

**Commands used:****Anagram:**

```
# Taken predictor
./sim-bpred -bpred taken -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_taken_lru
./sim-bpred -bpred taken -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_taken_fifo
./sim-bpred -bpred taken -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_taken_random

# Not-taken predictor
./sim-bpred -bpred nottaken -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_nottaken_lru
./sim-bpred -bpred nottaken -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_nottaken_fifo
./sim-bpred -bpred nottaken -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_nottaken_random

# Bimodal predictor
./sim-bpred -bpred bimod -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_bimod_lru
./sim-bpred -bpred bimod -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_bimod_fifo
./sim-bpred -bpred bimod -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_bimod_random

#2lev
./sim-bpred -bpred 2lev -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_2lev_lru
./sim-bpred -bpred 2lev -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_2lev_fifo
./sim-bpred -bpred 2lev -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_2lev_random

#comb
./sim-bpred -bpred comb -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_comb_lru
./sim-bpred -bpred comb -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_comb_fifo
./sim-bpred -bpred comb -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_comb_random
```

```

# Taken
./sim-outorder -bpred taken -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_taken_lru.out
./sim-outorder -bpred taken -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_taken_fifo.out
./sim-outorder -bpred taken -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_taken_random.out

# Not-taken
./sim-outorder -bpred nottaken -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_nottaken_lru.out
./sim-outorder -bpred nottaken -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_nottaken_fifo.out
./sim-outorder -bpred nottaken -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_nottaken_random.out

# Bimodal
./sim-outorder -bpred bimod -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_bimod_lru.out
./sim-outorder -bpred bimod -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_bimod_fifo.out
./sim-outorder -bpred bimod -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_bimod_random.out

#2lev
./sim-outorder -bpred 2lev -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_2lev_lru.out
./sim-outorder -bpred 2lev -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_2lev_fifo.out
./sim-outorder -bpred 2lev -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_2lev_random.out

#comb
./sim-outorder -bpred comb -bpred:btb_repl lru benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_comb_lru.out
./sim-outorder -bpred comb -bpred:btb_repl fifo benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_comb_fifo.out
./sim-outorder -bpred comb -bpred:btb_repl random benchmarks/anagram.alpha words <
benchmarks/anagram.in > anagram_comb_random.out

```

**GCC:**

```
./sim-bpred -bpred taken -bpred:btb_repl lru benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_taken_lru
./sim-bpred -bpred taken -bpred:btb_repl fifo benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_taken_fifo
./sim-bpred -bpred taken -bpred:btb_repl random benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_taken_random

./sim-bpred -bpred nottaken -bpred:btb_repl lru benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_nottaken_lru
./sim-bpred -bpred nottaken -bpred:btb_repl fifo benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_nottaken_fifo
./sim-bpred -bpred nottaken -bpred:btb_repl random benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_nottaken_random

./sim-bpred -bpred bimod -bpred:btb_repl lru benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_bimod_lru
./sim-bpred -bpred bimod -bpred:btb_repl fifo benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_bimod_fifo
./sim-bpred -bpred bimod -bpred:btb_repl random benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_bimod_random

./sim-bpred -bpred 2lev -bpred:btb_repl lru benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_2lev_lru
./sim-bpred -bpred 2lev -bpred:btb_repl fifo benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_2lev_fifo
./sim-bpred -bpred 2lev -bpred:btb_repl random benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_2lev_random

./sim-bpred -bpred comb -bpred:btb_repl lru benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_comb_lru
./sim-bpred -bpred comb -bpred:btb_repl fifo benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_comb_fifo
./sim-bpred -bpred comb -bpred:btb_repl random benchmarks/cc1.alpha -O benchmarks/1stmt.i > OUT_gcc_comb_random
```

```
./sim-outorder -bpred taken -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_taken_lru.out
./sim-outorder -bpred taken -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_taken_fifo.out
./sim-outorder -bpred taken -bpred:btb_repl random benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_taken_random.out

./sim-outorder -bpred nottaken -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_nottaken_lru.out
./sim-outorder -bpred nottaken -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_nottaken_fifo.out
./sim-outorder -bpred nottaken -bpred:btb_repl random benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_nottaken_random.out

./sim-outorder -bpred bimod -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_lru.out
./sim-outorder -bpred bimod -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_fifo.out
./sim-outorder -bpred bimod -bpred:btb_repl random benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_random.out

./sim-outorder -bpred 2lev -bpred:btb_repl lru benchmarks/cc1.alpha -O benchmarks/1stmt.i
> gcc_2lev_lru.out
./sim-outorder -bpred 2lev -bpred:btb_repl fifo benchmarks/cc1.alpha -O benchmarks/1stmt.i
> gcc_2lev_fifo.out
./sim-outorder -bpred 2lev -bpred:btb_repl random benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_2lev_random.out

./sim-outorder -bpred comb -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_comb_lru.out
./sim-outorder -bpred comb -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_comb_fifo.out
./sim-outorder -bpred comb -bpred:btb_repl random benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_comb_random.out
```

