

Lampiran 9

Hasil Pengujian Pengaruh Cacah Sampel

Soal Uji 1

Hasil Komputasi

Monte Carlo

1000	10000	100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
1582.29447483945	1572.20264941840	1545.80970691855	1527.69909447501	1526.43410305747	1526.77149610606	1526.75809127993	1526.84164914472	1526.85275972308	
1585.82355718602	1572.67281055466	1546.88592755087	1527.90296752683	1526.61379083618	1526.78578584072	fail to start	1526.83703748320	1526.85320339551	
1587.03600651140	1571.09190066934	1544.70336960256	1527.72485790910	1526.57449024138	1526.77515962234	1526.77087872206	1526.83772751665	1526.85252648172	
1586.74879277596	1573.37602830796	1545.04824462664	1527.74846778353	1526.67864855206	1526.77928826046	1526.76382819088	1526.83506481951	1526.85248975457	
1579.98722928847	1569.20641532811	1545.44064931268	1527.95111444191	1526.51832676811	1526.80179222712	fail to start	1526.83581541944	1526.85325867097	
1584.36632573628	1571.46387413736	1543.81617020393	1527.79768487043	1526.55547132697	1526.77229174689	1526.76344493787	1526.83861559857	1526.85323264803	
1582.34876358123	1569.93647097910	1543.05697208027	1527.85257452886	1526.57221775515	fail to start	1526.76730804417	1526.83706315886	1526.85211505908	
1581.57301220048	1571.14487858204	1545.88789072635	1527.82883488129	1526.55808763450	1526.74989682276	fail to start	1526.83625369412	1526.85279211194	
1583.77227026491	1571.38687849712	1545.08111637773	1527.81319955212	1526.56314202148	1526.77653008948	1526.76471023498	1526.83740335438	1526.85279723061	rerata
3.730529	2.919337	1.196419	0.065441	0.016432	0.002456	0.003230	0.001531	0.002539	error (persen)
5.9307327883	1.6606782786	1.3011698082	0.0067660975	0.0043577575	0.0002122808	1.8197677979E-05	3.6453686142E-06	1.5026537048E-07	varians

Balok

1536	8232	98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
1297.77635612575	1432.07241410330	1488.10706009203	1515.49578878849	1524.59470651610	1526.62481642328	1526.91548930903	1526.84782214679	1526.92006695691	
15.001020	6.205184	2.535146	0.741298	0.145356	0.012393	0.006645	0.002213	0.006945	error (persen)

Waktu Proses Komputasi

Monte Carlo

waktu (s)								
1000	10000	100000	1000000	10000000	100000000	1000000000	10000000000	100000000000
0.003061	0.027488.	0.005361	0.033634	0.243648	2.448423	24.581510	246.147813	2558.564265
0.003045	0.003320	0.005458	0.025867	0.244228	2.459295	fail to start	252.710499	2568.987512
0.003065	0.003326	0.005493	0.025724	0.244095	2.451321	24.472983	253.450270	2582.679947
0.003409	0.003282	0.005536	0.026261	0.245313	2.434621	24.712385	262.919521	2550.835476
0.003102	0.003300	0.005390	0.026183	0.244491	2.445223	fail to start	253.830939	2554.827905
0.003016	0.003293	0.005387	0.030272	0.243723	2.468929	24.592192	251.094780	2562.362784
0.003170	0.003286	0.005314	0.027306	0.243620	fail to start	24.673607	252.905531	2627.088208
0.003057	0.003293	0.005376	0.026145	0.244100	2.450262	fail to start	253.816264	2524.711026
0.003116	0.003300	0.005414	0.027674	0.244152	2.451153	24.606535	253.359452	2566.257140
1.0000	1.0592	1.6407	5.1112	8.8224	10.0394	10.0388	10.2964	10.1289

Balok

waktu (s)								
1536	8232	98304	943296	9725376	98304000	994121664	9963862464	99972228696
0.017516.	0.003057	0.009798.	0.014066.	0.056965	0.480751	5.176733	51.510787	555.195455
0.003060	0.003058	0.003537	0.008188	0.049403	0.498608	5.153716	51.452404	575.465797
0.003013	0.003104	0.003611	0.008313	0.049855	0.478588	fail to start	51.538949	576.752334
0.003037	0.003073	0.003574	0.008251	0.052074	0.485982	5.165225	51.500713	569.137862
1.0000	1.0120	1.1630	2.3085	6.3117	9.3325	10.6284	9.9707	11.0511
1.0261	1.0739	1.5149	3.3542	4.6885	5.0437	4.7639	4.9195	4.5090

perbandingan

Soal Uji 2

Hasil Komputasi

Monte Carlo

100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
28.5240674717770	28.3523584682955	28.2802830650899	28.2715858814617	28.2743440634896	28.2753158106239	28.2745372194801	
28.5546400645158	28.3554197667646	28.2782228473712	28.2715475162428	fail to start	28.2752559314955	28.2745472332638	
28.5629188512078	28.3529546092092	28.2794584764653	28.2716865327859	28.2743133425589	28.2753255987682	28.2745330459877	
28.5583238807553	28.3542423965281	28.2783183178662	28.2711481833949	28.2744369231549	28.2753451731607	28.2745375278974	
28.5415275649913	28.3546628917625	28.2784024386412	28.2714862165251	fail to start	28.2753252598678	28.2745432897978	
28.5382920427456	28.3537597101644	28.2793125741538	fail to start	28.2742760178983	28.2753285370142	28.2745446264431	
28.5478916879763	28.3561067730789	28.2780500413010	28.2714023579343	28.2743088251622	28.2753188753080	28.2745224966117	
28.5534572539169	28.3551987974357	28.2792416856041	28.2718240600082	fail to start	28.2752943389730	28.2745381337052	
28.5476398522357	28.3543379266549	28.2789111808116	28.2715258211933	28.2743358344528	28.2753136906514	28.2745379466483	rerata
0.966622	0.282956	0.016189	0.009931	0.000007	0.003465	0.000722	error (persen)
0.0001388629	1.4151474230E-06	5.3470228606E-07	3.9753504366E-08	0.000000003	6.5364942358E-10	5.2858669260E-11	varians

