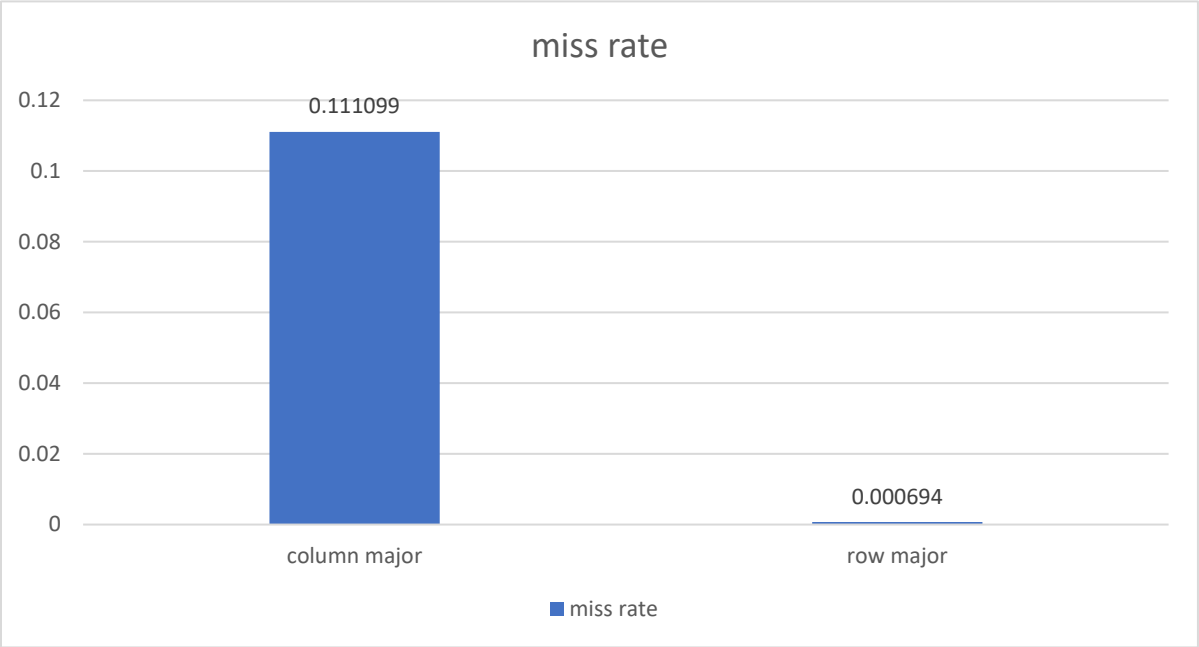
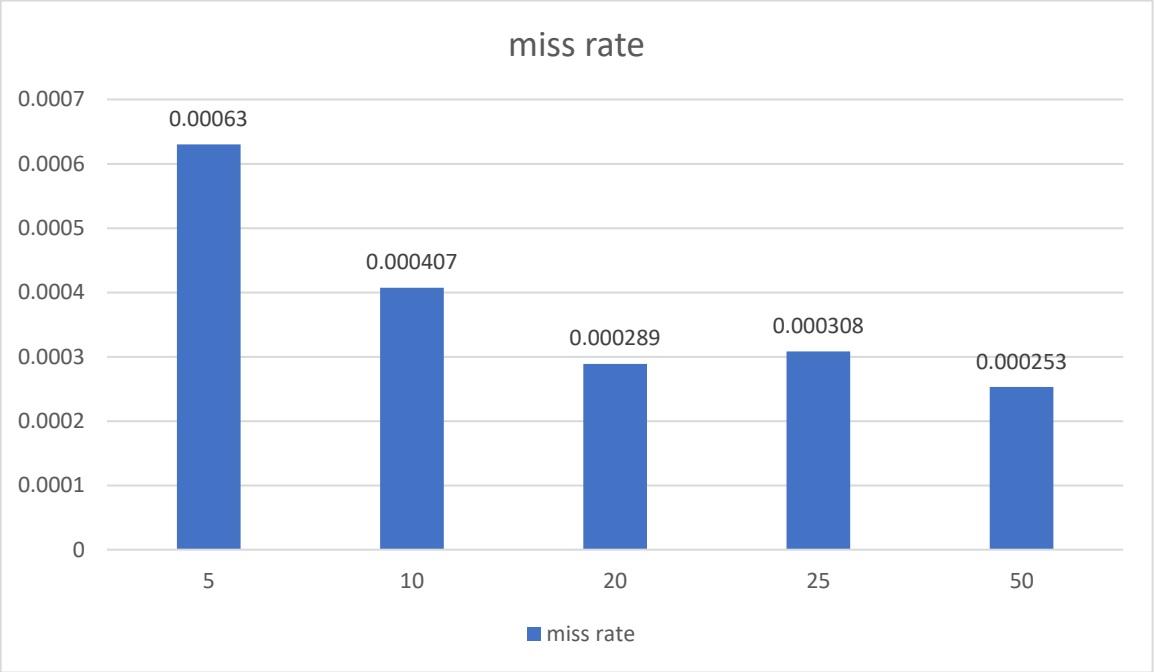
1. According to tow status.txt file, we can know the miss rate for row major code is much lower than column major code. (0. 006941 for row major and 0. 111099 for column major)



