HW8. Minimal Cover

id	check	l_refs	cpu_time	m_peak	lost	m.e.	gcc	i.f.	i.h.	lang	flt	maxrss	?	priority	diversity	func	p_score	score	submission_time
109550074	1.00	226.94 M	130 ms	15.61 MB	0 B	0	0	0	0	cpp	395	3.23 MB	0	1.211	0.01	1.000	99	100	1/13 22:11:44
109550206	1.00	222.65 M	130 ms	15.46 MB	0 B	0	0	0	0	cpp	403	3.24 MB	0	1.211	0.01	1.000	99	100	1/14 01:42:18
109700045	1.00	451.67 M	130 ms	15.69 MB	0 B	0	0	0	0	cpp	452	3.44 MB	0	1.158	0.01	1.000	95	98	1/14 17:33:00
110550023	1.00	370.92 M	130 ms	15.79 MB	0 B	0	0	0	0	cpp	2.46 K	3.56 MB	0	1.125	0.01	1.000	92	97	1/14 21:35:15
109550133	1.00	564.55 M	200 ms	15.88 MB	0 B	0	0	0	0	cpp	4.25 K	3.54 MB	0	1.101	0.01	1.000	90	96	12/24 20:48:43
109550022	1.00	1.47 G	260 ms	15.61 MB	0 B	0	0	0	0	cpp	408	3.26 MB	0	1.100	0.01	1.000	90	96	1/10 11:05:45
109550184	1.00	1.49 G	310 ms	15.46 MB	0 B	0	0	0	0	cpp	419	3.27 MB	0	1.098	0.01	1.000	90	96	1/12 03:30:09
0712211	1.00	1.46 G	260 ms	16.98 MB	0 B	0	0	0	0	cpp	414	3.42 MB	0	1.098	0.01	1.000	90	96	1/2 16:01:24
109550098	1.00	1.47 G	270 ms	15.61 MB	0 B	0	0	0	0	cpp	416	3.49 MB	0	1.096	0.01	1.000	90	96	1/13 05:48:33
109550088	1.00	1.5 G	270 ms	15.46 MB	0 B	0	0	0	0	cpp	426	3.36 MB	0	1.096	0.01	1.000	90	96	1/12 17:09:02
0813463	1.00	1.51 G	310 ms	15.76 MB	0 B	0	0	0	0	cpp	436	3.25 MB	0	1.096	0.01	1.000	90	96	1/11 20:24:41
109652017	1.00	1.59 G	290 ms	15.74 MB	0 B	0	0	0	0	cpp	440	3.25 MB	0	1.093	0.01	1.000	89	96	1/9 15:51:27
109550094	1.00	2.2 G	350 ms	15.46 MB	0 B	0	0	0	0	cpp	387	2.91 MB	0	1.089	0.01	1.000	89	96	1/6 10:38:21
109550068	1.00	2.41 G	400 ms	15.51 MB	0 B	0	0	0	0	cpp	386	2.93 MB	0	1.084	0.01	1.000	89	95	12/27 18:42:38
109550053	1.00	1.71 G	430 ms	15.84 MB	0 B	0	0	0	0	cpp	462	3.58 MB	0	1.082	0.01	1.000	88	95	1/10 23:11:55
109550110	1.00	1.83 G	360 ms	15.84 MB	0 B	0	0	0	0	cpp	468	3.43 MB	0	1.080	0.01	1.000	88	95	1/11 17:05:14

