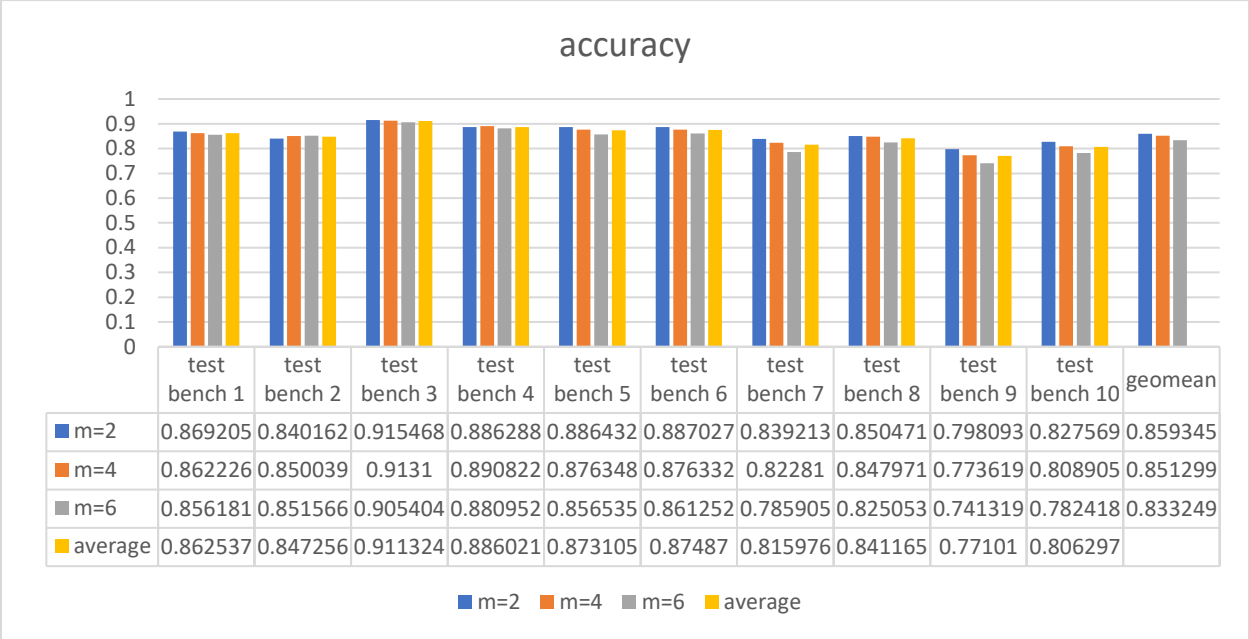
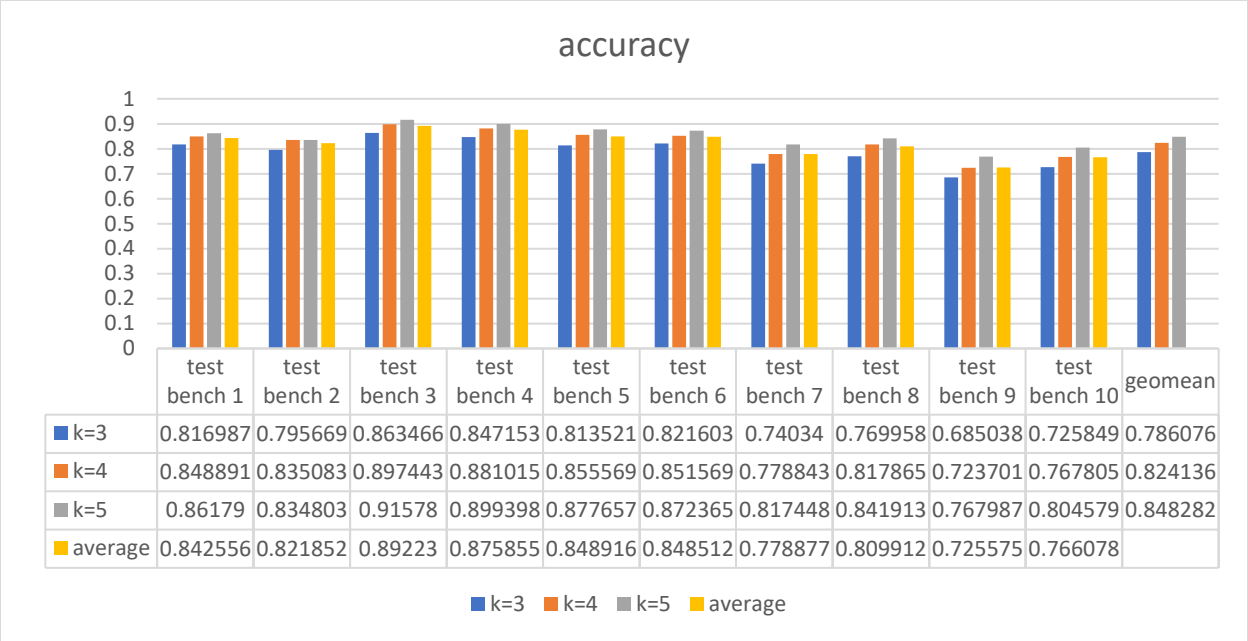
1. In this global branch predictor, global branch history function as row selector and address of each instruction acts as column selector. The original definition of column selector is the last p bits of the address, so the address module 2^p is the column index in this code to match the definition. From the chart below, we can say for this global branch predictor, it is suitable for test bench 3 and not as good as other test bench for test bench 9. It also shows that the best accuracy can be got when setting parameter m as 2.