Balok

98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
28.3375343300206	28.3422993448317	28.3183074102902	28.2997916362726	28.2889645589455	28.2792628477302	28.2937493147225	
0.223526	0.240379	0.155525	0.090038	0.051745	0.017433	0.017433	error (persen)

Waktu Proses Komputasi

onte Carlo

waktu (s)

1000	10000	100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
0.008827.	0.003123	0.005850	0.014175	0.114501	1.142083	11.686736	124.650607	1218.985398	
0.003025	0.003243	0.003557	0.014005	0.116208	1.139229	fail to start	119.907914	1218.420707	
0.003008	0.003203	0.004242	0.013432	0.117205	1.145539	11.643473	120.208994	1243.056314	
0.003025	0.002586	0.004181	0.014057	0.115329	1.191731	11.565351	126.338346	1218.554584	
0.003060	0.003158	0.004570	0.014035	0.114891	1.142982	fail to start	120.981332	1228.029952	
0.003147	0.003135	0.004118	0.014227	0.115275	fail to start	11.512532	119.856499	1210.456838	
0.003383	0.003117	0.004179	0.014009	0.115343	1.166235	11.629442	119.673687	1201.583813	
0.003077	0.003120	0.004110	0.014044	0.116581	1.148513	fail to start	121.617754	1205.041361	
0.003104	0.003086	0.004351	0.013998	0.115667	1.153759	11.607507	121.654392	1218.016121	rerata (s)
1.0000	0.9942	1.4100	3.2173	8.2631	9.9749	10.0606	10.4807	10.0121	inc

Balok

waktu (s)

1536	8232	98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
0.003124	0.003054	0.003890	0.009058	0.051926	0.482537	5.064855	54.040064	567.661109	
0.003026	0.003081	0.003465	0.008012	0.051865	0.490127	fail to start	55.764383	565.956428	
0.003012	0.003027	0.003438	0.008851	0.05206	0.489298	5.105758	55.480402	567.483336	
0.003054	0.003054	0.003598	0.008640	0.051950	0.487321	5.085307	55.094950	567.033624	rerata (s)
1.0000	1.0000	1.1780	2.4016	6.0125	9.3805	10.4352	10.8341	10.2919	inc

1.0162 1.0104 1.2094 1.6201 2.2265 2.3676 2.2826 2.2081 2.1480 perbandingan

Soal Uji 3

Hasil Komputasi

Monte Carlo

100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
5.30693066173089	5.09367007896153	5.02884972976883	5.02446387830625	5.02671005222703	5.02678562749361	5.02670181160775	
5.31165488064115	5.09175171567280	5.02838755781755	5.02428421456184	fail to start	5.02679857561167	5.02668828792419	
5.31128382539467	5.09252914025023	5.02864334648054	5.02443969183786	5.02673526160277	5.02679476621170	5.02669631768269	
5.30552288932691	5.09421211499592	5.02860643603335	5.02461022586559	5.02671208266065	5.02678766308051	5.02669719516675	
5.30855873192651	5.09106219964692	5.02882291661678	5.02445562006605	fail to start	5.02679252351764	5.02668945121703	
5.30998583505534	5.09307747839609	5.02807473849826	5.02429591988532	5.02665167568213	5.02678548041764	fail to start	
5.31136787705115	5.09443435164695	5.02813200291547	5.02452741102297	5.02666003499887	5.02680725903616	5.02669401027778	
5.30775721738041	5.09533858650526	5.02825020294622	5.02460219032807	fail to start	5.02678653898652	5.02669300854324	
5.30913273981338	5.09325945825946	5.02847086638463	5.02445989398424	5.02669382143429	5.02679230429443	5.02669429748849	rerata
5.621840	1.327177	0.038249	0.041546	0.002896	0.004855	0.002906	error (persen)
4.60171111631E-6	1.805878392029E-6	8.0372970809E-08	1.3199938378E-08	0.000000001	5.18759276476E-11	1.8612113163E-11	varians

Balok

98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
5.20725095268061	5.12219057833809	5.07531657801131	5.05100131972585	5.03850640753692	5.03227037497396	5.02921968755392	
3.594966	1.902744	0.970215	0.486478	0.237900	0.113838	0.053147	error (persen)

Waktu Proses Komputasi

Monte Carlo

waktu (s)									
1000	10000	100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
0.003436	0.003168	0.004552	0.018802	0.162775	1.615300	16.663403	164.793719	1742.206588	
0.003421	0.003226	0.004535	0.018788	0.161714	1.623023	fail to start	167.557534	1694.738788	
0.003029	0.003535	0.004711	0.018661	0.160951	1.621606	16.251853	175.072893	1678.745564	
0.003022	0.003185	0.004552	0.018755	0.161691	1.616594	16.342852	167.682615	1690.369585	
0.003080	0.003210	0.004569	0.018647	0.161105	1.61295	fail to start	167.705602	1714.495741	
0.003261	0.003313	0.004546	0.018544	0.161658	1.717248	16.294756	169.180278	1768.207748	
0.011005.	0.003367	0.004565	0.018768	0.162654	1.613045	16.261157	168.963278	1674.681719	
0.003058	0.003186	0.004524	0.018572	0.160429	1.62994	fail to start	164.357633	1679.533791	
0.003187	0.003274	0.004569	0.018692	0.161622	1.631213	16.362804	168.164194	1705.372441	rerata (s)
1.0000	1.0273	1.3957	4.0909	8.6465	10.0928	10.0311	10.2772	10.1411	inc

