LAB TEST 2 EVALUATION GUIDELINES

EVEN SET : Corrected by AD [abhij@cse.iitkgp.ac.in]
ODD SET : Corrected by SpG [saptarshi@cse.iitkgp.ac.in]

Output

Part 1 (Correctness)	4
Part 2 (correctness and proper sequencing)	6
Total	10

Code

Process-tree creation	10	[Both parts]
Correctness + waiting for child termination	10	[Part 1]
Shared-memory creation/deletion	5	[Part 1]
Semaphore creation/deletion	5	[Part 2]
Wait of parents of leaf processes	10	[Part 2]
Sequencing of printing by leaf processes	10	[Part 2]
Total	50	

Grand Total 60

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SAMPLE FOR EVEN PC
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+++ N = 60
+++ L = 3

+++ Initial array
     -18   23  -20   24  -17   -7   23   -4   12   -6  -23   -2   -2  -11   24
      -2   -8   11  -20   23  -13  -18  -17  -11   21    8  -23    7    2    7
     -12   14    5   -2   18   12   15   21  -12    7   -9  -10  -14   18    3
     -10   -4   24  -23    0  -21  -12   11  -14    6    8   24    8   -5    1

*** PART 1
+++ Root process: Final array
     -18    5  -15    9   -8  -15    8    4   16   10  -13  -15  -17  -28   -4
      -6  -14   -3  -23    0  -13  -31  -48  -59  -38  -30  -53  -46  -44  -37
     -49  -35  -30  -32  -14   -2   13   34   22   29   20   10   -4   14   17
       7    3   27    4    4  -17  -29  -18  -32  -26  -18    6   14    9   10

*** PART 2
+++ Leaf process 0: Final array segment
     -18    5  -15    9   -8  -15    8
+++ Leaf process 1: Final array segment
       4   16   10  -13  -15  -17  -28   -4
+++ Leaf process 2: Final array segment
      -6  -14   -3  -23    0  -13  -31
+++ Leaf process 3: Final array segment
     -48  -59  -38  -30  -53  -46  -44  -37
+++ Leaf process 4: Final array segment
     -49  -35  -30  -32  -14   -2   13
+++ Leaf process 5: Final array segment
      34   22   29   20   10   -4   14   17
+++ Leaf process 6: Final array segment
       7    3   27    4    4  -17  -29
+++ Leaf process 7: Final array segment
     -18  -32  -26  -18    6   14    9   10
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SAMPLE FOR ODD PC
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+++ N = 60
+++ L = 3

+++ Initial array
      148  298  377  472  671  934  881 1246 1245 1120 1617 1759 2091 1432 1323
     2347 2610 2657 2684 2300 1789 2967 3538 3692 2184 3324 2868 2551 3457 2669
     4273 3969 5112 3298 3435 4414 4020 6203 5237 6548 4451 5760 7145 5516 4289
     4036 6014 7947 4471 5128 5811 6014 8168 5462 5657 5451 8303 7294 6203 7245

*** PART 1
+++ Root process: Final array
      148  298  377  472  671  881  881 1120 1120 1120 1323 1323 1323 1323 1323
     1789 1789 1789 1789 1789 1789 2184 2184 2184 2184 2551 2551 2551 2669 2669
     3298 3298 3298 3298 3435 4020 4020 4036 4036 4036 4036 4036 4036 4036 4036
     4036 4471 4471 4471 5128 5451 5451 5451 5451 5451 5451 6203 6203 6203 7245

