

Computer Architectures

2nd part labs – lab 3

1) Benchmark behavior

Conf	FP resources	Fetch speed	Fetch ifqsize	Lsq size	Ruu size	Issue width	Commit width	In order	test-fmath	test-llong	test-lswlr	test-math	test-printf
7	4	8	8	8	64	4	4	N	1.0851	1.0568	1.1595	1.0551	1.0291

	sim_num_insn	sim_cycle	sim_IPC	sim_CPI	bpred_bimod.misses	bpred_bimod.addr_hits	bpred_bimod.dir_hits
anagram	18030141	17996437	1.0019	0.9981	207404	4176008	4176477
go	548130810	596572447	0.9188	1.0884	16034486	62649457	64240249
cc1	279596317	300655768	0.9300	1.0753	6324265	47980145	50015779
perl	21838865	22756365	0.9597	1.0420	389522	3867142	3971137
compress95	80432533	81829316	0.9829	1.0174	1448073	12912555	12912994

2) Comparing BPUs behavior

Using row 7 of lab 2

Bpred_dir_rate	Not taken	Taken	BTB 1	BTB 256	BTB 512	BTB 1024	BHT 1	BHT 256	BHT 512	BHT 1024
anagram	0.3535	0.3535	0.9526	0.9527	0.9527	0.9527	0.6612	0.9555	0.9527	0.9527
go	0.3522	0.3522	0.8016	0.8004	0.8003	0.8002	0.6629	0.7644	0.7804	0.7915
cc1	0.3826	0.3826	0.8874	0.8877	0.8877	0.8877	0.6654	0.8422	0.8622	0.8770
perl	0.3424	0.3424	0.9104	0.9107	0.9108	0.9106	0.6750	0.8582	0.8905	0.9027
compress95	0.2842	0.2842	0.8991	0.8992	0.8992	0.8992	0.6512	0.8991	0.8991	0.8992