	——	——
	Burrows	1.04%	67.08%	63.36%	2.72%	14.40%	23.23%	82.80%	12.54	37.04%
	MTF	1.04%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%
Lyle & Jonathan	CSA	1.04%	——	——	35.69%	46.58%	——	——	52.67%	——
	Burrows	1.04%	——	——	35.69%	48.26%	——	——	52.67%	——
	MTF	1.04%	——	——	35.73%	29.64%	——	——	8.80%	——
Parker & Rafael	CSA									
	Burrows									
	MTF									
Trung & Viet	CSA									
	Burrows									
	MTF									
Tudo	CSA									
	Burrows									
	MTF									

For this section,

2 De-Compression

2.1 Correctness:

The results were:

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brenda & Josh	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brendan & Christian	Passed	Failed	Passed	Failed	Failed	Failed	Failed	Failed	Failed
Colin & Derek	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Jiri & Ronak	Passed	Failed	Passed	Passed	Passed	Failed	Failed	Passed	Failed
Lyle & Jonathan	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Parker & Rafael									
Trung & Viet									
Tudo									

2.2 Timing:

The results were (seconds):

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	0.437	9.889	18.641	0.634	0.957	1.754	31.304	0.963	9.159
Brenda & Josh	0.752	5.285	9.138	0.762	0.813	2.209	12.653	0.996	3.831
Brendan & Christian	0.626	3.030	5.887	0.815	0.891	1.555	7.244	1.241	2.296
Colin & Derek	——	——	——	——	——	——	——	——	——
Jiri & Ronak	0.646	——	——	0.711	13.795	——	——	7.830	——
Lyle & Jonathan	0.514	8.499	15.508	0.716	0.846	3.170	22.990	1.004	6.563
Parker & Rafael									
Trung & Viet									
Tudo									

2.3 Memory:

The results were (percent used of total memory CSA:Burrows:MTF):

Group name	Class	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	MTF	1.04%	1.77%	10.66%	2.08%	6.25%	14.56%	46.03%	5.21%	19.21%
	Burrows	1.04%	56.03%	79.61%	2.76%	14.29%	68.46%	75.55%	11.41%	41.91%
Brenda & Josh	MTF	1.56%	29.44%	87.08%	1.56%	3.06%	15.30%	82.17%	2.92%	32.40%
	Burrows	1.56%	49.07%	92.00%	2.59%	5.07%	17.40%	88.23%	4.62%	64.11%
Brendan & Christian	MTF	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%
	Burrows	1.56%	81.82%	59.66%	2.61%	10.97%	24.77	70.80	9.76	57.88
Colin & Derek	MTF	——	——	——	——	——	——	——	——	——
	Burrows	——	——	——	——	——	——	——	——	——
Jiri & Ronak	MTF	1.04%	——	——	1.56%	1.56%	——	——	1.56%	——
	Burrows	1.04%	——	——	2.51%	5.92%	——	——	5.52%	——
Lyle & Jonathan	MTF	1.04%	64.70%	82.00%	2.09%	4.90%	4.90%	25.20%	87.46%	3.87%
	Burrows	1.04%	67.12%	67.12%	2.53%	10.26%	10.25%	41.52%	82.04%	8.86%
Parker & Rafael	MTF									
	Burrows									
Trung & Viet	MTF									
	Burrows									
Tudo	MTF									
	Burrows									

For this section,

3 Burrows Transform

3.1 Correctness:

The results were:

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brenda & Josh	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brendan & Christian	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Colin & Derek	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Jiri & Ronak	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Lyle & Jonathan	Passed	Failed	Failed	Passed	Passed	Failed	Failed	Passed	Failed
Parker & Rafael									
Trung & Viet									
Tudo									

3.2 Timing:

The results were (seconds):

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	0.225	20.286	37.788	0.315	0.696	4.043	47.375	0.702	12.273
Brenda & Josh	0.299	21.959	41.325	0.368	0.803	4.196	49.473	0.873	11.945
Brendan & Christian	0.274	18.133	32.374	0.411	1.123	4.862	45.602	0.747	10.850
Colin & Derek	0.319	20.307	139.702	0.311	1.711	5.147	52.007	1.557	11.274
Jiri & Ronak	0.165	24.147	45.944	0.378	0.823	6.467	62.763	1.332	17.149
Lyle & Jonathan	0.192	——	——	0.742	40.453	——	——	27.408	——
Parker & Rafael									
Trung & Viet									
Tudo									