*** PART 2
+++ Leaf process 0: Final array segment
      148  298  377  472  671  881  881
+++ Leaf process 1: Final array segment
     1120 1120 1120 1323 1323 1323 1323 1323
+++ Leaf process 2: Final array segment
     1789 1789 1789 1789 1789 1789 2184
+++ Leaf process 3: Final array segment
     2184 2184 2184 2551 2551 2551 2669 2669
+++ Leaf process 4: Final array segment
     3298 3298 3298 3298 3435 4020 4020
+++ Leaf process 5: Final array segment
     4036 4036 4036 4036 4036 4036 4036 4036
+++ Leaf process 6: Final array segment
     4036 4471 4471 4471 5128 5451 5451
+++ Leaf process 7: Final array segment
     5451 5451 5451 5451 6203 6203 6203 7245
```

			Output		Code							
					Part 1			Part 2				
#	Roll No	Name	Part 1 (4)	Part 2 (6)	Proc Tree (10)	Wait (10)	SHM (5)	SEM (5)	Sync1 (10)	Sync2 (10)	Total (60)	Comments
1	18CS60D01	Abdul Shamnar P	0	0	10	6	5	2	0	3	26	No output (Seg Fault): there are many logical bugs. For second child, start should be n1. All processes (including leaves) wait for child termination. No synchronization done in Part 2, leaf processes print their chunks immediately.
2	18CS60D02	Amit Kumar Jha	0	0	3	0	5	3	6	7	24	Suffix minima not calculated as per the problem statement (2 deducted from Proc Tree part), parent process not calling wait, several syntax errors during compilation
3	18CS60D03	Bachau Prasad	0	0	3	0	3	0	0	0	6	Input not properly parsed ; incomplete code; critical section not written; semaphores not defined
4	18CS60D04	Ajay Kumar Gupta	2	0	7	5	5	0	0	0	19	Suffixmin not implemented (5 deducted from Wait part); Part2 not attempted; incomplete code; semaphore not used
5	18CS60D05	Aditya Kaushik	0	0	10	4	5	2	0	0	21	Uncompilable code. Part 1: Only process tree created, no computation done, every process (even a leaf) waits for only one child. Part 2 not implemented.
6	18CS60D06	Anish Poonia	0	0	10	5	5	0	3	3	26	Suffix minima not calculated (5 deducted from Wait part); process tree for part 1 is correct; syntactical errors; approach more or less correct for part 1; semaphore not used as per the problem statement
7	18CS60R01	Soham Poddar	4	6	10	10	5	5	10	10	60	Perfect

8	18CS60R02	Shounak Paul	4	6	10	10	5	5	10	10	60	Perfect
9	18CS60R03	Neha	0	0	10	6	4	3	2	0	25	Uncompilable code. Part 1: Many bugs (like leaves waiting for themselves, three shared memory segments created). Part 2: Essentially nothing important done. Why are all leaf processes waiting on a single mutex, their parents should wait. No effort on Sync2.
10	18CS60R05	Himanshu Verma	0	0	5	2	3	0	0	0	10	Essentially nothing significant is done. Even process tree is not properly created. Shared memory is of size two ints. Parent makes recursive calls, whereas second child waits. Part 2: No sync at all.
11	18CS60R07	Souradip Guha	4	3	10	10	5	5	8	8	53	Part 1: Fine. Part 2: Faulty o/p changing from run to run. Part 2 code: Good effort.
12	18CS60R08	Animesh Panwar	0	0	7	0	5	5	0	0	17	Syntax error (missing semicolon); infinite loop -- need to call exit if p.l != 0 ; no proper synchronization done in part2
13	18CS60R10	Manish Kumar	0	0	0	0	0	0	0	0	0	Code is exactly the same as that of 18CS60R56 and 18CS60R41. Awarded zero due to plagiarism.
14	18CS60R11	Ahwan Mishra	4	4	8	0	3	3	2	2	26	No wait function in part 1 (can lead to process leakage), suffix minima computed locally and not according to question (2 deducted from Proc Tree part) part 2 synchronization is wrong (only one semaphore used)
15	18CS60R12	Sugandh Pargal	3	0	10	10	3	3	2	0	31	Minor error in calculation of suffix min in part 1, exit call missing in part1 for non leaf nodes, minor code logic errors, synchronization of leaf process not present, parent process synchronization not correct (part 2 – only printf statement within critical section)
16	18CS60R14	Sharad Shourya Ghosh	0	0	0	0	3	3	0	0	6	Direct copy of assignment C1

17	18CS60R15	Gourav Chaturvedi	2	0	7	10	5	0	0	0	24	Part 2 not attempted; part 1 is not completely correct – leaf nodes not merged
18	18CS60R16	Erudakar Omkar Vasant	3	0	10	10	5	5	7	7	47	Part 1: Faulty output (may be caused by file read error). Code looks OK. Part 2: No output (commented). Code shows some effort, but not quite correct.