Balok

waktu (s)									
1536	8232	98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
0.003145	0.003061	0.003490	0.007478	0.054117	0.508507	4.945904	56.482381	581.218056	
0.003021	0.003173	0.003542	0.007594	0.054542	0.490438	5.173373	61.155461	594.498295	
0.003004	0.003103	0.003575	0.007542	0.054613	0.488248	fail to start	58.431512	589.752871	
0.003057	0.003112	0.003536	0.007538	0.054424	0.495731	5.059639	58.689785	588.489741	rerata (s)
1.0000	1.0182	1.1360	2.1320	7.2200	9.1087	10.2064	11.5996	10.0271	inc

1.0425 1.0519 1.2923 2.4797 2.9697 3.2905 3.2340 2.8653 2.8979 perbandingan

Soal Uji 4

Hasil Komputasi

Monte Carlo

100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
-1.57225407228979	-1.56604957600940	-1.57090273107728	-1.57083268403750	-1.57065945715847	-1.57077338858549	-1.57078941866314	
-1.57175251469549	-1.56613789892580	-1.57087198351958	-1.57085354147357	fail to start	-1.57077679449950	-1.57078975888152	
-1.57134186500899	-1.56594379958809	-1.57084665777464	-1.57086501568364	-1.57065967326036	-1.57077731488920	-1.57078955857943	
-1.57145650903458	-1.56632891902008	-1.57085798340022	-1.57085104024710	-1.57066130057333	-1.57077614020051	-1.57078985315904	
-1.57247861078715	-1.56600348579811	-1.57092146652834	-1.57085572754918	fail to start	-1.57077776914506	-1.57079102647509	
-1.57206493934439	-1.56595055433175	-1.57090244766848	-1.57084082227009	-1.57066259615130	-1.57077566983027	-1.57079068862256	
-1.57278181277087	-1.56591862127025	-1.57092213046847	-1.57085837894901	-1.57065878572095	-1.57077631111292	-1.57079099918767	
-1.57171524824888	-1.56594264752716	-1.57078873732881	-1.57084889802839	fail to start	-1.57077725740970	-1.57079044294462	
-1.57198069652252	-1.56603443780883	-1.57087676722073	-1.57085076352981	-1.57066036257288	-1.57077633070908	-1.57079021831413	rerata
0.075399	0.303151	0.005121	0.003466	0.008656	0.001273	0.000389	error (persen)
2.22118122352E-07	0.000000017	1.80262698936E-09	9.03412891553E-11	1.93002128310E-12	1.65513921437E-12	3.69205580272E-13	varians

Balok

98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
-1.55675174063804	-1.56470864502969	-1.56821645699079	-1.56963280379783	-1.57026302646288	-1.57055244170863	-1.57068241472463	
0.894106	0.387554	0.164240	0.074072	0.033951	0.015526	0.007252	error (persen)

Waktu Proses Komputasi

Monte Carlo

waktu (s)									
1000	10000	100000	1000000	10000000	100000000	1000000000	10000000000	100000000000	sampel
0.003009	0.003007	0.003598	0.006663	0.045987	0.456577	4.469366	44.720598	433.390175	
0.002988	0.002977	0.003454	0.007334	0.046005	0.450225	fail to start	43.569140	448.619359	
0.003008	0.003068	0.003567	0.007218	0.047151	0.453751	4.470154	45.111009	450.474338	
0.002987	0.003226	0.003395	0.007136	0.046642	0.437796	4.388849	44.949727	447.204485	
0.003179	0.003034	0.003382	0.007265	0.045957	0.448312	fail to start	45.264404	447.157226	
0.002957	0.003036	0.003353	0.007391	0.046768	0.450263	4.365031	44.723035	453.958284	
0.003004	0.003114	0.003373	0.007307	0.046389	0.433299	4.332398	45.075302	442.626103	
0.003215	0.003015	0.003432	0.007454	0.045897	0.448533	fail to start	4.798737	440.024096	
0.003043	0.003060	0.003444	0.007221	0.046350	0.447345	4.405160	39.776494	445.431758	rerata (s)
1.0000	1.005	1.126	2.097	6.419	9.652	9.847	9.030	11.198	inc

Balok

waktu (s)									
1536	8232	98304	943296	9725376	98304000	994121664	9963862464	99972228696	sampel
0.003089	0.003034	0.003126	0.004081	0.013239	0.117003	1.129611	11.275628	116.855880	
0.004081	0.003213	0.003110	0.004089	0.013943	0.115061	1.156335	11.270103	118.184350	
0.004089	0.003093	0.003089	0.004035	0.014043	0.11249	1.128388	fail to start	118.284583	
0.003753	0.003113	0.003108	0.004068	0.013742	0.114851	1.138111	11.272866	117.774938	rerata (s)
1.0000	0.830	0.998	1.309	3.378	8.358	9.909	9.905	10.448	inc

