

Tool Name	Execution Time (s)	Total Energy (J)	CPU Energy (J)	Memory Energy (J)	Energy/Time (J/s)
CMake	4 (1.8)	3 (2.0)	3 (2.5)	4 (1.8)	4 (1.8)
qmake	3 (1.7)	3 (2.0)	4 (2.7)	3 (1.7)	3 (1.7)
Qbs	5 (2.0)	5 (2.5)	5 (3.0)	5 (2.0)	5 (2.0)
NetBeans IDE	5 (2.0)	5 (2.5)	5 (3.0)	5 (2.0)	5 (2.0)
Code::Blocks	7 (3.0)	8 (4.0)	8 (5.0)	7 (3.0)	7 (3.0)
CLion	4 (1.8)	3 (2.0)	3 (2.5)	4 (1.8)	4 (1.8)
CodeLite	5 (2.0)	3 (2.0)	3 (2.5)	5 (2.0)	5 (2.0)
Eclipse CDT	5 (2.0)	3 (2.0)	3 (2.5)	5 (2.0)	5 (2.0)
KDevelop	4 (1.8)	3 (2.0)	3 (2.5)	4 (1.8)	4 (1.8)
Geany	7 (3.0)	8 (4.0)	8 (5.0)	7 (3.0)	7 (3.0)
Anjuta DevStudio	6 (2.5)	7 (3.5)	7 (4.2)	6 (2.5)	6 (2.5)
Qt Creator	4 (1.8)	4 (2.1)	4 (2.7)	4 (1.8)	4 (1.8)
DialogBlocks	5 (2.0)	5 (2.5)	5 (3.0)	5 (2.0)	5 (2.0)
Zinjal	5 (2.0)	6 (3.0)	6 (3.5)	5 (2.0)	5 (2.0)
GPS	2 (1.5)	2 (1.8)	2 (2.0)	2 (1.5)	2 (1.5)
Oracle Developer Studio	5 (2.0)	5 (2.5)	5 (3.0)	5 (2.0)	5 (2.0)
Sphere Engine	1 (1.0)	1 (1.0)	1 (1.0)	1 (1.0)	1 (1.0)
AWS Cloud9	7 (3.0)	9 (4.5)	9 (5.5)	7 (3.0)	7 (3.0)

Table 1: Spectral-norm tools ranked with 0 decimal points

Tool Name	Execution Time (s)	Total Energy (J)	CPU Energy (J)	Memory Energy (J)	Energy/Time (J/s)
CMake	4 (1.8)	2 (6.0)	3 (6.2)	3 (2.0)	2 (4.0)
qmake	3 (1.7)	5 (7.3)	5 (7.3)	3 (2.0)	5 (5.0)
Qbs	5 (2.0)	6 (7.5)	7 (8.0)	5 (2.5)	6 (5.5)
NetBeans IDE	5 (2.0)	7 (8.0)	8 (8.5)	5 (2.5)	5 (5.0)
Code::Blocks	7 (3.0)	10 (12.0)	11 (13.0)	8 (4.0)	9 (8.0)
CLion	4 (1.8)	2 (6.0)	3 (6.2)	3 (2.0)	2 (4.0)
CodeLite	5 (2.0)	4 (7.0)	4 (7.0)	5 (2.5)	3 (4.5)
Eclipse CDT	5 (2.0)	2 (6.0)	2 (6.0)	5 (2.5)	3 (4.5)
KDevelop	4 (1.8)	2 (6.0)	3 (6.2)	3 (2.0)	2 (4.0)
Geany	7 (3.0)	10 (12.0)	11 (13.0)	8 (4.0)	9 (8.0)
Anjuta DevStudio	6 (2.5)	8 (10.0)	9 (10.8)	6 (3.2)	8 (6.8)
Qt Creator	4 (1.8)	3 (6.8)	4 (7.0)	4 (2.1)	4 (4.7)
DialogBlocks	5 (2.0)	6 (7.5)	6 (7.5)	5 (2.5)	6 (5.5)
Zinjal	5 (2.0)	9 (10.5)	10 (11.0)	5 (2.5)	7 (6.5)
GPS	2 (1.5)	3 (6.8)	4 (7.0)	2 (1.8)	3 (4.5)
Oracle Developer Studio	5 (2.0)	7 (8.0)	8 (8.5)	5 (2.5)	5 (5.0)
Sphere Engine	1 (1.0)	1 (3.0)	1 (3.0)	1 (1.0)	1 (2.0)
AWS Cloud9	7 (3.0)	11 (14.0)	12 (15.0)	7 (3.5)	10 (8.5)