109550096	1.00	134.27 M	80 ms	91.34 MB	0 B	0	0	0	0	cpp_shm	1.56 K	21.15 MB	0	1.077	0.01	1.000	88	95	1/10 02:37:48
109550130	1.00	135.68 M	90 ms	91.34 MB	0 B	0	0	0	0	cpp_shm	1.56 K	21.24 MB	0	1.076	0.01	1.000	88	95	1/10 17:54:55
109550056	1.00	1.69 G	380 ms	16.38 MB	0 B	0	0	0	0	cpp	550	3.53 MB	0	1.074	0.01	1.000	88	95	1/12 02:10:32
109550160	1.00	2.47 G	490 ms	15.46 MB	0 B	0	0	0	0	cpp	421	3.52 MB	0	1.069	0.01	1.000	87	95	1/10 16:03:39
109550046	1.00	2.69 G	490 ms	15.76 MB	0 B	0	0	0	0	cpp	418	3.27 MB	0	1.069	0.01	1.000	87	95	1/11 22:05:54
109550154	1.00	2.31 G	1 s	15.71 MB	0 B	0	0	0	0	cpp	456	3.61 MB	0	1.067	0.01	1.000	87	95	1/14 21:29:45
109550052	1.00	2.84 G	500 ms	15.61 MB	0 B	0	0	0	0	cpp	408	3.35 MB	0	1.066	0.01	1.000	87	95	1/10 19:53:27
109550002	1.00	2.69 G	510 ms	15.46 MB	0 B	0	0	0	0	cpp	427	3.47 MB	0	1.065	0.01	1.000	87	95	1/12 16:09:38
109550026	1.00	161.74 M	90 ms	91.4 MB	0 B	0	0	0	0	cpp_shm	3.58 K	75.06 MB	0	1.062	0.01	1.000	87	95	1/14 16:36:52
0712254	1.00	163.39 M	210 ms	91.34 MB	0 B	0	0	0	0	cpp_shm	4.87 K	21.32 MB	0	1.061	0.01	1.000	87	95	1/8 23:38:34
0711624	1.00	3.76 G	560 ms	15.46 MB	0 B	0	0	0	0	cpp	401	3.43 MB	0	1.052	0.01	1.000	86	94	1/13 13:48:06
109550156	1.00	3.77 G	600 ms	15.61 MB	0 B	0	0	0	0	cpp	409	3.48 MB	0	1.050	0.01	1.000	86	94	1/11 21:19:12
0816078	1.00	1.51 G	280 ms	15.68 MB	0 B	0	0	0	0	cpp	1.83 K	3.49 MB	0	1.050	0.01	1.000	86	94	1/14 21:26:12
109550070	1.00	3.8 G	580 ms	15.46 MB	0 B	0	0	0	0	cpp	415	3.48 MB	0	1.049	0.01	1.000	86	94	1/9 19:04:54
109550071	1.00	1.51 G	280 ms	15.89 MB	0 B	0	0	0	0	cpp	3.37 K	3.34 MB	0	1.049	0.01	1.000	86	94	1/10 20:28:54
109550150	1.00	1.51 G	320 ms	15.89 MB	0 B	0	0	0	0	cpp	3.37 K	3.53 MB	0	1.049	0.01	1.000	86	94	1/12 19:48:46
0816068	1.00	1.52 G	280 ms	15.9 MB	0 B	0	0	0	0	cpp	3.38 K	3.54 MB	0	1.048	0.01	1.000	86	94	1/13 18:47:51
109550146	1.00	1.52 G	310 ms	16.01 MB	0 B	0	0	0	0	cpp	4.51 K	3.47 MB	0	1.048	0.01	1.000	86	94	1/5 18:25:19
109550085	1.00	3.79 G	570 ms	15.46 MB	0 B	0	0	0	0	cpp	426	3.5 MB	0	1.048	0.01	1.000	86	94	1/11 22:01:57

