

CA3 Report

Screenshots (diffs)

```
diff --git a/output.output b/output.output
index 99999..10000
--- a/output.output
+++ b/output.output
@@ -1,17 +1,17 @@
 99999 52839 52041 24999 52038
-100000 52839 52041 24999 52039
+100000 99992 24998 24999 52039
-100001 52041 52043 25000 52039
+100001 99993 24999 25000 52039
-100002 52040 52042 25000 52040
+100002 99994 24999 25000 52040
-100003 52047 52048 25000 52040
+100003 99995 24999 25000 52040
-100004 52041 52043 25000 52041
+100004 99996 24999 25000 52041
-100005 52043 52044 25001 52042
+100005 99997 25000 25001 52042
-100006 52043 52045 25001 52042
+100006 99998 25000 25001 52042
-100007 52043 52045 25001 52043
+100007 99999 25000 25001 52043
-100008 52044 52046 25001 52043
+100008 100000 25000 25001 52043
-100009 52047 52048 25001 52043
+100009 52047 52048 25001 52043
-100010 Processor stats:
+100010 Processor stats:
-100011 Total instructions: 100000
+100011 Total instructions: 100000
-100012 Avg Dispatch queue size: 26039.072266
+100012 Avg Dispatch queue size: 26039.072266
-100013 Maximum Dispatch queue size: 51965
+100013 Maximum Dispatch queue size: 51965
-100014 Avg inst fired per cycle: 1.921303
+100014 Avg inst fired per cycle: 1.921303
-100015 Avg inst retired per cycle: 1.921303
+100015 Avg inst retired per cycle: 1.921303
-100016 Total run time (cycles): 52048
+100016 Total run time (cycles): 52048
-100017
+100017
```

```
joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gcc.100k.trace
52048
joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gcc.output output.output > diff.txt
joycechen@Joyces-MacBook-Pro ca3 %
```

Visual Studio Code interface showing a comparison of two output files: `output.output` and `gobmk.output`. The Explorer pane on the left shows the project structure, including `Makefile`, `debug.txt`, `.gitignore`, `procsim_driver.cpp`, `procsim.hpp`, and various trace files. The main editor displays a side-by-side diff view of the two output files, showing line numbers and content differences. The diff view highlights several lines where the two outputs differ, particularly in the processor statistics section. The terminal at the bottom shows the commands used to generate the traces and the diff.

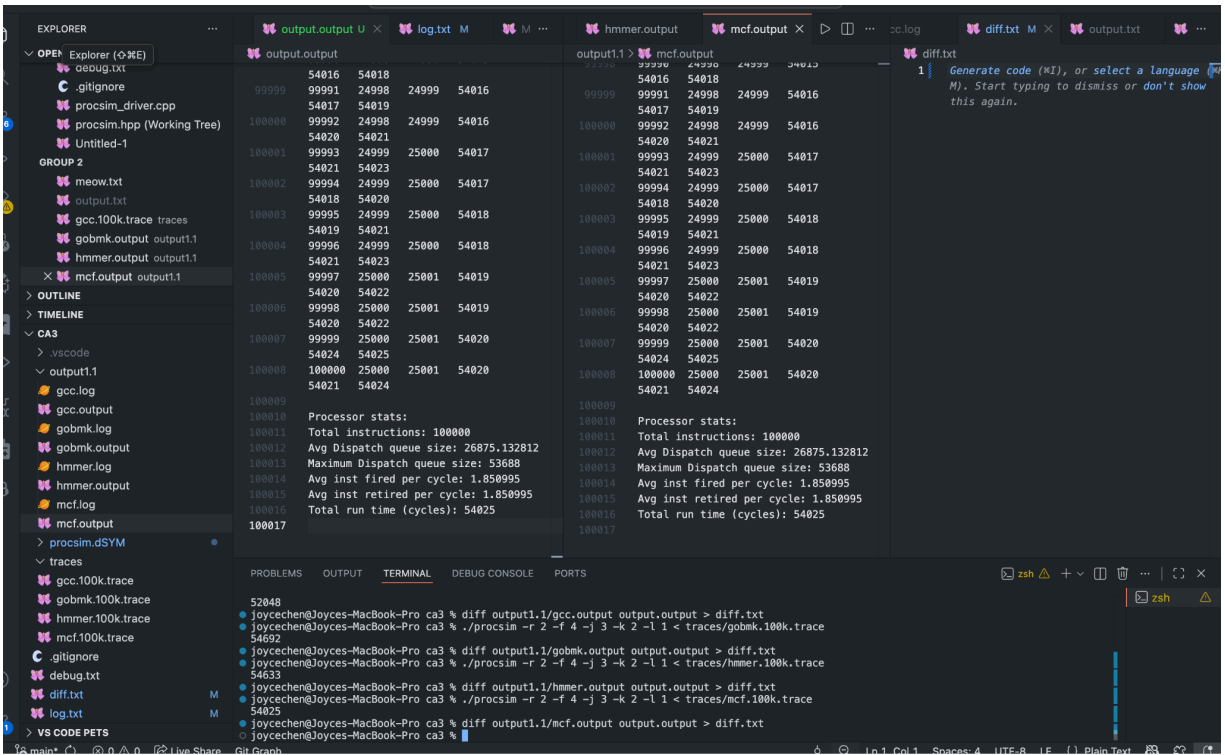
```
diff.txt
1 | Generate code (*I), or select a language
  | M). Start typing to dismiss or don't show
  | this again.
```