0.8109 0.9827 1.1081 1.7749 3.3729 3.8950 3.8706 3.5285 3.7821 perbandingan

Lampiran 10

Hasil Pengujian Pengaruh Cacah Proses

Soal Uji 1

waktu (s)																	
1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	cacah proses
448.630568	224.260041	112.305153	74.727360	56.089323	45.257576	37.405199	41.737548	37.476620	33.234212	29.390942	26.553850	fail to start	29.644341	30.486902	27.116335	28.927819	
448.519535	225.180663	112.436489	74.746194	56.565873	44.918863	37.385776	42.569823	36.835781	32.770352	fail to start	fail to start	25.599707	34.508004	29.994520	27.796050	30.100814	
448.216349	225.405910	112.041581	75.055053	56.226615	44.916390	37.604899	41.555003	36.549729	32.667320	29.495378	26.705954	25.914870	31.283104	31.046584	fail to start	30.443570	
449.803792	224.796856	112.046665	74.758595	57.025692	45.051514	37.480641	41.317070	36.592941	33.449620	29.498327	26.923889	fail to start	30.040063	27.325046	26.443191	29.519601	
449.954710	225.182899	112.241521	74.864988	56.159391	44.973166	37.606932	41.835463	36.896134	32.914748	29.503838	fail to start	25.913598	30.656394	fail to start	26.825688	30.294112	
448.242093	224.156032	112.455781	74.692152	56.118408	46.248061	37.568562	41.732736	36.542958	32.487670	30.299597	27.338277	26.036570	30.016748	27.241334	fail to start	28.553682	
448.470002	224.110749	114.320939	74.731698	56.149543	44.934629	37.404298	42.022606	36.551411	32.816456	29.503888	26.942934	fail to start	35.928078	28.935363	fail to start	fail to start	
448.575902	224.272776	112.128167	74.696870	56.561904	46.379961	37.422721	42.101304	37.028446	32.699177	29.699780	27.320112	26.561416	fail to start	28.241574	fail to start	29.745828	
448.559937	224.402656	112.256315	75.193968	56.647625	46.314710	37.711877	43.905938	37.760524	32.722353	29.588510	fail to start	26.876444	29.246354	fail to start	28.079335	30.240963	
448.284371	224.265358	112.047156	74.740575	56.205625	44.987322	37.418444	41.578364	36.383930	33.047107	29.600276	26.913973	fail to start	31.902262	28.795167	27.558888	30.065578	
448.378905	224.220270	112.116047	74.792706	56.389379	44.890825	37.453324	41.953085	36.683429	32.509813	29.673775	28.375699	26.929693	32.496214	30.943913	fail to start	28.472556	
448.606749	225.327389	112.131650	74.755991	56.507178	45.090741	37.394766	42.228228	36.762777	32.302790	29.840457	fail to start	26.803447	32.426682	28.062975	28.024636	fail to start	
448.686909	224.631800	112.377289	74.813013	56.387213	45.330313	37.488120	42.044764	36.838723	32.801802	29.644979	27.134336	26.329468	31.649840	29.107338	27.406303	29.636452	rerata (s)
1.0000	1.9974	3.9927	5.9974	7.9572	9.8982	11.9688	10.6716	12.1798	13.6787	15.1353	16.5358	17.0412	14.1766	15.4149	16.3717	15.1397	speedup
1.0000	1.9974	1.9989	1.5021	1.3268	1.2439	1.2092	0.8916	1.1413	1.1231	1.1065	1.0925	1.0306	0.8319	1.0873	1.0621	0.9247	inc speedup
1.0000	0.9987	0.9982	0.9996	0.9947	0.9898	0.9974	0.7623	0.7612	0.7599	0.7568	0.7516	0.7101	0.5453	0.5505	0.5457	0.4731	kesangkalan

Soal Uji 2

waktu (s)																	
1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	cacah proses
204.267013	102.077129	51.03372	34.034666	25.575924	fail to start	17.270177	20.117029	fail to start	15.369093	14.119268	fail to start	11.682488	14.461149	fail to start	13.080384	13.717508	
208.251860	102.079562	51.306196	34.949518	fail to start	20.460428	17.06725	fail to start	17.435263	15.376981	fail to start	12.676947	11.684815	fail to start	13.475373	12.619078	fail to start	
204.740800	102.125452	51.127434	34.241695	25.576597	20.492246	fail to start	19.894917	17.236435	fail to start	13.875205	14.417515	fail to start	13.896345	15.866067	fail to start	15.067801	
205.215548	102.10365	51.053642	34.039698	25.927582	fail to start	17.047383	19.665482	fail to start	15.577853	13.890897	fail to start	12.412024	14.670215	fail to start	13.505155	13.982327	
204.378810	102.094004	51.178498	34.031328	fail to start	20.438729	17.042742	fail to start	17.327738	15.27167	fail to start	13.324165	11.739831	fail to start	13.50237	12.841811	fail to start	
204.526145	102.231833	51.280358	34.470465	25.565024	20.977325	fail to start	19.51139	17.344149	fail to start	14.053004	12.636549	fail to start	13.673417	14.804502	fail to start	15.761997	
fail to start	102.126056	51.178589	34.274179	25.56604	fail to start	17.043087	19.696303	fail to start	15.440969	13.79492	fail to start	11.621987	14.777428	fail to start	13.198531	15.444008	
209.727606	102.095948	51.060592	34.033	25.837087	20.464243	fail to start	19.804561	17.179700	fail to start	16.725478	12.607971	fail to start	14.663704	12.892326	fail to start	13.567826	
204.728121	103.575329	51.179723	34.309638	fail to start	20.663971	17.053546	fail to start	17.115244	15.205342	fail to start	12.847916	11.984577	fail to start	14.188558	13.689600	fail to start	
204.203390	102.406547	51.313206	34.113941	25.883780	fail to start	17.078607	19.986014	fail to start	15.519834	13.891004	fail to start	12.443725	13.912200	fail to start	13.866981	14.201592	
204.212627	102.235696	51.044155	34.036033	25.636434	20.497918	fail to start	19.768184	17.196654	fail to start	13.988610	12.668439	fail to start	14.816649	13.093087	fail to start	14.056100	
204.237930	fail to start	51.040955	34.035836	fail to start	20.484198	17.071208	fail to start	17.225752	15.402396	fail to start	12.600124	12.998904	fail to start	14.152382	14.168853	fail to start	
205.3173	102.2865	51.1498	34.2142	25.6961	20.5599	17.0843	19.8055	17.2576	15.3955	14.2923	12.9725	12.0710	14.3589	13.9968	13.3713	14.4749	rerata (s)
1.0000	2.0073	4.0140	6.0009	7.9902	9.9863	12.0179	10.3667	11.8972	13.3362	14.3656	15.8272	17.0091	14.2990	14.6688	15.3551	14.1844	speedup
1.0000	2.0073	1.9997	1.4950	1.3315	1.2498	1.2034	0.8626	1.1476	1.1210	1.0772	1.1017	1.0747	0.8407	1.0259	1.0468	0.9238	inc speedup
1.0000	1.0036	1.0035	1.0002	0.9988	0.9986	1.0015	0.7405	0.7436	0.7409	0.7183	0.7194	0.7087	0.5500	0.5239	0.5118	0.4433	kesangkalan

