

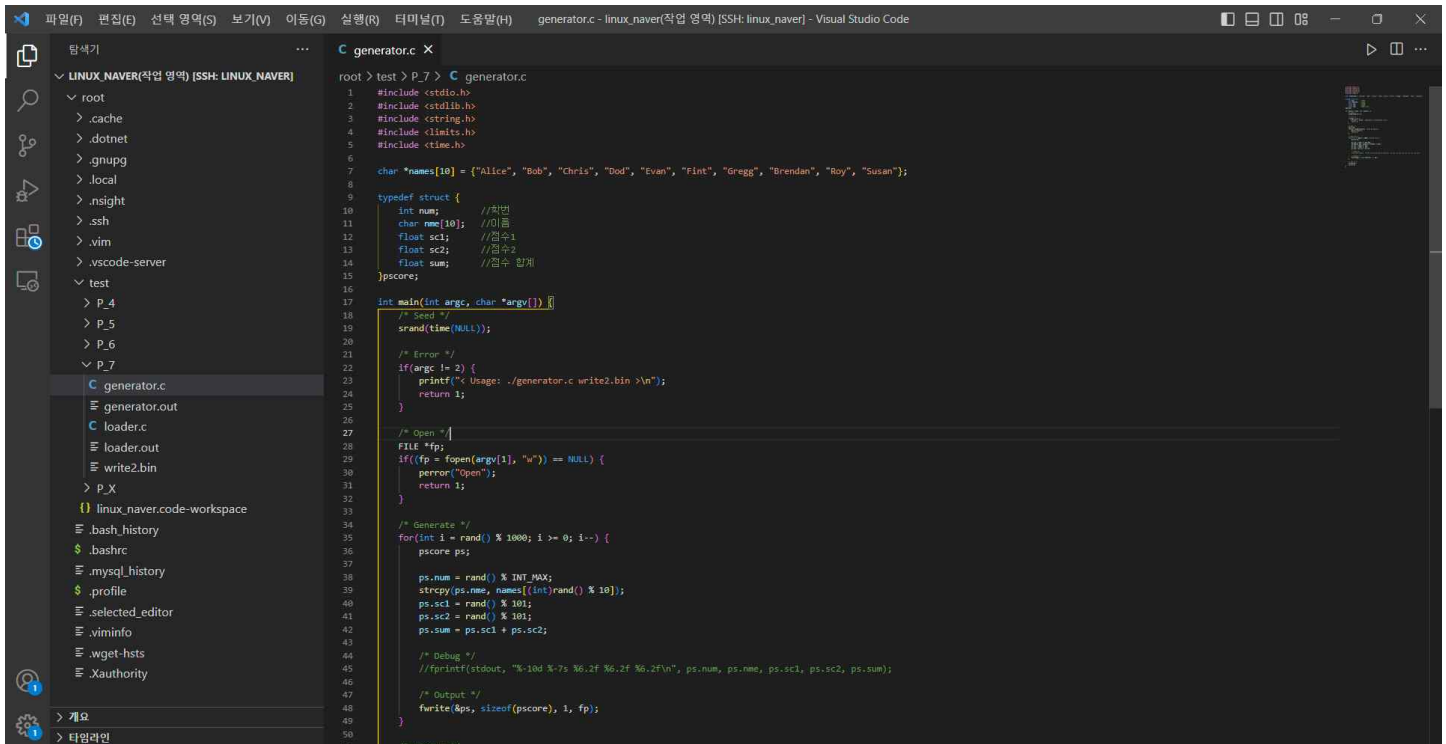
201818716

컴퓨터공학부

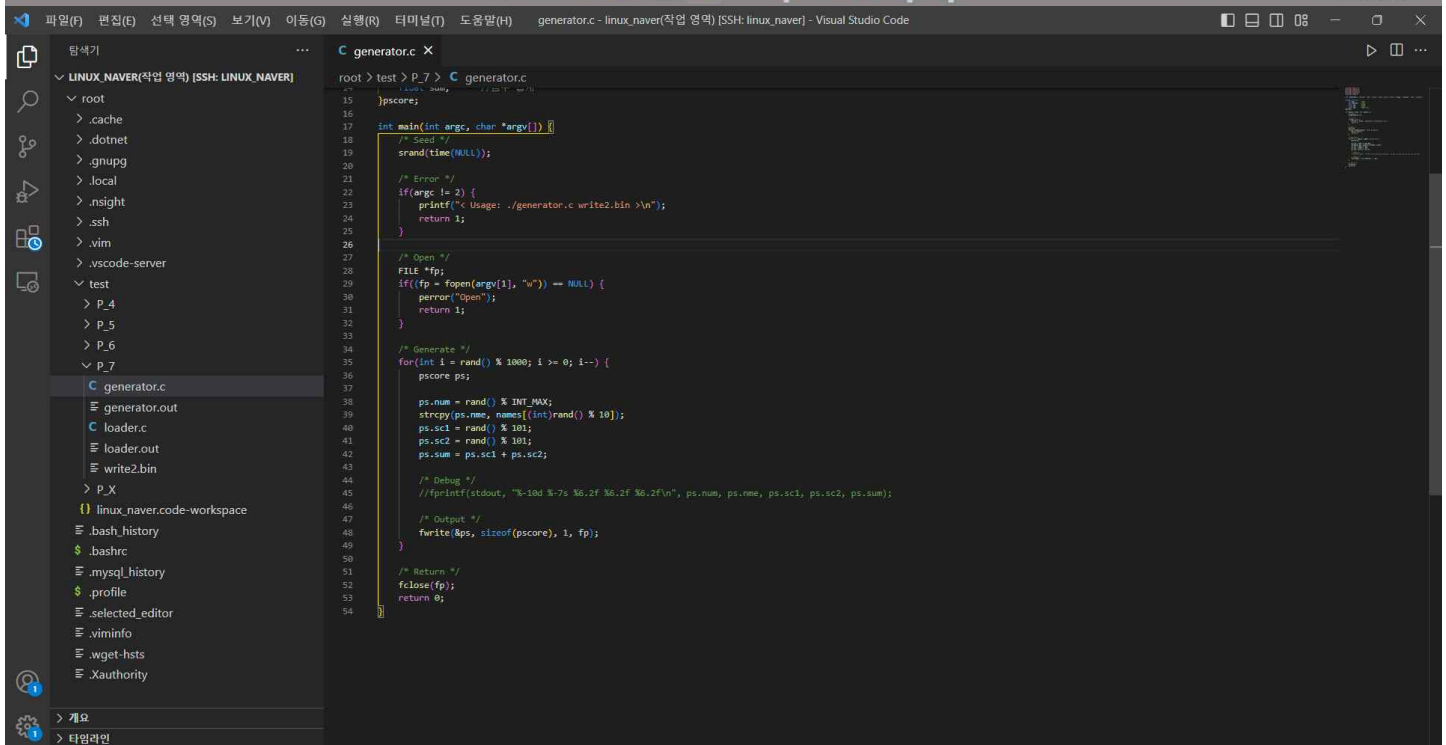
김용현

※ 실습 간 Putty · Xshell 대신, VScode상의 SSH 확장프로그램을 이용하여 실습 서버에 접근하였습니다.

