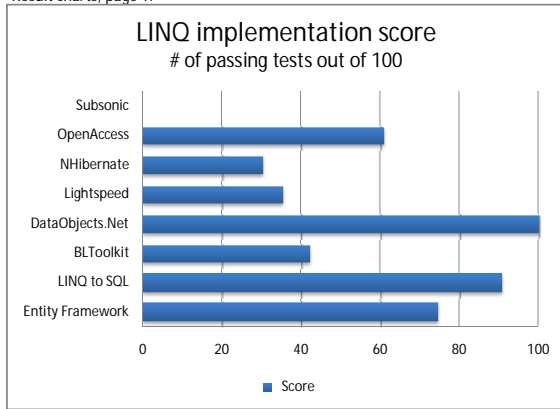


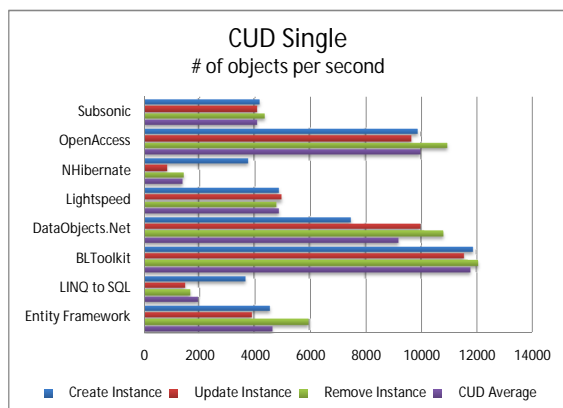
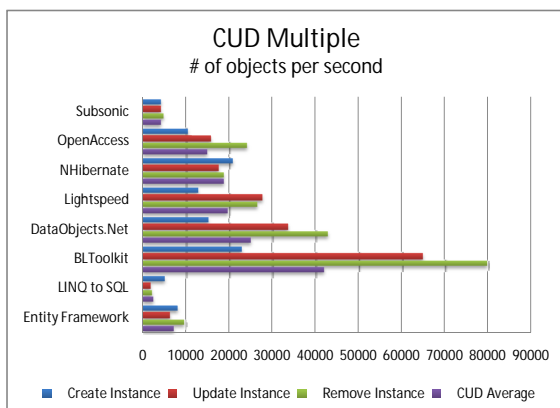
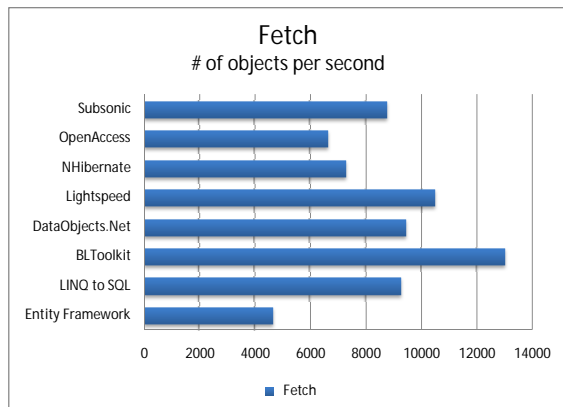
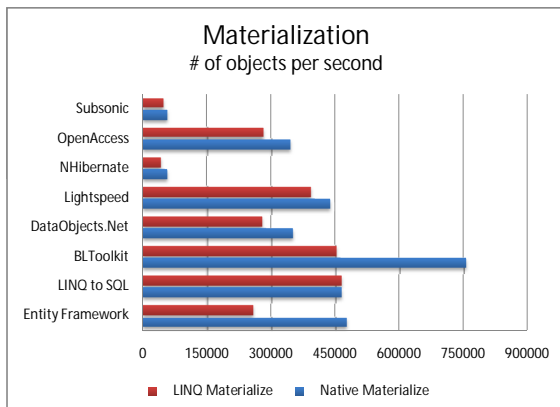
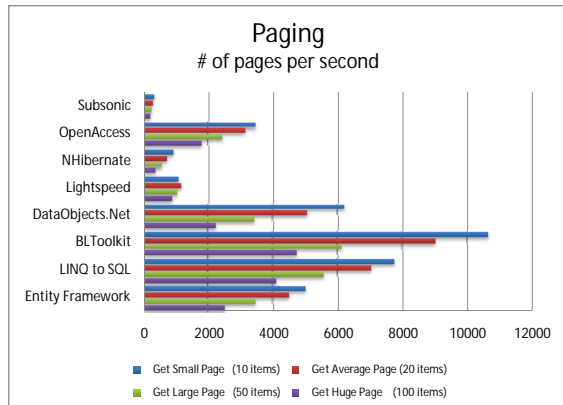
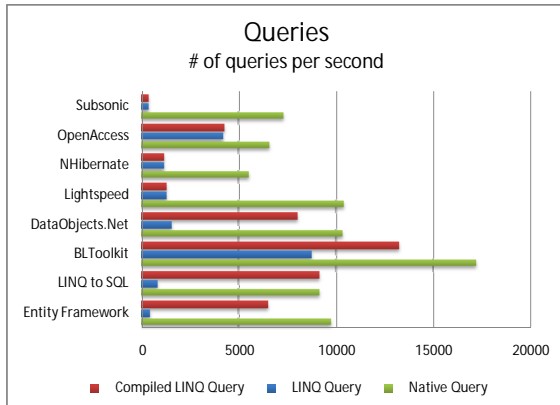
Visit <http://ormbattle.net> for details