19	18CS60R17	Udit Agrawal	4	2	10	6	4	0	0	0	26	Faulty output for Part 2. Part 1: Why are A[] parts copied to C1[], C2[], should be done in place? Only one wait by parent. Why three shm segments? These are not removed. Part 2: No progress beyond Part 1. No effort of sync.
20	18CS60R18	Shivangi Sharma	2	0	10	10	4	0	0	0	26	Part 1: Seg Fault. Code: prefixinplace is inefficient. Otherwise, logically OK. SHM not removed. Part 2: Not implemented.
21	18CS60R19	Rajesh Sahu	2	0	10	8	5	0	0	0	25	Part 2 not attempted; part 1 output wrong, suffix minima calculation not correct (2 deducted from Wait part); no semaphores, hence no sync
22	18CS60R20	Abhijeet Bhandari	0	0	7	10	3	0	0	0	20	Lots of syntax errors; part2 is copy of part1; suffix merging is incorrect
23	18CS60R21	Subham Saha	2	0	10	7	5	2	0	0	26	Part 1: No output (hangs). Code: Only one wait() call. Busy wait on check[]. Part 2: No progress beyond Part 1 (only one semaphore created and removed, but not used).
24	18CS60R22	Akashdeep	4	2	10	10	5	3	0	0	34	Part 1 is correct; no semaphore in part2; part2 is incomplete
25	18CS60R23	Birudaraju Sri Charan	2	2	10	5	5	0	0	0	24	No computations done in any part. Only process tree created. No sync effort in Part 2.

26	18CS60R24 Aditi Singh	4	0	10	10	5	5	7	7	48	Part 1: Perfect. Part 2 hangs. Some efforts are made for the syncs, but there are serious bugs (for example, why should everyone signal P00?).
27	18CS60R25 Nidamanuri Dharma Teja	2	0	10	8	5	0	0	0	25	Part 2 not attempted; output of part1 is incorrect; merging of suffixes not done (2 deducted from Wait part)
28	18CS60R26 Ayush Malik	3	0	10	9	5	0	0	0	27	Part 1: Every process prints, no explicit exit(), OK otherwise. Part 2 not implemented.
29	18CS60R28 Shivansh Gupta	4	0	10	10	5	5	7	7	48	Part 1: OK. Part 2: Non-operational. Some effort is made for the syncs.
30	18CS60R30 Karwa Prachi Mukesh	3	0	10	8	5	3	0	0	29	Part 1 output is not correct - miscalculation of suffixes at leaf nodes (2 deducted from Wait part); inadequate exit calls; part2 does not give any output; wrong synchronization at leaf and non-leaf nodes
31	18CS60R31 Bansi Shah	3	0	10	9	5	0	0	0	27	Part 1: Wrong output (chunk size wrongly computed). Otherwise logically OK. Every process prints, because of no explicit exit. Part 2: No progress over Part 1.
32	18CS60R32 Subrata Chattopadhyay	0	0	10	8	5	3	5	5	36	Segmentation fault ; part 1 is more or less correct; one exit call missing from part 1 and part2; also L-1 level should contain P(Y) twice
33	18CS60R34 Vaibhav Mishra	2	0	0	0	4	0	0	0	6	Only a single-process Part 1 is implemented. Rest has no resemblance with the given problem.
34	18CS60R35 Vishal Kumar	0	0	8	6	4	0	0	0	18	Uncompilable code. Weak effort to implement Part 1. Nothing done for Part 2.

35	18CS60R36 Mayank Jain	3	0	10	10	5	5	4	4	41	Merging of leaf suffixes not properly done in part1, no output for part2; involves busy wait on a local variable (which is wrong)
36	18CS60R37 Surabhi S Kadur	4	0	5	8	5	0	0	0	22	Part 1 is almost correct, but one wait call is missing in parent; Part2 is incorrect; no semaphore in part2
37	18CS60R38 Doshi Rushi Kamaleshbhai	0	0	8	5	3	0	0	0	16	Part2 not attempted; no suffix calculation done (5 deducted from Wait part); no merging done; shared memory is not deleted
38	18CS60R39 Stanchion Bishoyi	0	0	10	7	3	0	0	0	20	Part2 not attempted; exit call missing from leaf nodes; extra wait calls; shared memory deleted before using
39	18CS60R40 Harshita Chouhan	0	0	10	5	3	3	3	3	27	Compilation error; potential process leakage; exit not called on non root processes; incorrect synchronization pattern
40	18CS60R41 Saket Kumar	0	0	0	0	0	0	0	0	0	Code is exactly the same as that of 18CS60R56 and 18CS60R10. Awarded zero due to plagiarism.
41	18CS60R42 Gaurav Gupta	3	0	10	10	5	0	0	0	28	Minor error in part1; part2 not attempted
42	18CS60R43 Pranjal Doshi	2	0	10	5	5	5	0	0	27	Part1 – output is incorrect; part 2 - synch is wrong; no recursive/iterative function call
43	18CS60R44 Amit Kumar	2	0	10	6	5	0	0	0	23	Segmentation fault; part2 not attempted; no semaphore; no exit call; no suffix merging; suffix calculation wrong (2 deducted from Wait part)