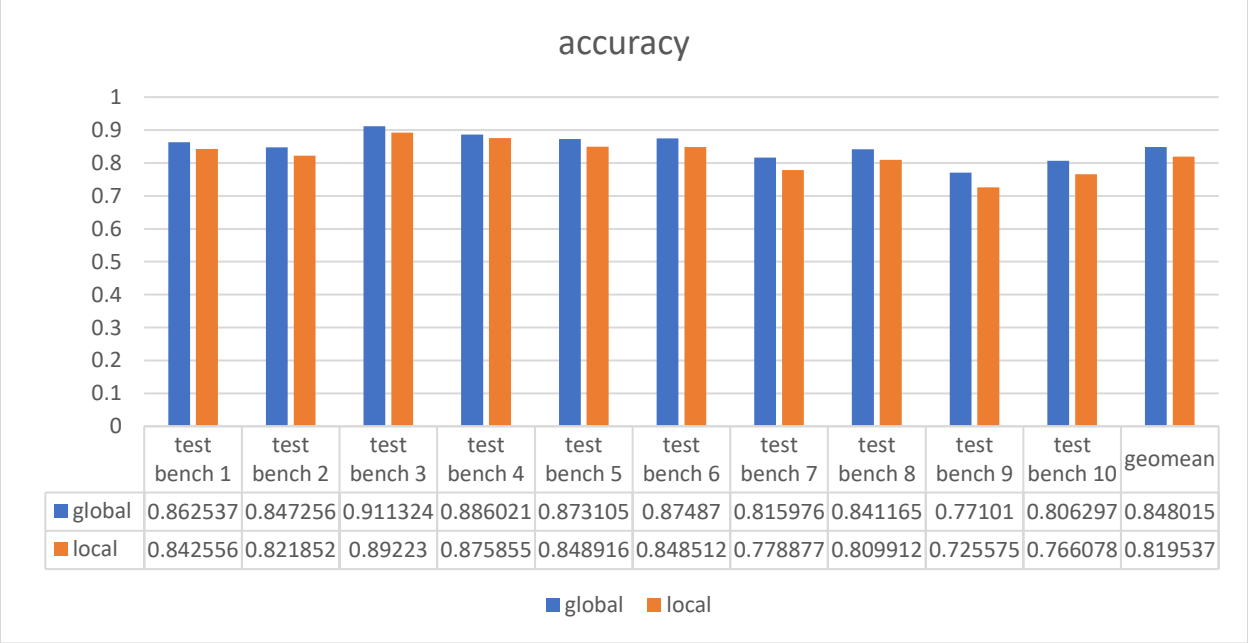
	test bench 1	test bench 2	test bench 3	test bench 4	test bench 5	test bench 6	test bench 7	test bench 8	test bench 9	test bench 10	geomean
m=2	0.869205	0.840162	0.915468	0.886288	0.886432	0.887027	0.839213	0.850471	0.798093	0.827569	0.859345
m=4	0.862226	0.850039	0.9131	0.890822	0.876348	0.876332	0.82281	0.847971	0.773619	0.808905	0.851299
m=6	0.856181	0.851566	0.905404	0.880952	0.856535	0.861252	0.785905	0.825053	0.741319	0.782418	0.833249
average	0.862537	0.847256	0.911324	0.886021	0.873105	0.87487	0.815976	0.841165	0.77101	0.806297	

2. Most of features in this local branch prediction is the same as the global branch predictor mentioned above, except the local branch history table. Due to the hardware cost limitation, each storage in table is shared by address with same module (2^k). as the table shown below, it gets the best result when setting k as 5, which means that parameter m is 2, this conclusion is just the same as the global branch predictor. And the suitable and worse test bench are 3 and 9, same as above.



	test bench 1	test bench 2	test bench 3	test bench 4	test bench 5	test bench 6	test bench 7	test bench 8	test bench 9	test bench 10	geomean
k=3	0.816987	0.795669	0.863466	0.847153	0.813521	0.821603	0.74034	0.769958	0.685038	0.725849	0.786076
k=4	0.848891	0.835083	0.897443	0.881015	0.855569	0.851569	0.778843	0.817865	0.723701	0.767805	0.824136
k=5	0.86179	0.834803	0.91578	0.899398	0.877657	0.872365	0.817448	0.841913	0.767987	0.804579	0.848282
average	0.842556	0.821852	0.89223	0.875855	0.848916	0.848512	0.778877	0.809912	0.725575	0.766078	

3. Comparing the average accuracy of every test bench, local branch predictor is worse than the global. In my opinion, the outcome may mean the sharing method of LBHT is not really suitable for this.



	test bench 1	test bench 2	test bench 3	test bench 4	test bench 5	test bench 6	test bench 7	test bench 8	test bench 9	test bench 10	geomean
global	0.862537	0.847256	0.911324	0.886021	0.873105	0.87487	0.815976	0.841165	0.77101	0.806297	0.848015
local	0.842556	0.821852	0.89223	0.875855	0.848916	0.848512	0.778877	0.809912	0.725575	0.766078	0.819537