[generator.c]



```
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4 #include <limits.h>
5 #include <time.h>
6
7 char *names[10] = {"Alice", "Bob", "Chris", "Dod", "Evan", "Fint", "Gregg", "Brendan", "Roy", "Susan"};
8
9 typedef struct {
10     int num; //차번호
11     char nme[10]; //이름
12     float sc1; //점수1
13     float sc2; //점수2
14     float sum; //점수 합계
15 }pscore;
16
17 int main(int argc, char *argv[]) {
18     /* Seed */
19     srand(time(NULL));
20
21     /* Error */
22     if(argc != 2) {
23         printf("< Usage: ./generator.c write2.bin >\n");
24         return 1;
25     }
26
27     /* Open */
28     FILE *fp;
29     if((fp = fopen(argv[1], "w")) == NULL) {
30         perror("Open");
31         return 1;
32     }
33
34     /* Generate */
35     for(int i = rand() % 1000; i >= 0; i--) {
36         pscore ps;
37
38         ps.num = rand() % INT_MAX;
39         strcpy(ps.nme, names[(int)rand() % 10]);
40         ps.sc1 = rand() % 101;
41         ps.sc2 = rand() % 101;
42         ps.sum = ps.sc1 + ps.sc2;
43
44         /* Debug */
45         //fprintf(stdout, "%-10d %-7s %6.2f %6.2f %6.2f\n", ps.num, ps.nme, ps.sc1, ps.sc2, ps.sum);
46
47         /* Output */
48         fwrite(&ps, sizeof(pscore), 1, fp);
49     }
50
51     /* Return */
52     return 0;
53 }
```



```
15 }pscore;
16
17 int main(int argc, char *argv[]) {
18     /* Seed */
19     srand(time(NULL));
20
21     /* Error */
22     if(argc != 2) {
23         printf("< Usage: ./generator.c write2.bin >\n");
24         return 1;
25     }
26
27     /* Open */
28     FILE *fp;
29     if((fp = fopen(argv[1], "w")) == NULL) {
30         perror("Open");
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34     /* Generate */
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36         pscore ps;
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38         ps.num = rand() % INT_MAX;
39         strcpy(ps.nme, names[(int)rand() % 10]);
40         ps.sc1 = rand() % 101;
41         ps.sc2 = rand() % 101;
42         ps.sum = ps.sc1 + ps.sc2;
43
44         /* Debug */
45         //fprintf(stdout, "%-10d %-7s %6.2f %6.2f %6.2f\n", ps.num, ps.nme, ps.sc1, ps.sc2, ps.sum);
46
47         /* Output */
48         fwrite(&ps, sizeof(pscore), 1, fp);
49     }
50
51     /* Return */
52     fclose(fp);
53     return 0;
54 }
```

[generator의 실행파일 실행 및 결과]

탐색기

LINUX_NAVER(작업 영역) [SSH: LINUX_NAVER]

root

.cache

.dotnet

.gnupg

.local

.nsight

.ssh

.vim

.vscode-server

test

P_4

P_5

P_6

P_7

generator.c

generator.out

loader.c

loader.out

write2.bin

P_X

linux_naver.code-workspace

.bash_history

.bashrc

.mysql_history

.profile

.selected_editor

.viminfo

.wget-hsts

.Xauthority

개요

타임라인

generator.c

1 #include <stdio.h>

2 #include <stdlib.h>

3 #include <string.h>

4 #include <limits.h>

5 #include <time.h>

6

7 char *names[10] = {"Alice", "Bob", "Chris", "Dod", "Evan", "Fint", "Gregg", "Brendan", "Roy", "Susan"};

8

9 typedef struct {

10 int num; //차번호

11 char name[10]; //이름

12 float sc1; //점수1

13 float sc2; //점수2

14 float sum; //점수 합계

15 }pscore;

16

17 int main(int argc, char *argv[]) {

18 /* Seed */

19 srand(time(NULL));

20

21 /* Error */

22 if(argc != 2) {

23 printf("< Usage: ./generator.c write2.bin>\n");

24 return 1;

25 }

26

27 /* Open */

28 FILE *fp;

29 if((fp = fopen(argv[1], "w")) == NULL) {

30 perror("Open");

31 return 1;

32 }

33 }

문제

출력

디버그 콘솔

터미널

포트

root@lumir:~/test/P_7# gcc -o generator.out generator.c

root@lumir:~/test/P_7# ./generator.out write2.bin

root@lumir:~/test/P_7#

줄 29, 열 45 공백: 4 EUC-KR LF {} C Linux

오후 6:39 2023-05-12

탐색기

LINUX_NAVER(작업 영역) [SSH: LINUX_NAVER]

