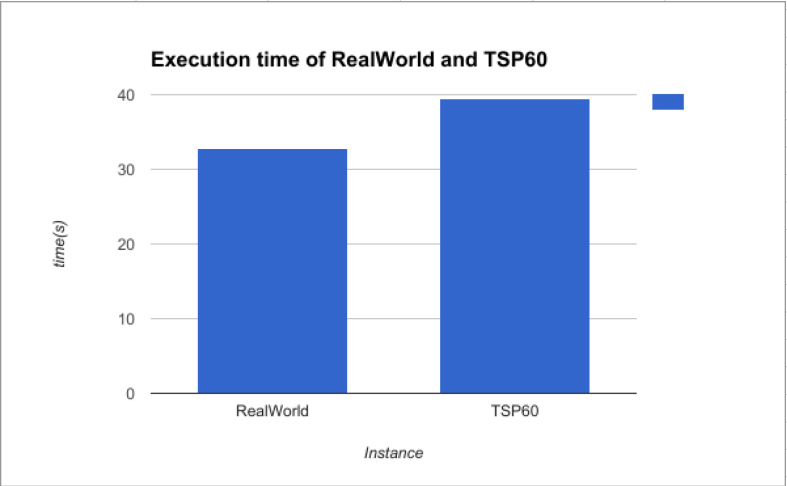


Exact Algorithm

	RealWorld	TSP60	TSP12
AVG	32.86219	39.45976	0.345576
Run1	27.1911	34.0182	0.422018
Run2	32.7734	39.3331	0.323864
Run3	36.447	39.4976	0.315477
Run4	32.2885	34.6931	0.324835
Run5	35.8902	42.1197	0.317445
Run6	33.8915	37.5944	0.348059
Run7	32.1371	42.0235	0.326256
Run8	29.995	41.7344	0.423227
Run9	34.7148	41.7918	0.324431
Run10	33.2933	41.7918	0.330148
Average	32.86219	39.45976	0.345576
CV on time	8.36%	7.81%	12.02%
Objvalue	2.23E+08	629.80	66.4



Genetic Algorithm

	Real World				TSP60				TSP12			
	S = 10		S = 100		S = 10		S = 100		S = 10		S = 100	
	Time	Objective Value	Time		Time	Objective Value	Time		Time	Objective Value	Time	
AVG												
Run1	0.33	301,057,000.00	1.63	299,265,000.00	0.54	743.10	3.69	865.20	0.06	66.40	0.51	66.40
Run2	0.33	301,057,000.00	1.76	269,060,000.00	0.38	870.20	5.91	811.20	0.06	66.40	0.42	66.40
Run3	0.28	277,002,000.00	2.96	269,240,000.00	0.49	870.20	3.56	867.10	0.05	66.40	0.44	66.40
Run4	0.28	277,002,000.00	1.78	283,917,000.00	0.56	888.20	4.28	844.10	0.04	66.40	0.44	66.40
Run5	0.28	277,002,000.00	1.47	307,136,000.00	0.57	888.20	4.39	756.60	0.04	66.40	0.52	66.40
Run6	0.27	306,703,000.00	1.99	295,599,000.00	0.45	780.10	6.10	829.50	0.03	66.40	0.52	66.40
Run7	0.33	306,703,000.00	1.43	271,824,000.00	0.54	780.10	4.12	844.50	0.03	66.40	0.29	66.40
Run8	0.34	306,703,000.00	1.56	282,969,000.00	0.64	898.10	6.92	768.80	0.03	66.40	0.30	66.40
Run9	0.26	291,471,000.00	1.90	268,578,000.00	0.52	810.70	3.46	875.50	0.03	66.40	0.36	66.40
Run10	0.32	291,471,000.00	0.96	277,386,000.00	0.53	810.70	3.03	867.40	0.03	66.40	0.25	66.40
Average	0.30	2.94E+08	1.83	2.83E+08	0.52	836.54	4.55	832.99	0.04	66.40	0.40	66.40
Best	0.26	277,002,000.00	0.96	268,578,000.00	0.38	743.10	3.03	756.60	0.03	66.40	0.25	66.40
Worst	0.34	306,703,000.00	2.96	307,136,000.00	0.64	898.10	6.92	875.50	0.06	66.40	0.52	66.40
STD DEVIATION	0.03	13,494,004.23	0.46	14,676,482.96	0.08	58.27	1.27	42.68	0.01	0.00	0.09	0.00
CV on time/value	9.50%	4.34%	28.25%	4.93%	13.77%	6.64%	28.77%	5.04%	31.78%	0.00%	24.62%	0.00%
Avg Error (Obj)		31.89%		27.04%		32.83%		32.26%		0.00%		0.00%
Best Error		24.32%		20.54%		17.99%		20.13%		0.00%		0.00%
Worst Error		37.65%		37.85%		42.60%		39.01%		0.00%		0.00%

TSPRANDOM 100 a - b		
EXACT ALGORITHM		
	RANDOM100a	RANDOM100b
AVG	376.6687	449.4727
Run1	370.323	452.068
Run2	368.359	459.707
Run3	370.932	459.248
Run4	376.96	468.94
Run5	379.045	440.689
Run6	382.125	436.196
Run7	375.166	445.858
Run8	370.636	442.556
Run9	396.811	440.675
Run10	376.33	448.79
Average time	376.6687	449.4727
CV on time	2.21%	2.32%
Objvalue	9778.91	9802.17

Execution time of RANDOM100a, Random100b

Instance	Execution Time (s)
RANDOM100a	376.6687
RANDOM100b	449.4727

Genetic Algorithm

	TSPRANDOM100A				TSPRANDOM100B				
	S = 10		S = 100		S = 10		S = 100		
	Time	Objective Value	Time		Time	Objective Value	Time		
AVG									
Run1	0.98	15,722.70	13.07	17,124.60	0.96	15,957.00	13.38	15215.6	
Run2	1.63	18,359.70	9.75	14,199.40	0.84	16,374.60	11.20	16717.1	
Run3	1.03	16,051.90	10.03	16,101.80	1.22	16,664.30	8.15	17957.9	
Run4	1.37	17,044.40	9.77	17,830.40	1.10	17,965.00	8.37	18874.8	
Run5	1.10	15,914.40	8.13	16,792.10	1.23	17,450.70	12.88	15252.1	
Run6	1.54	17,919.70	9.61	17,133.60	1.15	14,263.90	10.45	18284.3	

Run7	1.37	16,761.50	7.07	18,137.70	1.57	17,750.30	11.70	15835.6	
Run8	1.01	16,017.60	12.01	18,247.70	1.59	15,735.30	13.80	14926.3	
Run9	1.24	16,744.90	16.30	16,286.00	1.42	14,726.50	14.08	17491.6	
Run10	1.66	14,782.40	9.93	15,645.40	1.03	13,968.10	9.70	19288.3	
Average	1.25	16,726.31	10.64	16,872.59	1.23	16,320.84	11.56	16,728.37	
Best	0.98	14,782.40	7.07	14,199.40	0.84	13,968.10	8.15	14,926.30	
Worst	1.66	18,359.70	16.30	18,247.70	1.59	17,965.00	14.08	19,288.30	
CV on time/value	20.70%	6.37%	24.72%	7.39%	20.33%	8.75%	18.84%	9.67%	
Avg Error (Obj)		71.04%		72.13%		66.50%		70.66%	
Best Error		51.17%		44.86%		42.50%		52.28%	
Worst Error		87.75%		86.16%		83.28%		96.78%	