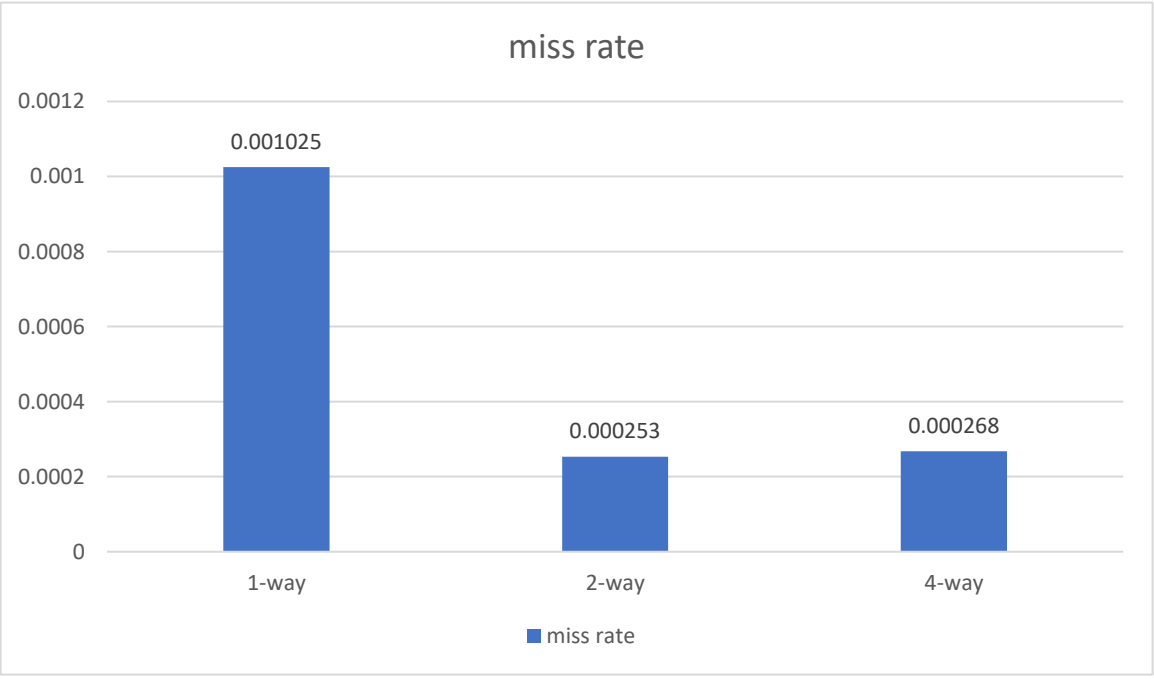
2. Answers for blocking method questions

2.1. Comparing the miss rate of non-blocking code and blocking code with blocking factor 20, about 40% of miss rate is reduced. (0.000474 and 0.000289)

2.2. For different blocking factors (5, 10, 20, 25, 50), we can see the higher blocking factor, the lower miss rate, especially blocking factor 5, the miss rate (0.000630) is even higher than non-blocking code (0.000474). But for high blocking factors, the tendency of the descending miss rate is not as significant as low blocking factor, e.g., miss rate of 25 is slightly higher than 20.



2.3. From 2.2, we get the best blocking factor is 50, and default associativity is 2-way, so I choose 1-way, or direct-mapped, and 4-way set to simulate. Surprisingly miss rate of 4-way is a little bit higher than 2-way.



2.4. In 2.3, the best condition is 2-way set and blocking factor 50, and the default data cache size is 64kB, so we test for 32kB and 128 kB data cache. Comparing three status files, miss rate is reduce to about 50% when double the cache size.