root

.cache

.dotnet

.gnupg

.local

.nsight

.ssh

.vim

.vscode-server

test

P_4

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P_7

generator.c

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P_X

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.wget-hsts

.Xauthority

개요

타임라인

모든 명령 표시 Ctrl + <Shift> + P

파일로 이동 Ctrl + P

파일에서 찾기 Ctrl + <Shift> + F

디버깅 시작 F5

터미널 설정/해제 Ctrl + `

문제

출력

디버그 콘솔

터미널

포트

root@lumir:~/test/P_7# ls

generator.c generator.out loader.c loader.out write2.bin

root@lumir:~/test/P_7#

오후 6:48 2023-05-12

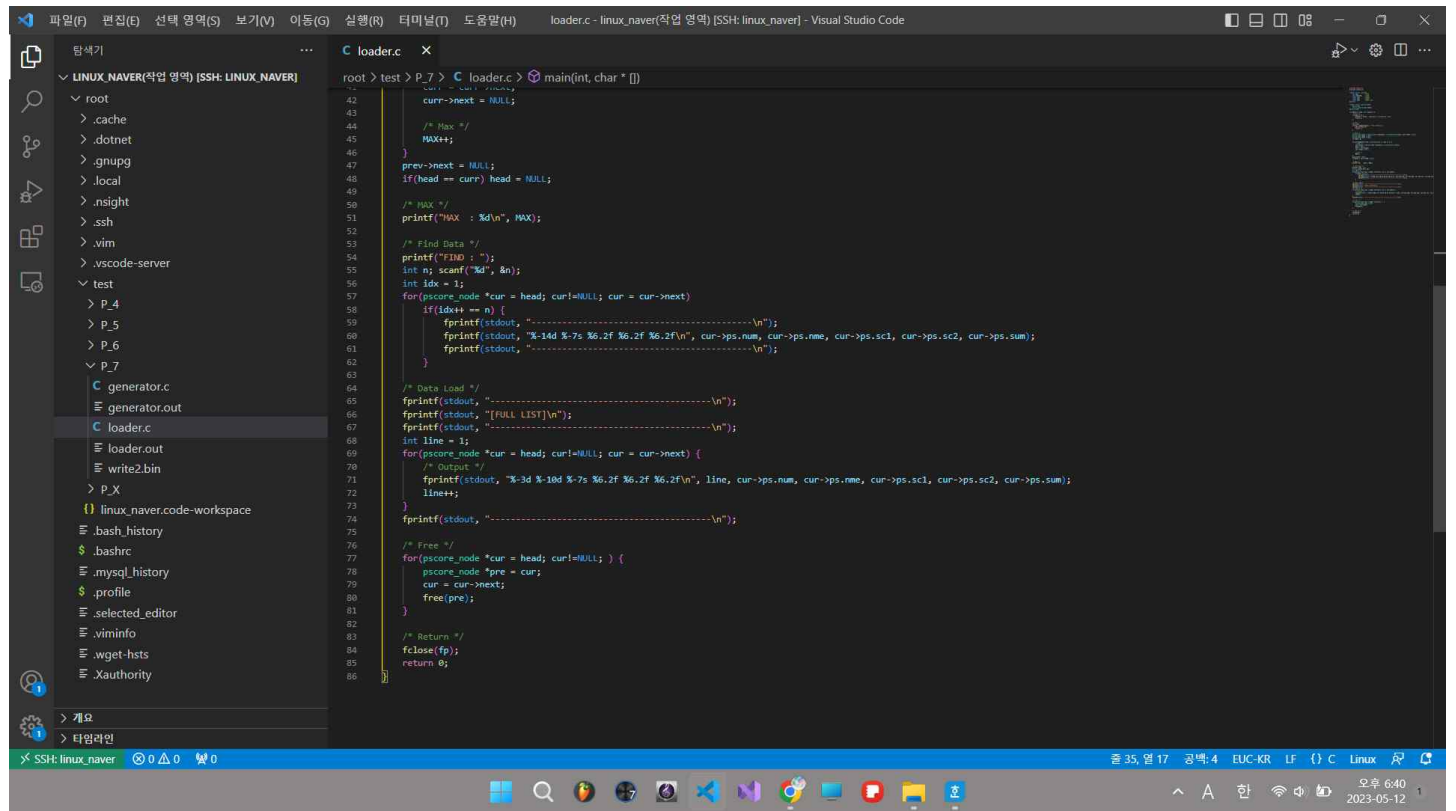
generator.c - linux_naver[작업 영역] [SSH: linux_naver] - Visual Studio Code

```
00000000: 2f4a fe68 426f 6200 0000 0000 0000 0000 /J.hBob.....
00000010: 0000 f041 0000 a042 0000 dc42 a076 493b ..A..B...B.VI;
00000020: 4368 7269 7300 0000 0000 0000 0000 9442 Chris.....B
00000030: 0000 8642 0000 0d43 abd6 544c 416c 6963 ..B...C..TlAlc
00000040: 6500 0000 0000 0000 0000 4040 0000 8442 e.....@...B
00000050: 0000 8a42 9b22 2e29 4772 6567 6700 0000 ..B..")Gregg...
00000060: 0000 0000 0000 9841 0000 ac42 0000 d242 .....A...B
00000070: ce1d 9231 526f 7900 6700 0000 0000 0000 ..1Roy.g.....
00000080: 0000 1041 0000 c042 0000 d242 6fd5 ed11 ..A...B...Bo...
00000090: 4576 616e 0000 0000 0000 0000 0000 0041 Evan.....A
000000a0: 0000 8042 0000 9042 27d8 471e 4368 7269 ..B...B..G.Chri
000000b0: 7300 0000 0000 0000 0000 0000 0e42 0000 0041 s.....B...A
000000c0: 0000 ae42 1732 a175 4772 6567 6700 0000 ..B..2..Gregg...
000000d0: 0000 0000 0000 b842 0000 9041 0000 dc42 .....B...A...B
000000e0: bc24 f43c 4272 656e 6461 6e00 0000 0000 $.<Brendan....
000000f0: 0000 8242 0000 b042 0000 1943 b3d4 1147 ..B...B...C...G
00000100: 4272 656e 6461 6e00 0000 0000 0000 a041 Brendan.....A