Soal Uji 3

waktu (s)																	
1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	cacah proses
291.569837	146.125617	72.656752	48.50298	36.448297	29.187635	fail to start	27.581933	fail to start	24.696738	19.65424	fail to start	17.926916	21.73824	fail to start	17.781563	20.80846	
292.005271	145.745106	72.886548	48.584819	36.450440	fail to start	24.337993	fail to start	24.533243	21.749138	fail to start	17.771698	16.490395	fail to start	21.170682	17.610785	fail to start	
291.521512	146.849499	72.924227	48.597718	36.514067	29.313309	fail to start	27.943108	24.560398	fail to start	19.475118	17.63729	fail to start	19.634395	18.366534	fail to start	20.578604	
291.794677	145.513424	73.067468	48.585204	36.964350	fail to start	24.453278	27.911442	fail to start	21.575739	19.600957	fail to start	16.715733	22.216405	fail to start	20.219249	19.049534	
291.497471	145.73032	72.752742	48.568386	36.575195	29.24946	24.40066	fail to start	24.744939	21.73345	fail to start	17.9121	16.805551	fail to start	19.092763	17.373891	fail to start	
292.048355	146.286871	72.862251	48.613853	36.832559	fail to start	fail to start	27.873877	24.126817	fail to start	19.535211	17.60586	fail to start	21.679379	19.046949	fail to start	19.433779	
fail to start	145.72485	72.747833	48.664301	36.516062	29.213187	24.345512	27.950801	fail to start	21.858219	19.407318	fail to start	16.668912	19.919432	fail to start	19.703447	20.390909	
291.512196	145.755780	72.644722	48.585668	36.556436	30.294939	24.353276	28.031837	fail to start	22.493083	19.528814	fail to start	17.188202	21.029476	fail to start	18.407276	20.342079	
291.473750	145.718736	72.777219	48.791113	36.493176	29.214765	fail to start	27.651668	24.334996	fail to start	19.866671	18.088471	fail to start	19.838493	20.812794	fail to start	19.736352	
291.767276	145.779460	72.876169	48.581127	36.752051	29.251289	24.333395	fail to start	24.787021	21.839938	19.640951	17.977706	17.471677	fail to start	18.488146	18.226049	fail to start	
290.983215	145.934838	72.874955	48.603871	36.728665	fail to start	24.337503	27.640083	fail to start	21.938423	fail to start	fail to start	17.712451	20.490174	fail to start	19.921087	18.975262	
292.592820	151.538857	72.900270	48.584620	36.476590	29.202951	fail to start	27.525909	24.455099	fail to start	20.488023	17.803366	fail to start	19.682758	20.649900	fail to start	19.976295	
291.665851	146.945534	72.814667	48.629280	36.601384	29.490986	24.341391	27.712374	24.525705	22.090481	19.881115	17.956514	17.457443	20.260225	19.983613	18.851471	19.757497	rerata (s)
1.0000	1.9849	4.0056	5.9977	7.9687	9.8900	11.9823	10.5248	11.8923	13.2032	14.6705	16.2429	16.7072	14.3960	14.5953	15.4718	14.7623	speedup
1.0000	1.9849	2.0181	1.4973	1.3286	1.2411	1.2116	0.8784	1.1299	1.1102	1.1111	1.1072	1.0286	0.8617	1.0138	1.0601	0.9541	inc speedup
1.0000	0.9924	1.0014	0.9996	0.9961	0.9890	0.9985	0.7518	0.7433	0.7335	0.7335	0.7383	0.6961	0.5537	0.5213	0.5157	0.4613	kesangkalan