												LINQ Implementation	
	Minimum	Maximum	SqlClient	Entity Framework	LINQ to SQL	BLToolkit	DataObjects.Net	Lightspeed	NHibernate	OpenAccess	Subsonic	Unit	
Test name													
LINQ implementation													
Aggregates	0	5	n/a	0	0	4	0	3	3	2	n/a	f.a	
All/Any/Contains	0	6	n/a	3	1	6	0	6	4,2	4	n/a	f.a	
Complex	0	6	n/a	1	0	6	0	6	6	5	n/a	f.a	
Element operations	0	9	n/a	4	2	6	0	6	6	5	n/a	f.a	
Filtering	0	12	n/a	4,2	2,2	1	0	5,5	6,1	2	n/a	f.a	
Grouping	0	10	n/a	1	1	6	0	10	10,2	5	n/a	f.a	
Join	0	4	n/a	1	0	4	0	4	4	2	n/a	f.a	
Ordering	0	8	n/a	3,2	2	1	0	5,1	6	3	n/a	f.a	
Projections	0	13	n/a	2	1	8	0	9,2	6,1	3	n/a	f.a	
References	0	4	n/a	0	0	4	0	4	3	1	n/a	f.a	
Set operations	0	9	n/a	0	0	5,1	0	5,1	6,2	4,1	n/a	f.a	
Standard functions	0	21	n/a	9	1	13	0	8	16	6,1	n/a	f.a	
Take/Skip	0	5	n/a	1	0	1	0	2,1	2,1	2	n/a	f.a	
Type casts	0	5	n/a	1	1	3	0	3,1	4	2	n/a	f.a	
LINQ Implementation total:													
Performed	0	117	n/a	117	117	117	117	117	117	117	n/a	#	
Passed	0	117	n/a	87	106	49	117	41	35	71	n/a	#	
Failed	0	117	n/a	30	11	68	0	76	82	46	n/a	#	
Properly	0	117	n/a	26	9	67	0	65	73	44	n/a	#	
Asserted	0	117	n/a	4	2	1	0	11	9	2	n/a	#	
Score	0	100	n/a	74,4	90,6	41,9	100	35	29,9	60,7	n/a	%	
Color bar								Best result					
Units:													
f/a	total count of failed tests [, count of tests failed with assertion], less is better (0 is ideal)												
#	count												
%	percentage (% of passed tests), more is better												
1000 item sequence													
	Minimum	Maximum	SqlClient	Entity Framework	LINQ to SQL	BLToolkit	DataObjects.Net	Lightspeed	NHibernate	OpenAccess	Subsonic	Unit	
Test name													
CRUD Performance:													
Fetch	0		18 738	4634	9280	13001	9433	10444	7289	6611	8765	op/s	
Single Operation:													
Create Instance	0		10 688	4566	3670	11832	7441	4851	3741	9848	4167	op/s	
Update Instance	0		15 379	3898	1493	11507	9948	4955	871	9609	4099	op/s	
Remove Instance	0		16 281	5955	1670	12047	10785	4776	1440	10936	4354	op/s	
CUD Average	0		13 635	4641	1942	11777	9147	4859	1421	9959	4105	op/s	
Multiple Operations:													
Create Instance	0		21 779	7915	4879	22748	14988	12649	20587	10197	4010	op/s	
Update Instance	0		64 662	6199	1687	64451	33320	27537	17259	15497	4154	op/s	
Remove Instance	0		24 219	9365	1841	79514	42499	26199	18551	24022	4472	op/s	
CUD Average	0		29 219	6997	2232	41583	24729	19538	18623	14579	4167	op/s	
Data Access Performance:													
Query:													
LINQ Query	0		n/a	450	835	8749	1559	1290	1156	4168	351	queries/s	
Compiled LINQ Query	0		n/a	6501	9114	13222	8046	1290	1156	4269	351	queries/s	
Native Query	0		18 745	9728	9114	17187	10335	10424	5494	6590	7312	queries/s	
Paging (LINQ only):													
Get Small Page (10 items)	0		n/a	5009	7736	10625	6199	1105	907	3458	322	pages/s	
Get Average Page (20 items)	0		n/a	4494	7014	9009	5051	1175	726	3130	298	pages/s	
Get Large Page (50 items)	0		n/a	3445	5551	6132	3410	1043	564	2447	262	pages/s	
Get Huge Page (100 items)	0		n/a	2493	4108	4732	2236	892	369	1803	208	pages/s	
Materialization:													
LINQ Materialize	0		n/a	257884	462149	451752	276556	390747	41555	279126	47665	objects/s	
Native Materialize	0		1 276 161	476553	462149	752841	350029	437196	55515	343666	56430	objects/s	
File sizes (in bytes):													
Original .cs + mapping files			n/a	58 188	15 521	9 631	8 275	14 762	32 008	61 621	n/a	bytes	
Generated .cs files			n/a	126 774	92 043	0	0	32 121	0	31 190	n/a	bytes	
Runtime libraries (.dlls)			n/a	2 879 448	684 032	1 224 704	3 126 272	354 304	2 210 816	3 999 232	280 064	bytes	
Color bar								Best result					
Units:													
op/s	operations per second, more is better												
queries/s	queries per second, more is better												
pages/s	pages per second, more is better												
objects/s	# of materialized objects per second, more is better												