Table 2: Spectral-norm tools ranked with 1 decimal points

Tool Name	Execution Time (s)	Total Energy (J)	CPU Energy (J)	Memory Energy (J)	Energy/Time (J/s)
CMake	4 (1.8)	3 (9.5)	3 (9.5)	4 (1.8)	2 (8.8)
qmake	3 (1.7)	6 (11.7)	6 (11.7)	3 (1.7)	7 (11.3)
Qbs	5 (2.0)	8 (12.5)	8 (12.5)	5 (2.0)	9 (12.0)
NetBeans IDE	5 (2.0)	9 (13.5)	9 (13.5)	5 (2.0)	8 (11.5)
Code::Blocks	7 (3.0)	12 (20.0)	12 (20.0)	7 (3.0)	12 (18.0)
CLion	4 (1.8)	3 (9.5)	3 (9.5)	4 (1.8)	2 (8.8)
CodeLite	5 (2.0)	5 (11.5)	5 (11.5)	5 (2.0)	6 (11.0)
Eclipse CDT	5 (2.0)	2 (9.0)	2 (9.0)	5 (2.0)	3 (9.0)
KDevelop	4 (1.8)	3 (9.5)	3 (9.5)	4 (1.8)	2 (8.8)
Geany	8 (4.0)	13 (21.0)	13 (21.0)	7 (3.0)	12 (18.0)
Anjuta DevStudio	6 (2.5)	10 (16.8)	10 (16.8)	6 (2.5)	10 (14.8)
Qt Creator	4 (1.8)	4 (10.9)	4 (10.9)	4 (1.8)	5 (10.3)
DialogBlocks	5 (2.0)	7 (12.0)	7 (12.0)	5 (2.0)	6 (11.0)
Zinjal	6 (2.5)	11 (17.5)	11 (17.5)	5 (2.0)	11 (16.0)
GPS	2 (1.5)	5 (11.5)	5 (11.5)	2 (1.5)	4 (10.2)
Oracle Developer Studio	5 (2.0)	9 (13.5)	9 (13.5)	5 (2.0)	8 (11.5)
Sphere Engine	1 (1.0)	1 (4.0)	1 (4.0)	1 (1.0)	1 (4.0)
AWS Cloud9	7 (3.0)	14 (22.5)	14 (22.5)	7 (3.0)	13 (20.0)

Table 3: Spectral-norm tools ranked with 2 decimal points

Tool Name	Execution Time (s)	Total Energy (J)	CPU Energy (J)	Memory Energy (J)	Energy/Time (J/s)
CMake	4 (4.8)	3 (10.0)	3 (10.0)	3 (3.8)	3 (9.8)
qmake	2 (4.3)	7 (12.3)	7 (12.3)	2 (3.7)	7 (12.3)
Qbs	5 (5.0)	9 (13.0)	9 (13.0)	6 (4.5)	9 (13.5)
NetBeans IDE	5 (5.0)	10 (14.0)	10 (14.0)	6 (4.5)	9 (13.5)
Code::Blocks	10 (9.0)	13 (21.0)	13 (21.0)	10 (8.0)	13 (21.0)
CLion	4 (4.8)	3 (10.0)	3 (10.0)	3 (3.8)	3 (9.8)
CodeLite	6 (5.5)	6 (12.0)	6 (12.0)	6 (4.5)	6 (12.0)
Eclipse CDT	6 (5.5)	2 (9.5)	2 (9.5)	6 (4.5)	2 (9.5)
KDevelop	4 (4.8)	3 (10.0)	3 (10.0)	3 (3.8)	3 (9.8)
Geany	11 (12.0)	14 (22.0)	14 (22.0)	11 (9.0)	12 (20.0)
Anjuta DevStudio	8 (7.5)	11 (17.5)	11 (17.5)	8 (6.5)	10 (16.8)
Qt Creator	3 (4.7)	4 (11.4)	4 (11.4)	4 (3.9)	4 (11.4)
DialogBlocks	6 (5.5)	8 (12.5)	8 (12.5)	6 (4.5)	8 (12.5)
Zinjal	7 (7.0)	12 (18.5)	12 (18.5)	7 (5.5)	11 (18.0)
GPS	5 (5.0)	5 (11.8)	5 (11.8)	5 (4.2)	5 (11.8)
Oracle Developer Studio	5 (5.0)	10 (14.0)	10 (14.0)	6 (4.5)	9 (13.5)
Sphere Engine	1 (3.0)	1 (4.0)	1 (4.0)	1 (2.0)	1 (4.0)
AWS Cloud9	9 (8.0)	15 (23.5)	15 (23.5)	9 (7.0)	14 (23.0)

Table 4: Spectral-norm tools ranked with 3 decimal points