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE PORTS
● joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gcc.100k.trace
52048
● joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gcc.output output.output > diff.txt
● joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gobmk.100k.trace
54692
● joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gobmk.output output.output > diff.txt
○ joycechen@Joyces-MacBook-Pro ca3 %
```

Visual Studio Code interface showing a comparison of two output files: `gobmk.output` and `hmmmer.output`. The Explorer pane on the left shows the project structure, including `Makefile`, `debug.txt`, `.gitignore`, `procsim_driver.cpp`, `procsim.hpp`, and various trace files. The main editor displays a side-by-side diff view of the two output files, showing line numbers and content differences. The diff view highlights several lines where the two outputs differ, particularly in the processor statistics section. The terminal at the bottom shows the commands used to generate the traces and the diff.

```
diff.txt
1 | Generate code (*I), or select a language
  | M). Start typing to dismiss or don't show
  | this again.
```

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE PORTS
● joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gcc.100k.trace
52048
● joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gcc.output output.output > diff.txt
● joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gobmk.100k.trace
54692
● joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gobmk.output output.output > diff.txt
● joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/hmmmer.100k.trace
54633
● joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/hmmmer.output output.output > diff.txt
○ joycechen@Joyces-MacBook-Pro ca3 %
```



gcc.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	26039.072266	51965	1.921303	1.921303	52048
R=4	100000	19915.861328	861328	2.422363	2.422363	41282
N=8	100000	38047.218750	76112	1.921303	1.921303	52048
R=4, N=8	100000	35055.632812	70306	2.422363	2.422363	41282

gobmk.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	26039.072266	51965	1.921303	1.921303	52048
R=4	100000	19915.861328	861328	2.422363	2.422363	41282
N=8	100000	38047.218750	76112	1.921303	1.921303	52048
R=4, N=8	100000	35055.632812	70306	2.422363	2.422363	41282

Default	100000	27406.4492 19	55374	1.828421	1.828421	54692
R=4	100000	21736.1171 88	44208	2.250124	2.250124	44442
N=8	100000	38834.0820 31	75931	1.828421	1.828421	54692
R=4, N=8	100000	35797.9453 12	70561	2.250174	2.250174	44441

hmmer.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	27129.6699 22	54225	1.830396	1.830396	54633
R=4	100000	22034.1464 84	43960	2.240244	2.240244	44638
N=8	100000	38569.6406 25	77148	1.830396	1.830396	54633
R=4, N=8	100000	36035.6718 75	71985	2.240244	2.240244	44638

mcf.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	26875.1328 12	53688	1.850995	1.850995	54025
R=4	100000	21867.1835 94	43689	2.252810	2.252810	44389
N=8	100000	38443.8515 62	76899	1.850995	1.850995	54025

R=4, N=8	100000	35947.2500 00	71849	2.252810	2.252810	44389
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