The State University of New York at Binghamton

Department of Computer Science
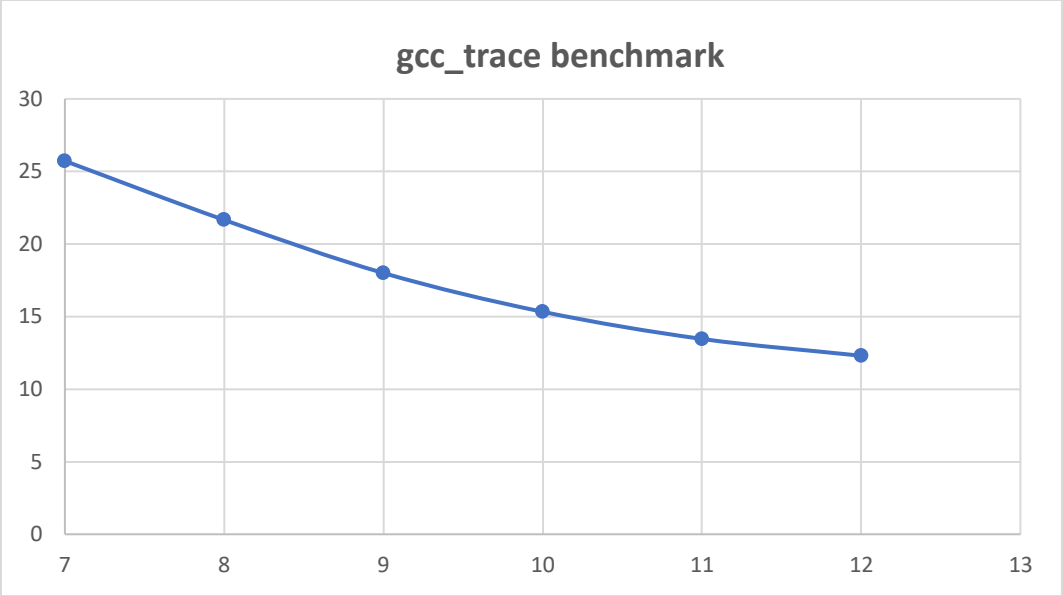
CS 520 –Spring2019