109550132	1.00	3.85 G	650 ms	15.68 MB	0 B	0	0	0	0	cpp	462	3.38 MB	0	1.045	0.01	1.000	85	94	1/14 02:42:32
109550058	1.00	3.77 G	600 ms	15.69 MB	0 B	0	0	0	0	cpp	469	3.47 MB	0	1.044	0.01	1.000	85	94	1/14 01:32:15
109550174	1.00	4.77 G	750 ms	15.59 MB	0 B	0	0	0	0	cpp	408	3.45 MB	0	1.040	0.01	1.000	85	94	1/14 23:51:59
0811619	1.00	3.99 G	730 ms	15.84 MB	0 B	0	0	0	0	cpp	488	3.57 MB	0	1.038	0.01	1.000	85	94	1/10 11:16:08
109550128	1.00	4.73 G	660 ms	15.73 MB	0 B	0	0	0	0	cpp	444	3.39 MB	0	1.037	0.01	1.000	85	94	1/3 21:47:38
109550162	1.00	2.01 G	350 ms	15.79 MB	0 B	0	0	0	0	cpp	2.45 K	3.35 MB	0	1.035	0.01	1.000	85	94	1/14 14:06:15
109550066	1.00	276.44 M	120 ms	91.4 MB	0 B	0	0	0	0	cpp_shm	3.56 K	21.16 MB	0	1.033	0.01	1.000	84	94	1/5 00:39:01
109550006	1.00	3.78 G	620 ms	15.8 MB	0 B	0	0	0	0	cpp	583	3.55 MB	0	1.032	0.01	1.000	84	94	1/12 00:37:15
0816138	1.00	4.53 G	1 s	15.84 MB	0 B	0	0	0	0	cpp	478	3.66 MB	0	1.032	0.01	1.000	84	94	1/11 22:45:42
109550182	1.00	4.56 G	1 s	15.84 MB	0 B	0	0	0	0	cpp	471	3.75 MB	0	1.031	0.01	1.000	84	94	1/13 00:23:54
109550018	1.00	4.65 G	2 s	15.84 MB	0 B	0	0	0	0	cpp	507	3.82 MB	0	1.025	0.01	1.000	84	94	1/13 00:08:52
610001005	1.00	6.22 G	1 s	15.72 MB	0 B	0	0	0	0	cpp	449	3.7 MB	0	1.020	0.01	1.000	83	93	1/14 18:27:13
109550100	1.00	6.86 G	7 s	15.84 MB	0 B	0	0	0	0	cpp	457	3.42 MB	0	1.018	0.01	1.000	83	93	12/25 17:35:57
109550118	1.00	6.86 G	8 s	15.84 MB	0 B	0	0	0	0	cpp	462	3.63 MB	0	1.015	0.01	1.000	83	93	1/12 23:29:17
109652042	1.00	7.13 G	2 s	15.93 MB	0 B	0	0	0	0	cpp	491	3.37 MB	0	1.014	0.01	1.000	83	93	1/11 11:30:54
109550086	1.00	3.18 G	480 ms	15.81 MB	0 B	0	0	0	0	cpp	1.76 K	3.41 MB	0	1.013	0.01	1.000	83	93	1/10 13:56:33
0816003	1.00	3.79 G	590 ms	15.79 MB	0 B	0	0	0	0	cpp	2.45 K	3.52 MB	0	1.006	0.01	1.000	82	93	1/14 16:09:27
109652026	1.00	3.8 G	560 ms	15.79 MB	0 B	0	0	0	0	cpp	2.45 K	3.45 MB	0	1.005	0.01	1.000	82	93	1/9 16:36:27
109550168	1.00	3.91 G	650 ms	15.79	0 B	0	0	0	0	cpp	2.45	3.52		1.004	0.01	1.000	82	93	1/11 15:41:09

				MB							K	MB							
0717030	1.00	3.85 G	650 ms	16.01 MB	0 B	0	0	0	0	cpp	4.5 K	3.45 MB	0	1.004	0.01	1.000	82	93	1/14 01:05:39
109550158	1.00	3.94 G	630 ms	15.79 MB	0 B	0	0	0	0	cpp	2.45 K	3.48 MB	0	1.004	0.01	1.000	82	93	1/14 23:37:36
109550054	1.00	3.94 G	670 ms	15.79 MB	0 B	0	0	0	0	cpp	2.44 K	3.37 MB	0	1.004	0.01	1.000	82	93	1/14 13:45:10
109550082	1.00	3.94 G	640 ms	15.79 MB	0 B	0	0	0	0	cpp	2.45 K	3.31 MB	0	1.004	0.01	1.000	82	93	1/14 23:59:53
109550124	1.00	3.94 G	650 ms	15.79 MB	0 B	0	0	0	0	cpp	2.45 K	3.5 MB	0	1.004	0.01	1.000	82	93	1/14 23:58:20
109550090	1.00	3.95 G	610 ms	15.8 MB	0 B	0	0	0	0	cpp	2.46 K	3.42 MB	0	1.004	0.01	1.000	82	93	1/14 14:24:05
109550126	1.00	3.96 G	720 ms	15.79 MB	0 B	0	0	0	0	cpp	2.58 K	3.43 MB	0	1.004	0.01	1.000	82	93	1/10 05:55:41
109652053	1.00	3.89 G	650 ms	16.05 MB	0 B	0	0	0	0	cpp	4.25 K	3.64 MB	0	1.003	0.01	1.000	82	93	1/14 01:07:31
109550076	1.00	3.94 G	710 ms	16.05 MB	0 B	0	0	0	0	cpp	7.55 K	3.55 MB	0	1.003	0.01	1.000	82	93	12/29 14:46:14
109550142	1.00	7.04 G	9 s	16.1 MB	0 B	0	0	0	0	cpp	540	3.95 MB	0	1.002	0.01	1.000	82	93	1/13 03:37:41
baseline	1.00	4.21 G	770 ms	16 MB	0 B	0	0	0	0	cpp	1.18 K	3.05 MB	0	1.000	0.01	1.000	82	93	12/23 00:18:41
109550106	1.00	4.95 G	830 ms	16.16 MB	0 B	0	0	0	0	cpp	1.32 K	3.97 MB	0	0.992	0.01	1.000	81	92	1/14 08:48:13
109550049	1.00	12.73 G	3 s	15.86 MB	0 B	0	0	0	0	cpp	490	3.5 MB	0	0.987	0.01	1.000	81	92	1/12 12:43:20
610001007	1.00	7.51 G	2 s	16.04 MB	0 B	0	0	0	0	cpp	7.52 K	3.53 MB	0	0.975	0.01	1.000	80	92	1/4 14:03:14
109550044	1.00	1.53 G	300 ms	87.15 MB	0 B	0	0	0	0	cpp	951	73.15 MB	0	0.951	0.01	1.000	78	91	1/12 14:56:39
109550178	1.00	3.73 G	680 ms	87.11 MB	0 B	0	0	0	0	cpp	962	73.55 MB	0	0.912	0.01	1.000	75	90	1/14 21:12:14
M093638	1.00	406.74 G	48 s	280.82 MB	0 B	0	0	0	0	python	48.46 K	186.98 MB	0	0.708	4.26	1.000	58	87	1/4 21:20:27
0713339	0.98	1.83 G	390 ms	15.84 MB	0 B	0	0	0	0	cpp	480	3.5 MB	0	0	0.00	0.978	0	59	1/10 01:15:57