Soal Uji 4

waktu (s)																	
1	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	cacah proses
73.307065	37.144767	18.324243	fail to start	9.172187	fail to start	6.165701	7.668013	fail to start	5.8833	5.538907	fail to start	4.390339	6.166155	fail to start	4.892354	5.351946	
73.309169	36.647928	fail to start	12.320241	fail to start	7.559005	6.119131	fail to start	6.47669	6.063512	fail to start	4.880231	4.468779	fail to start	5.767534	5.936407	fail to start	
73.876693	36.647821	18.330547	fail to start	9.173408	8.135728	fail to start	7.46276	6.481441	fail to start	5.369153	4.920018	fail to start	5.393342	5.090483	fail to start	5.312796	
73.310816	36.651578	18.327642	12.318983	9.325685	fail to start	6.148018	7.683301	fail to start	5.778727	5.378317	fail to start	4.344173	5.627649	fail to start	4.988949	6.188442	
74.086533	37.005252	fail to start	12.216396	fail to start	7.341663	6.114084	fail to start	6.481814	5.955106	fail to start	4.722584	4.444616	fail to start	5.456503	5.531311	fail to start	
73.303941	36.647827	18.328647	fail to start	9.22265	7.377829	fail to start	7.405506	6.70912	fail to start	5.273445	4.861463	fail to start	5.968727	5.056552	fail to start	5.240354	
73.295796	36.697341	18.324394	12.215953	9.172449	fail to start	6.15017	7.754087	fail to start	5.95182	5.223457	fail to start	4.58336	6.166678	fail to start	5.470791	5.255622	
73.308293	36.647370	18.324398	12.221097	fail to start	7.379936	6.146455	fail to start	6.524002	5.948468	fail to start	4.860563	4.481830	fail to start	5.758940	5.401269	fail to start	
73.293915	36.647729	fail to start	12.216471	9.203718	fail to start	6.114807	7.515970	fail to start	6.007651	5.219171	fail to start	4.374097	5.982572	fail to start	5.313074	5.429482	
73.294004	36.345222	18.327326	12.220854	9.202157	7.398314	fail to start	7.397637	6.481850	fail to start	5.450434	4.782770	fail to start	5.596917	5.375531	fail to start	5.824880	
74.085353	36.647467	18.324498	12.216294	fail to start	7.380445	6.136028	fail to start	6.552650	5.964337	fail to start	4.876743	4.476811	fail to start	5.250599	5.229189	fail to start	
73.293540	36.795691	fail to start	fail to start	9.175196	fail to start	6.114669	7.502127	fail to start	5.808789	5.273526	fail to start	4.481812	5.402517	fail to start	5.132021	5.364837	
73.480427	36.710499	18.326462	12.243286	9.205931	7.510417	6.134340	7.548675	6.529652	5.929079	5.340801	4.843482	4.449535	5.788070	5.393735	5.321707	5.496045	rerata (s)
1.0000	2.0016	4.0095	6.0017	7.9819	9.7838	11.9785	9.7342	11.2533	12.3932	13.7583	15.1710	16.5142	12.6952	13.6233	13.8077	13.3697	speedup
1.0000	2.0016	2.0031	1.4969	1.3299	1.2258	1.2243	0.8126	1.1561	1.1013	1.1101	1.1027	1.0885	0.7687	1.0731	1.0135	0.9683	inc speedup
1.0000	1.0008	1.0024	1.0003	0.9977	0.9784	0.9982	0.6953	0.7033	0.6885	0.6879	0.6896	0.6881	0.4883	0.4865	0.4603	0.4178	kesangkalan

Lampiran 11

Hasil Pengujian Pengaruh Cacah *Node*

Soal Uji 1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	node
4	8	12	16	20	24	26	28	30	32	34	36	38	40	42	44	core
148.761601	76.932771	49.477630	37.678395	30.048343	24.639225	23.064665	fts	fts	19.260548	fts	16.790183	15.818780	14.958112	fts	13.586770	
148.069400	73.888769	49.436272	36.744870	29.439158	fts	fts	fts	fts	fts	fts	fts	15.687062	fts	14.227664	13.489612	
148.385535	73.628270	49.495545	38.921738	29.605012	24.562659	23.147395	21.246413	fts	19.132288	17.831190	16.861234	fts	15.426095	14.202109	fts	
147.542348	73.647998	53.371487	37.737961	29.549813	24.449269	22.771830	fts	19.843963	19.580785	fts	17.325992	16.719510	14.954814	fts	13.502526	
148.079891	73.474772	49.417480	36.862597	29.501752	fts	fts	21.247971	20.232720	fts	17.949953	fts	15.716002	fts	14.311666	13.643231	
147.81317	78.308277	49.299360	36.676563	29.464783	24.589854	fts	fts	fts	19.560940	18.378517	17.089805	fts	14.822580	14.249209	fts	
146.577926	74.064476	48.762106	36.802122	29.360600	fts	22.838395	21.382820	20.010139	19.424877	fts	17.395702	15.757391	14.969245	fts	13.600427	
148.346715	74.095752	49.131520	36.942388	fts	24.960473	fts	fts	20.686126	fts	18.062608	fts	15.758197	fts	14.265966	13.455028	
147.831389	73.631686	48.680883	37.041594	29.520582	fts	23.002495	22.210801	fts	19.018740	18.584238	17.094009	fts	15.731550	14.260239	fts	
149.003797	74.126943	48.680883	36.691883	29.440216	25.828562	23.448960	21.921598	20.022902	19.564339	fts	17.339794	15.756893	14.923631	fts	13.697493	
148.041177	74.579971	49.575317	37.210011	29.547807	24.838340	23.045623	21.601921	20.159170	19.363217	18.161301	17.128103	15.887691	15.112290	14.252809	13.567870	time (s)
1.0000	1.9850	2.9862	3.9785	5.0102	5.9602	6.4238	6.8531	7.3436	7.6455	8.1515	8.6432	9.3180	9.7961	10.3868	10.9112	speedup
	1.9850	1.5044	1.3323	1.2593	1.1896	1.0778	1.0668	1.0716	1.0411	1.0662	1.0603	1.0781	1.0513	1.0603	1.0505	inc speedup
11961.73	12052.12	12017.06	12026.28	11937.31	12041.63	11172.52	10472.61	9773.17	9387.29	8804.60	8303.70	7702.35	7326.44	6909.76	6577.70	prim (J)
0.00	0.00	0.00	0.00	0.00	0.00	1608.58	3015.63	4221.33	5406.21	6338.29	7173.25	7762.73	8438.70	8953.61	9470.37	sec (J)
11961.73	12052.12	12017.06	12026.28	11937.31	12041.63	12781.10	13488.24	13994.50	14793.50	15142.89	15476.95	15465.08	15765.14	15863.38	16048.08	total (J)
1.0000	0.9925	0.9954	0.9946	1.0020	0.9934	0.9177	0.8566	0.8160	0.7645	0.7410	0.7203	0.7168	0.6997	0.6925	0.6819	efficiency (comp)
1.0000	0.9925	0.9954	0.9946	1.0020	0.9934	0.9359	0.8868	0.8547	0.8086	0.7899	0.7729	0.7735	0.7587	0.7540	0.7454	efficiency (energy)