Project #1: Branch Prediction
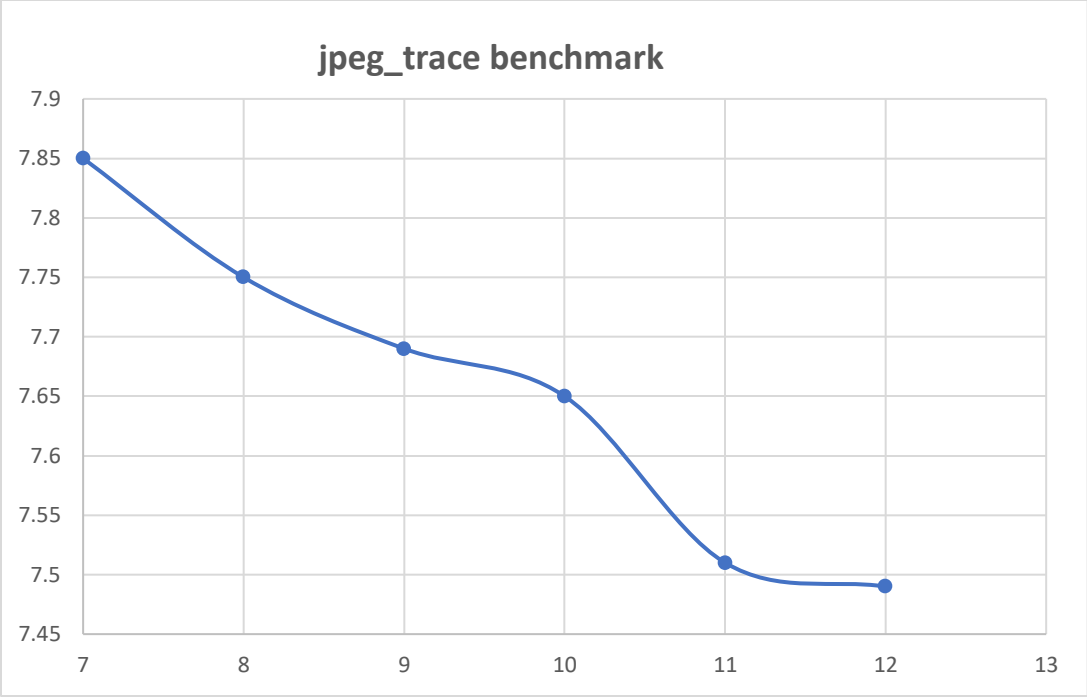
By

Akash Shirale

gcc_trace benchmark

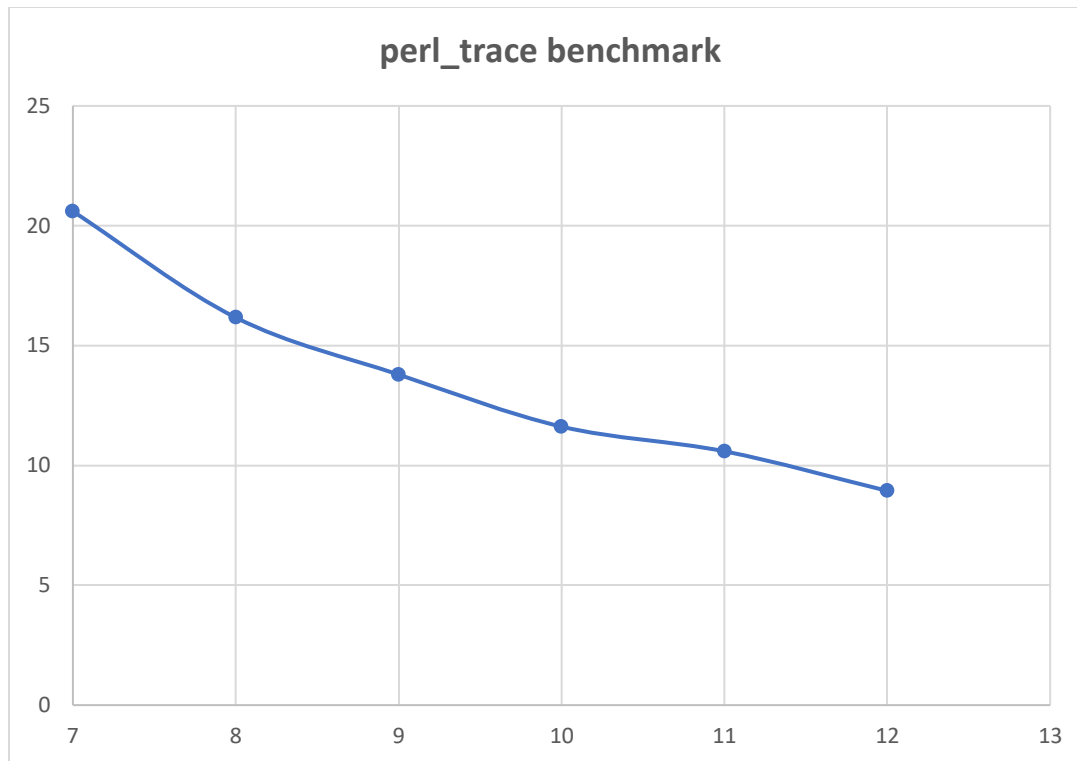GCC TRACE:

X(m)	Y(prediction rate)
7	25.72
8	21.66
9	18
10	15.33
11	13.46
12	12.3

jpeg_trace benchmark

JPEG TRACE

X(m)	Y(Prediction rate)
7	7.85
8	7.75
9	7.69
10	7.65
11	7.51
12	7.49

perl_trace benchmark

PERL TRACE :

X(m)	Y(prediction rate)
7	20.6
8	16.17
9	13.79
10	11.62
11	10.59
12	8.94

Analysis:
1)As seen in all benchmarks, as the value of m increases the prediction rate of the branch predictor decreases.
2)In gcc trace, the drop in prediction rate between each iteration of m iscsignificantly more than jpeg and perl.
3) In jpeg trace, the drop in the value of the prediction rate is seen is get low generally.