44	18CS60R46	Sagun Tudu	0	0	0	3	5	3	0	0	11	Output is only the input array itself. Random forks and semaphores in code; suffix minima not computed (5 deducted from Wait part)
45	18CS60R47	Shalini Saini	0	0	6	5	3	0	0	0	14	Uncompilable code, full of C bugs. Very weak effort to create and wait in Part 1 without any computations. Why fork() in main()? No Part 2.
46	18CS60R50	Rishabh Malhotra	0	0	0	0	5	5	0	0	10	Only input is processed; rest of code is commented out
47	18CS60R51	Navdeep Khare	0	0	10	9	5	0	4	0	28	Uncompilable code. Part 1 logic is OK, but implementation has many C bugs. Part 2: little progress over Part 1 (wait on shared variables signal[] is not asked).
48	18CS60R53	Somnath Hazra	4	1	10	10	5	5	6	6	47	Part 1: Fine. Part 2: Quite faulty. You cannot manage with so few semaphores.
49	18CS60R54	Pratik Rawat	0	0	0	0	4	2	0	0	6	Essentially nothing is done.
50	18CS60R55	Aabhas Behere	3	3	10	10	5	3	10	5	49	Part1 is correct; Part 2 - inadequate exit calls, incorrect leaf synchronization
51	18CS60R56	Narayan Kunal	0	0	0	0	0	0	0	0	0	Code is exactly the same as that of 18CS60R10 and 18CS60R41. Awarded zero due to plagiarism.
52	18CS60R57	Samriddhi Sanadhya	0	0	10	10	5	0	0	0	25	Segmentation fault; part1 logic seems more or less correct; part2 is copy of part 1

53 18CS60R58 Shelke Yogesh Kalyan	4	0	10	10	5	0	0	0	29	Part1 OK, part2 commented out
54 18CS60R59 Deepak Kumar	2	0	8	6	5	0	0	0	21	Part 1: Faulty output. Code: CreateTree(), then waitTree(), and then prefixSum1(), why? No Part 2.
55 18CS60R60 Raj Kumar	2	0	0	0	0	0	0	0	2	Single-process implementation. No effort on any amount of OS programing.
56 18CS60R61 Krishna Reddy Kopparthy	2	0	5	5	0	0	0	0	12	No shared memory, no semaphore. Part 1 logic makes some little sense. Other that this, nothing is correct.
57 18CS60R62 Niraj Kumar Kachhwah	2	0	5	4	5	0	0	0	16	Part 1: Very faulty. Uncontrolled fork(); fork(); No of child is 2^l (should always be 2 for a non-leaf process). Part 2 not done.
58 18CS60R63 Nazmul Hussain	1	0	5	0	5	0	0	0	11	Uncontrolled fork (not as binary tree). No attempt to wait or solve the given computational problem. No Part 2.
59 18CS60R64 Mahendra Singh Kanyal	3	0	10	8	2	3	5	5	36	Part1 output is incorrect; array indices calculation is wrong (2 deducted from Wait part); incorrect order of initialization and deletion of shared memory; part2 function is incomplete and hence not called; level L-1 requires one more P call; wrong synchronization of leaf nodes
60 18CS60R65 Rachit Agarwal	4	1	10	10	5	3	0	7	40	Part 1: OK. Part 2: Some effort made to implement Sync 2, but non-functional (commented), also no effort on sequencing child process prints.
61 18CS60R66 Anjali Hotwani	2	0	0	0	5	0	0	0	7	Single-process implementation. No effort on any amount of OS programing (except handling shm).

62 18CS60R67 Rishabh Waman Shahare	2	0	10	9	4	0	0	0	25	Part 1: Wrong output (wrong merging formula used). Shm not removed. No Part 2.
63 18CS60R69 Himanshu Agarwal	0	0	10	10	5	0	0	0	25	Code full of syntax errors; more or less in the right track;merging part not correct; part2 not attempted
64 18CS60R70 Telang Onkar Ajay	2	0	9	7	5	0	0	0	23	Part 1: Output same as input. Wrong number of waits in wrong place. No Part 2.
65 18CS60R71 Sanjay Moharana	3	0	10	9	5	0	0	0	27	Part 1: Wrong output (incorrect computation). Logic OK. No Part 2.
66 18CS60R72 Nishant Kumar Mishra	2	0	10	5	5	0	0	0	22	No computation done. Process tree created OK, but child processes do not terminate immediately after processing their chunks. Every process returns to main(). No Part 2.
67 18CS60R73 Arun Jose	2	0	10	9	5	2	0	0	28	Part 1: Output same as input. Logic OK. Part 2: No meaningful progress over Part 1 (only one semaphore created and initialized to -1).
68 18CS60R75 Ritu Patel	1	0	10	6	5	0	0	0	22	Part 1: Updated array not printed. Will not work anyway, because local arrays b[] and c[] are changed by child processes. Logic is somewhat OK, otherwise.
69 18CS60R76 Gunjan Balde	0	0	10	10	5	3	5	3	36	Code full of syntax errors; part1 logic seems okay; wrong synch in part2 (use of only one semaphore for all leaf nodes)
70 18CS60S01 Sudipta Paria	2	0	10	8	5	2	0	0	27	Part 1: Prefix calculations not correct (so output is wrong). Part 2: Nothing significant beyond Part 1 (one sem created but not used).