Soal Uji 2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	node
4	8	12	16	20	24	26	28	30	32	34	36	38	40	42	44	core
70.169974	34.440729	23.550583	17.611336	14.074045	11.537260	12.186756	fts	10.002786	9.028022	fts	7.985241	7.416356	fts	6.708713	6.567515	
70.785966	35.219216	fts	fts	fts	fts	fts	10.318411	9.559512	fts	8.705804	8.053066	fts	6.993893	7.013727	fts	
74.945992	36.815714	25.032140	17.292888	14.094754	12.206012	11.058630	12.320797	fts	9.335836	8.533478	fts	8.000309	7.039481	fts	6.502365	
70.480876	34.881831	23.403185	fts	13.685180	11.453145	11.008306	fts	9.589270	9.399121	fts	8.039831	7.412162	fts	7.227932	6.446491	
69.518120	35.011535	fts	17.393728	fts	fts	fts	fts	9.621786	fts	8.419843	8.725986	fts	7.012942	8.062365	fts	
69.821773	35.373174	23.031648	17.573335	fts	11.466867	10.837840	10.455822	fts	9.061771	8.581782	fts	8.884571	7.168578	fts	6.501044	
76.506862	35.173656	fts	fts	13.766513	fts	10.853091	fts	9.597580	9.042677	fts	7.815451	7.579766	fts	6.845662	6.737927	
69.974037	38.024772	23.270809	17.354045	13.782591	11.787681	fts	10.498762	9.923685	fts	8.800143	8.238446	fts	7.137247	6.665586	fts	
70.259537	35.002265	23.337743	fts	fts	11.467425	10.983411	10.515136	fts	9.812661	8.589196	fts	7.564933	7.113519	fts	6.508000	
70.116325	34.663414	fts	17.515730	13.927513	fts	11.108754	fts	9.664387	9.413405	fts	8.352020	7.589317	fts	6.843109	6.505262	
71.257946	35.460631	23.604351	17.456844	13.888433	11.653065	11.148113	10.821786	9.708429	9.299070	8.605041	8.172863	7.778202	7.077610	7.052442	6.538372	time (s)
1.0000	2.0095	3.0188	4.0819	5.1307	6.1150	6.3919	6.5847	7.3398	7.6629	8.2810	8.7188	9.1612	10.0681	10.1040	10.8984	speedup
	2.0095	1.5023	1.3522	1.2569	1.1918	1.0453	1.0302	1.1147	1.0440	1.0807	1.0529	1.0507	1.0990	1.0036	1.0786	inc speedup
5586.62	5560.23	5551.74	5474.47	5444.27	5481.60	5244.07	5090.57	4566.85	4374.28	4047.81	3844.51	3658.87	3329.31	3317.47	3075.65	prim (J)
0.00	0.00	0.00	0.00	0.00	0.00	778.14	1510.72	2032.95	2596.30	3003.16	3422.80	3800.43	3952.14	4430.34	4563.78	sec (J)
5586.62	5560.23	5551.74	5474.47	5444.27	5481.60	6022.21	6601.29	6599.79	6970.58	7050.97	7267.31	7459.30	7281.45	7747.81	7639.43	total (J)
1.0000	1.0047	1.0063	1.0205	1.0261	1.0192	0.9131	0.8231	0.8155	0.7663	0.7528	0.7266	0.7047	0.7191	0.6736	0.6812	efficiency (comp)
1.0000	1.0047	1.0063	1.0205	1.0261	1.0192	0.9277	0.8463	0.8465	0.8015	0.7923	0.7687	0.7489	0.7672	0.7211	0.7313	efficiency (energy)