Result charts, page 1:



Larger = better!



Cell: G46

Comment: Alex Yakunin:

Specialized API:

SqlQuery<T>.Insert(..., int batchSize, IEnumerable<T> sequence)

Cell: J46

Comment: Alex Yakunin:

Specialized API: ISessionFactory.OpenStatelessSession is used in this test.

Cell: G47

Comment: Alex Yakunin:

Specialized API:

SqlQuery<T>.Update(..., int batchSize, IEnumerable<T> sequence)

Cell: J47

Comment: Alex Yakunin:

Specialized API: ISessionFactory.OpenStatelessSession is used in this test.

Cell: G48

Comment: Alex Yakunin:

Specialized API:

SqlQuery<T>.Delete(..., int batchSize, IEnumerable<T> sequence)

Cell: J48

Comment: Alex Yakunin:

Specialized API: ISessionFactory.OpenStatelessSession is used in this test.

Cell: I54

Comment: Alex Yakunin:

Compiled queries are not supported, result is copied from above cell.

Cell: J54

Comment: Alex Yakunin:

Compiled queries are not supported, result is copied from above cell.

Cell: L54

Comment: Alex Yakunin:

Compiled queries are not supported, result is copied from above cell.

Cell: F55

Comment: Alex Yakunin:

No native queries, result is copied from above cell.

Cell: F63

Comment: Alex Yakunin:

No native queries, result is copied from above cell.