### **Compress:**

```
./sim-bpred -bpred taken -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_taken_lru
./sim-bpred -bpred taken -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_taken_fifo
./sim-bpred -bpred taken -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_taken_random

./sim-bpred -bpred nottaken -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_nottaken_lru
./sim-bpred -bpred nottaken -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_nottaken_fifo
./sim-bpred -bpred nottaken -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_nottaken_random

./sim-bpred -bpred bimod -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_bimod_lru
./sim-bpred -bpred bimod -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_bimod_fifo
./sim-bpred -bpred bimod -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_bimod_random

./sim-bpred -bpred 2lev -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_2lev_lru
./sim-bpred -bpred 2lev -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_2lev_fifo
./sim-bpred -bpred 2lev -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_2lev_random

./sim-bpred -bpred comb -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_comb_lru
./sim-bpred -bpred comb -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_comb_fifo
./sim-bpred -bpred comb -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > OUT_compress_comb_random
```

```
./sim-outorder -bpred taken -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_taken_lru.out
./sim-outorder -bpred taken -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_taken_fifo.out
./sim-outorder -bpred taken -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_taken_random.out

./sim-outorder -bpred nottaken -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_nottaken_lru.out
./sim-outorder -bpred nottaken -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_nottaken_fifo.out
./sim-outorder -bpred nottaken -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_nottaken_random.out

./sim-outorder -bpred bimod -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_bimod_lru.out
./sim-outorder -bpred bimod -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_bimod_fifo.out
./sim-outorder -bpred bimod -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_bimod_random.out

./sim-outorder -bpred 2lev -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_2lev_lru.out
./sim-outorder -bpred 2lev -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_2lev_fifo.out
./sim-outorder -bpred 2lev -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_2lev_random.out

./sim-outorder -bpred comb -bpred:btb_repl lru benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_comb_lru.out
./sim-outorder -bpred comb -bpred:btb_repl fifo benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_comb_fifo.out
./sim-outorder -bpred comb -bpred:btb_repl random benchmarks/compress95.alpha <
benchmarks/compress95.in > compress95_comb_random.out
```

**GO:**

```
./sim-bpred -bpred taken -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_taken_lru  
./sim-bpred -bpred taken -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_taken_fifo  
./sim-bpred -bpred taken -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_taken_random  
  
.sim-bpred -bpred nottaken -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_nottaken_lru  
.sim-bpred -bpred nottaken -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_nottaken_fifo  
.sim-bpred -bpred nottaken -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_nottaken_random  
  
.sim-bpred -bpred bimod -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_bimod_lru  
.sim-bpred -bpred bimod -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_bimod_fifo  
.sim-bpred -bpred bimod -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_bimod_random  
  
# 2-level  
.sim-bpred -bpred 2lev -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_2lev_lru  
.sim-bpred -bpred 2lev -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_2lev_fifo  
.sim-bpred -bpred 2lev -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_2lev_random  
  
# Combined  
.sim-bpred -bpred comb -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_comb_lru  
.sim-bpred -bpred comb -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_comb_fifo  
.sim-bpred -bpred comb -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > OUT_go_comb_random
```

```
./sim-outorder -bpred taken -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_taken_lru.out  
./sim-outorder -bpred taken -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_taken_fifo.out  
./sim-outorder -bpred taken -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_taken_random.out  
  
./sim-outorder -bpred nottaken -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_nottaken_lru.out  
./sim-outorder -bpred nottaken -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_nottaken_fifo.out  
./sim-outorder -bpred nottaken -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_nottaken_random.out  
  
./sim-outorder -bpred bimod -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_bimod_lru.out  
./sim-outorder -bpred bimod -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_bimod_fifo.out  
./sim-outorder -bpred bimod -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_bimod_random.out  
  
.sim-outorder -bpred 2lev -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_2lev_lru.out  
.sim-outorder -bpred 2lev -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_2lev_fifo.out  
.sim-outorder -bpred 2lev -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_2lev_random.out  
  
.sim-outorder -bpred comb -bpred:btb_repl lru benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_comb_lru.out  
.sim-outorder -bpred comb -bpred:btb_repl fifo benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_comb_fifo.out  
.sim-outorder -bpred comb -bpred:btb_repl random benchmarks/go.alpha 50 9  
benchmarks/2stone9.in > go_comb_random.out
```