Soal Uji 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	node
4	8	12	16	20	24	26	28	30	32	34	36	38	40	42	44	core
101.054570	48.903548	32.673182	24.637731	20.583674	16.694632	15.190994	14.802550	fts	12.538111	12.128645	fts	10.404045	10.061500	fts	8.946992	
98.220391	48.932220	32.770366	fts	fts	fts	15.162847	fts	13.531272	13.665643	fts	11.222978	10.514420	fts	9.3459148	9.978209	
98.836169	51.206692	32.956703	24.450906	20.023108	16.348057	fts	14.230545	13.691093	fts	11.816359	11.357474	fts	10.338634	9.384957	fts	
98.510771	48.901041	32.931051	24.378002	fts	16.285458	15.865864	14.551111	fts	13.594007	12.093513	fts	10.448567	9.990923	fts	9.065994	
99.060607	49.197394	32.968383	fts	19.487698	fts	15.220240	fts	13.420532	12.855154	fts	11.178905	10.374290	fts	9.4976598	9.972846	
98.459617	48.824739	32.279561	24.197974	23.153465	16.438731	fts	14.409399	13.966009	fts	12.980163	11.385317	fts	9.903880	9.354975	fts	
97.78318	48.931238	32.742237	fts	fts	fts	15.269746	14.548067	fts	12.689825	12.104683	fts	10.324107	9.851050	fts	9.105461	
97.304625	49.160454	32.634828	24.714802	19.521375	16.196081	15.484938	fts	13.573335	13.007115	fts	11.153164	10.576398	fts	9.4445079	1.133343	
98.534275	49.410315	33.321221	24.507977	19.744800	16.650511	fts	14.433048	13.778140	fts	12.015314	11.371827	fts	10.002212	9.605023	fts	
98.235227	48.744543	33.053389	fts	fts	fts	15.259175	14.608155	fts	12.535153	12.372363	fts	10.408302	10.001044	fts	8.933000	
98.599943	49.221218	32.833092	24.481232	20.419020	16.435578	15.350543	14.511839	13.660064	12.983573	12.215863	11.278278	10.435733	10.021320	9.4388399	0.019406	time (s)
1.0000	2.0032	3.0031	4.0276	4.8288	5.9992	6.4232	6.7944	7.2181	7.5942	8.0715	8.7425	9.4483	9.8390	10.4462	10.9320	speedup
	2.0032	1.4991	1.3412	1.1989	1.2424	1.0707	1.0578	1.0624	1.0521	1.0628	1.0831	1.0807	1.0414	1.0617	1.0465	inc speedup
7602.06	7589.91	7594.29	7550.01	7871.53	7603.10	7101.16	6713.18	6319.15	6006.20	5651.06	5217.33	4827.57	4635.86	4366.41	4172.38	prim (J)
0.00	0.00	0.00	0.00	0.00	0.00	1065.33	2014.24	2844.03	3604.24	4238.90	4696.27	5069.68	5563.84	5895.50	6259.47	sec (J)
7602.06	7589.91	7594.29	7550.01	7871.53	7603.10	8166.49	8727.42	9163.17	9610.44	9889.96	9913.61	9897.25	10199.70	10261.91	110431.85	total (J)
1.0000	1.0016	1.0010	1.0069	0.9658	0.9999	0.9176	0.8493	0.8020	0.7594	0.7338	0.7285	0.7268	0.7028	0.6964	0.6832	efficiency (comp)
1.0000	1.0016	1.0010	1.0069	0.9658	0.9999	0.9309	0.8711	0.8296	0.7910	0.7687	0.7668	0.7681	0.7453	0.7408	0.7287	efficiency (energy)

Soal Uji 4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	node
4	8	12	16	20	24	26	28	30	32	34	36	38	40	42	44	core
26.907183	fts	8.947620	6.733147	5.241202	4.465984	fts	fts	3.806780	fts	3.315104	3.147298	fts	2.792186	2.932149	fts	
26.839656	13.426550	fts	fts	fts	fts	4.320980	4.380058	fts	3.539927	3.278413	fts	2.926754	2.899363	fts	2.582642	
fts	fts	8.848396	6.505290	5.390109	4.488067	4.339070	fts	3.855027	3.506750	fts	fts	2.909203	fts	2.933800	2.586235	
26.179062	13.413043	8.635153	6.706912	5.195027	4.470688	fts	3.967848	3.754565	fts	3.408899	3.192427	fts	2.832947	2.708568	fts	
26.894116	fts	fts	fts	fts	fts	4.416152	3.952472	fts	3.457354	3.309069	fts	3.021026	2.908202	fts	2.634757	
26.872442	13.721192	8.762149	6.932973	5.371990	4.499664	4.453473	fts	3.748967	3.531929	fts	3.151898	3.035908	fts	2.920420	2.591010	
fts	fts	fts	fts	fts	fts	fts	3.926566	3.741128	fts	3.359892	3.126198	fts	2.775014	2.650141	fts	
26.864776	13.067746	8.875360	6.787333	5.320058	4.488023	4.323774	4.179933	fts	3.432293	3.285023	fts	2.876389	2.745460	fts	2.788781	
26.159240	fts	8.924238	6.775357	fts	4.545454	4.309934	fts	3.841425	3.541165	fts	3.425664	2.911708	fts	2.676768	2.559201	
fts	13.557011	fts	fts	5.391556	fts	fts	4.048818	3.740534	fts	3.573808	3.030204	fts	3.066919	2.692598	fts	
26.673782	13.437108	8.832153	6.740169	5.318324	4.492980	4.360564	4.075949	3.784061	3.501570	3.361458	3.178948	2.946831	2.860013	2.787778	2.623771	time (s)
1.0000	1.9851	3.0201	3.9574	5.0154	5.9368	6.1170	6.5442	7.0490	7.6177	7.9352	8.3908	9.0517	9.3265	9.5681	10.1662	speedup
	1.9851	1.5214	1.3104	1.2673	1.1837	1.0304	1.0698	1.0771	1.0807	1.0417	1.0574	1.0788	1.0304	1.0259	1.0625	inc speedup
2195.25	2211.75	2180.66	2218.86	2188.49	2218.63	2153.25	2012.70	1868.57	1729.08	1659.89	1569.76	1455.15	1412.27	1376.60	1295.62	prim (J)
0.00	0.00	0.00	0.00	0.00	0.00	302.62	565.74	787.84	972.04	1166.43	1323.71	1431.57	1587.88	1741.25	1820.90	sec (J)
2195.25	2211.75	2180.66	2218.86	2188.49	2218.63	2455.87	2578.45	2656.41	2701.11	2826.31	2893.48	2886.72	3000.15	3117.85	3116.52	total (J)
1.0000	0.9925	1.0067	0.9894	1.0031	0.9895	0.8739	0.8180	0.7832	0.7618	0.7214	0.6992	0.6963	0.6662	0.6379	0.6354	efficiency (comp)
1.0000	0.9925	1.0067	0.9894	1.0031	0.9895	0.8939	0.8514	0.8264	0.8127	0.7767	0.7587	0.7605	0.7317	0.7041	0.7044	efficiency (energy)