0816077	0.81	6.16 G	2 s	31.44 MB	0 B	0	0	0	0	cpp	458	3.72 MB	0	0	0.00	0.811	0	49	1/14 23:22:51
109550038	0.81	4.18 G	780 ms	15.84 MB	0 B	0	0	0	0	cpp	481	3.62 MB	0	0	0.00	0.808	0	48	1/14 23:38:20
109550134	0.73	4.19 G	690 ms	15.84 MB	0 B	0	0	0	0	cpp	463	3.7 MB	0	0	0.00	0.733	0	44	1/14 23:59:24
109550016	0.75	144.15 M	100 ms	91.21 MB	0 B	0	0	0	0	cpp_shm	1.53 K	74.94 MB	0	0	0.00	0.749	0	40	1/15 02:56:32
109550001	0.53	5.58 G	1 s	15.74 MB	0 B	0	0	0	0	cpp	433	3.53 MB	0	0	0.00	0.528	0	32	1/14 23:25:50
109550020	0.34	15.38 G	4 s	162.76 MB	0 B	6	0	0	0	cpp_shm	1.95 K	146.01 MB	0	0	0.00	0.249	0	15	1/14 23:49:52
0516048	0.00	-1	-1	-1	-1	-1	0	0	0	-1	-1	-1	8	0	0.00	0.000	0	0	1/14 21:48:24
0812236	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	12	0	0.00	0.000	0	0	1/15 02:30:47
109101012	0.00	2.77 M	10 ms	15.45 MB	0 B	0	0	0	0	cpp	381	3.3 MB	0	0	0.00	0.000	0	0	1/14 23:03:50
309551117	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	12	0	0.00	0.000	0	0	1/14 23:34:53

number of submission = 82

number of effective submission (priority>0) = 71

remaining p_score = 0.00

Field Definitions

if (gcc | illegal_func | illegal_header | missing),
    priority = 0
    func = 0
else,
    func = check * (0.95^m_error)
    if (check==1),
        perf_I1 = lg(2+4519937261)/lg(2+I_refs)
        perf_I2 = lg(2+770000)/lg(2+cpu_time))
        perf_I = (perf_I1>0) ? perf_I1 : perf_I2
        priority = perf_I * max(lg(2+16773120)/lg(2+m_peak) , lg(2+1211*3198976)/lg(2+flt*maxrss))

```
    else,
        priority = 0
```

p_score = [schedule](6000, priority)

```
if (m_peak > 0),
    func *= (m_peak-heap_lost)/m_peak
```

diversity = -ln([number of effective submissions using the same language] / [number of effective submissions]) * 1.00

score = min(func*(0.60*100 + 0.40*p_score + diversity), 100)