3.3 Memory:

The results were (percent used of total memory CSA:Burrows:MTF):

Group name	Class	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	CSA	1.04%	56.57%	63.26%	2.08%	7.90%	36.11%	64.41%	6.86%	46.56%
	Burrows	1.04%	56.57%	63.26%	2.10%	8.42%	36.38%	64.50%	7.38%	46.56%
Brenda & Josh	CSA	1.04%	48.19%	65.94%	2.55%	9.45%	46.88%	81.96%	8.33%	52.22%
	Burrows	1.04%	51.27%	61.26%	2.55%	10.37%	50.25%	66.98%	8.66%	55.15%
Brendan & Christian	CSA	2.08%	71.89%	66.56%	3.04%	10.59%	57.58%	83.69%	9.40%	52.66%
	Burrows	2.08%	71.94%	66.56%	3.04%	11.11%	55.39%	83.733%	9.40%	52.75%
Colin & Derek	CSA	2.08%	59.98%	69.69%	3.68%	8.43%	52.05%	80.67%	7.10%	52.90%
	Burrows	2.08%	62.73%	76.87%	3.68%	9.20%	57.13%	76.48%	7.99%	59.64%
Jiri & Ronak	CSA	——	——	——	——	——	——	——	——	——
	Burrows	1.04%	66.56%	73.82	2.76%	14.40%	22.07%	82.239%	12.54%	36.82%
Lyle & Jonathan	CSA	1.56%	——	——	40.35%	55.32%	——	——	73.83%	——
	Burrows	1.56%	——	——	40.35%	55.32%	——	——	73.83%	——
Parker & Rafael	CSA									
	Burrows									
	MTF									
Trung & Viet	CSA									
	Burrows									
	MTF									
Tudo	CSA									
	Burrows									
	MTF									

For this section,

4 Burrows Inverse Transform

4.1 Correctness:

The results were:

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brenda & Josh	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brendan & Christian	Passed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Colin & Derek	Passed	Failed	Failed	Failed	Failed	Passed	Passed	Failed	Failed
Jiri & Ronak	Passed	Passed	Failed	Passed	Passed	Failed	Failed	Passed	Failed
Lyle & Jonathan	Passed	Failed	Failed	Passed	Passed	Failed	Failed	Passed	Failed
Parker & Rafael									
Trung & Viet									
Tudo									

4.2 Timing:

The results were (seconds):

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	0.160	7.332	14.059	0.206	0.450	0.965	25.527	0.681	7.387
Brenda & Josh	0.248	1.940	3.473	0.378	0.476	0.555	3.666	0.299	1.367
Brendan & Christian	0.283	1.621	2.884	0.194	0.438	0.743	3.672	0.364	1.199
Colin & Derek	0.341	28.542	46.741	0.490	1.561	7.278	69.240	1.157	15.578
Jiri & Ronak	0.197	——	——	0.327	12.519	——	——	6.812	——
Lyle & Jonathan	Passed	Passed	Passed	Passed	Passed	Passed	Passed		
Parker & Rafael									
Trung & Viet									
Tudo									

4.3   Memory:

The results were (percent used of total memory CSA:Burrows:MTF):

Group name	Class	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Burrows	1.56%	57.40%	7.867%	2.76%	14.29%	68.46%	73.81%	11.40%	42.67%
Brenda & Josh	Burrows	1.04%	47.87%	92.00%	2.59%	5.07%	17.39%	88.23%	4.63%	64.07%
Brendan & Christian	Burrows	1.56%	65.31%	28.65%	2.61%	10.98%	32.85%	64.00%	9.75%	42.47%
Colin & Derek	Burrows	1.56%	41.61%	30.22%	5.15%	26.05%	56.77%	30.31%	25.35%	42.94%
Jiri & Ronak	Burrows	1.56%	——	——	2.51%	5.93%	——	——	6.83%	——
Lyle & Jonathan	Burrows	1.04%		Passed	Passed	Passed	Passed	Passed	Passed	Passed
Parker & Rafael	Burrows									
Trung & Viet	Burrows									
Tudo	Burrows									