## **Effect on various replacement algorithms with various BTB Sizes(# sets)**

### **Anagram:**

```
# ----- LRU -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl lru benchmarks/anagram.alpha
words < benchmarks/anagram.in > anagram_bimod_lru_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl lru benchmarks/anagram.alpha
words < benchmarks/anagram.in > anagram_bimod_lru_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl lru benchmarks/anagram.alpha
words < benchmarks/anagram.in > anagram_bimod_lru_btb512.out

# ----- FIFO -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl fifo benchmarks/anagram.alpha
words < benchmarks/anagram.in > anagram_bimod_fifo_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl fifo benchmarks/anagram.alpha
words < benchmarks/anagram.in > anagram_bimod_fifo_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl fifo benchmarks/anagram.alpha
words < benchmarks/anagram.in > anagram_bimod_fifo_btb512.out

# ----- RANDOM -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl random
benchmarks/anagram.alpha words < benchmarks/anagram.in >
anagram_bimod_random_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl random
benchmarks/anagram.alpha words < benchmarks/anagram.in >
anagram_bimod_random_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl random
benchmarks/anagram.alpha words < benchmarks/anagram.in >
anagram_bimod_random_btb512.out
```

### **Gcc:**

```
# ----- LRU -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_lru_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_lru_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl lru benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_lru_btb512.out

# ----- FIFO -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_fifo_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_fifo_btb256.out
```

```

./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl fifo benchmarks/cc1.alpha -O
benchmarks/1stmt.i > gcc_bimod_fifo_btb512.out

# ----- RANDOM ----- (128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl random benchmarks/cc1.alpha
-O benchmarks/1stmt.i > gcc_bimod_random_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl random benchmarks/cc1.alpha
-O benchmarks/1stmt.i > gcc_bimod_random_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl random benchmarks/cc1.alpha
-O benchmarks/1stmt.i > gcc_bimod_random_btb512.out

```

### **Compress:**

```

# ----- LRU ----- (128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl lru
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_lru_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl lru
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_lru_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl lru
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_lru_btb512.out

# ----- FIFO ----- (128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl fifo
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_fifo_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl fifo
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_fifo_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl fifo
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_fifo_btb512.out

# ----- RANDOM ----- (128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl random
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_random_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl random
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_random_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl random
benchmarks/compress95.alpha < benchmarks/compress95.in >
compress_bimod_random_btb512.out

```

**Go:**

```
# ----- LRU -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl lru benchmarks/go.alpha 50 9
benchmarks/2stone9.in > go_bimod_lru_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl lru benchmarks/go.alpha 50 9
benchmarks/2stone9.in > go_bimod_lru_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl lru benchmarks/go.alpha 50 9
benchmarks/2stone9.in > go_bimod_lru_btb512.out

# ----- FIFO -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl fifo benchmarks/go.alpha 50 9
benchmarks/2stone9.in > go_bimod_fifo_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl fifo benchmarks/go.alpha 50 9
benchmarks/2stone9.in > go_bimod_fifo_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl fifo benchmarks/go.alpha 50 9
benchmarks/2stone9.in > go_bimod_fifo_btb512.out

# ----- RANDOM -----(128,256,512 )(number of entries)
./sim-bpred -bpred bimod -bpred:btb 128 4 -bpred:btb_repl random benchmarks/go.alpha 50
9 benchmarks/2stone9.in > go_bimod_random_btb128.out
./sim-bpred -bpred bimod -bpred:btb 256 4 -bpred:btb_repl random benchmarks/go.alpha 50
9 benchmarks/2stone9.in > go_bimod_random_btb256.out
./sim-bpred -bpred bimod -bpred:btb 512 4 -bpred:btb_repl random benchmarks/go.alpha 50
9 benchmarks/2stone9.in > go_bimod_random_btb512.out
```

Additional work commands( adaptive replacement policy):

# Taken predictor

```
./sim-bpred -bpred taken -bpred:btb_repl adaptive benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_taken_adaptive
```

# Not-taken predictor

```
./sim-bpred -bpred nottaken -bpred:btb_repl adaptive benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_nottaken_adaptive
```

# Bimodal predictor

```
./sim-bpred -bpred bimod -bpred:btb_repl adaptive benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_bimod_adaptive
```

# 2-level predictor

```
./sim-bpred -bpred 2lev -bpred:btb_repl adaptive benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_2lev_adaptive
```

# Combined predictor

```
./sim-bpred -bpred comb -bpred:btb_repl adaptive benchmarks/anagram.alpha words <
benchmarks/anagram.in > OUT_anagram_comb_adaptive
```