For this section,

5   Move-To-Front Encode

5.1   Correctness:

The results were:

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brenda & Josh	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brendan & Christian	Passed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Colin & Derek	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Jiri & Ronak	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Lyle & Jonathan	Passed	Failed	Failed	Passed	Failed	Failed	Failed	Failed	Failed
Parker & Rafael									
Trung & Viet									
Tudo									

5.2   Timing:

The results were (seconds):

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	0.198	1.364	1.411	0.245	0.268	0.497	0.2367	0.302	0.936
Brenda & Josh	0.241	2.869	4.112	0.351	0.353	0.838	6.792	0.481	2.376
Brendan & Christian	0.305	——	——	——	——	——	——	——	——
Colin & Derek	——	——	——	——	——	——	——	——	——
Jiri & Ronak	0.146	1.356	2.008	0.257	0.296	0.467	2.897	0.252	0.974
Lyle & Jonathan	0.157	——	——	0.705	——	——	——	——	——
Parker & Rafael									
Trung & Viet									
Tudo									

5.3 Memory:

The results were (percent used of total memory CSA:Burrows:MTF):

Group name	Class	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	MTF	1.56%	1.31%	39.64%	2.08%	6.25%	14.56%	43.26%	5.21%	19.21%
Brenda & Josh	MTF	1.56%	29.44%	87.08%	1.56%	3.06%	15.30%	82.17%	2.92%	32.40%
Brendan & Christian	MTF	1.04%	——	——	——	——	——	——	——	——
Colin & Derek	MTF	——	——	——	——	——	——	——	——	——
Jiri & Ronak	MTF	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%
Lyle & Jonathan	MTF	1.56%	——	——	35.69%	——	——	——	——	——
Parker & Rafael	MTF									
Trung & Viet	MTF									
Tudo	MTF									

For this section,

6 Move-To-Front Decoding

6.1 Correctness:

The results were:

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brenda & Josh	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Brendan & Christian	Passed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Colin & Derek	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed	Failed
Jiri & Ronak	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Lyle & Jonathan	Passed	Failed	Failed	Passed	Failed	Failed	Failed	Failed	Failed
Parker & Rafael									
Trung & Viet									
Tudo									

6.2 Timing:

The results were (seconds):

Group name	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	0.160	1.260	1.379	0.209	0.487	0.897	2.674	0.251	0.702
Brenda & Josh	0.257	3.716	5.156	0.387	0.522	1.013	7.679	0.354	2.106
Brendan & Christian	0.315	0.303	0.198	0.186	0.249	0.190	0.215	0.246	0.342
Colin & Derek	——	——	——	——	——	——	——	——	——
Jiri & Ronak	0.218	0.846	1.098	0.203	0.250	0.401	1.712	0.253	0.670
Lyle & Jonathan	0.177	0.150	0.145	0.262	0.163	0.165	0.226	0.195	0.215
Parker & Rafael									
Trung & Viet									
Tudo									

6.3 Memory:

The results were (percent used of total memory CSA:Burrows:MTF):

Group name	Class	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9
Annamalis & Lukas	MTF	1.04%	1.46%	39.61%	2.08%	6.25%	14.56%	43.26%	5.21%	35.73%
Brenda & Josh	MTF	1.56%	23.90%	87.08%	1.56%	3.06%	15.30%	82.17%	2.92%	32.34%
Brendan & Christian	MTF	1.56%%	1.56%	1.56%	1.04%	1.56%	1.04%	1.56%	1.04%	1.56%
Colin & Derek	MTF	——	——	——	——	——	——	——	——	——
Jiri & Ronak	MTF	1.04%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%
Lyle & Jonathan	MTF	1.56%		1.56%	1.56%	1.56%	1.56%	1.56%	1.56%	1.56%
Parker & Rafael	MTF									
Trung & Viet	MTF									
Tudo	MTF									

For this section,

7 Summary:

The only groups to pass all cases were Lyle & Derek and Josh & Parker.