00000110: 0000 9041 0000 1842 350a b519 4272 656e ..A...B5...Bren
00000120: 6461 6e00 0000 0000 0000 a842 0000 8242 dan.....B...B
00000130: 0000 1543 fbb1 327d 446f 6400 6461 6e00 ..C..2Dod.dan.
00000140: 0000 0000 0000 4842 0000 9042 0000 f442 .....HB...B...B
00000150: ad49 800e 526f 7900 6461 6e00 0000 0000 ..I..Roy.dan....
00000160: 0000 8642 0000 e041 0000 be42 8c9d 6752 ..B...A...B..gR
00000170: 446f 6400 6461 6e00 0000 0000 0000 6c42 Dod.dan.....lB
00000180: 0000 7842 0000 f242 7f3b 890e 4772 6567 ..xB...B...Greg
00000190: 6700 6e00 0000 0000 0000 1442 0000 6042 g.n.....B...B
000001a0: 0000 b042 c30e 6152 426f 6200 6700 6e00 ..B..aBob:g.n.
000001b0: 0000 0000 0000 9642 0000 0442 0000 d842 .....B...B...B
000001c0: 6052 961b 4368 7269 7300 6e00 0000 0000 ..R..Chris.n....
000001d0: 0000 ae42 0000 e041 0000 e642 1ff0 0548 ..B...A...B...H
000001e0: 416c 6963 6500 6e00 0000 0000 0000 3842 Alice.n.....8B
000001f0: 0000 c841 0000 8e42 031c f503 526f 7900 ..A...B...Roy.
00000200: 6500 6e00 0000 0000 0000 6042 0000 8041 e.n.....B...A
00000210: 0000 9042 ef25 ef56 5375 7361 6e00 6e00 ..B..%.Vsusan.n.
00000220: 0000 0000 0000 b042 0000 7442 0000 1543 .....B...tB...C
00000230: 63aa bd45 5375 7361 6e00 6e00 0000 0000 c..ESusan.n....
00000240: 0000 6042 0000 9842 0000 0443 f62f 0d08 ..B...B...C./..
00000250: 416c 6963 6500 6e00 0000 0000 0000 4040 Alice.n.....@
00000260: 0000 7041 0000 9041 a643 0d4b 4272 656e ..pA...A.C.KBren
00000270: 6461 6e00 0000 0000 0000 be42 0000 8041 dan.....B...A
00000280: 0000 ae42 4043 4576 616e 0061 6e00 ..BI..d.Evan.an.
00000290: 0000 0000 0000 4442 0000 8041 0000 8442 .....DB...A...B
000002a0: 4451 770a 4272 656e 6461 6e00 0000 0000 DQa..Brendan....
000002b0: 0000 3041 0000 7042 0000 8e42 a7d7 1731 ..0A..pB...B...1
```

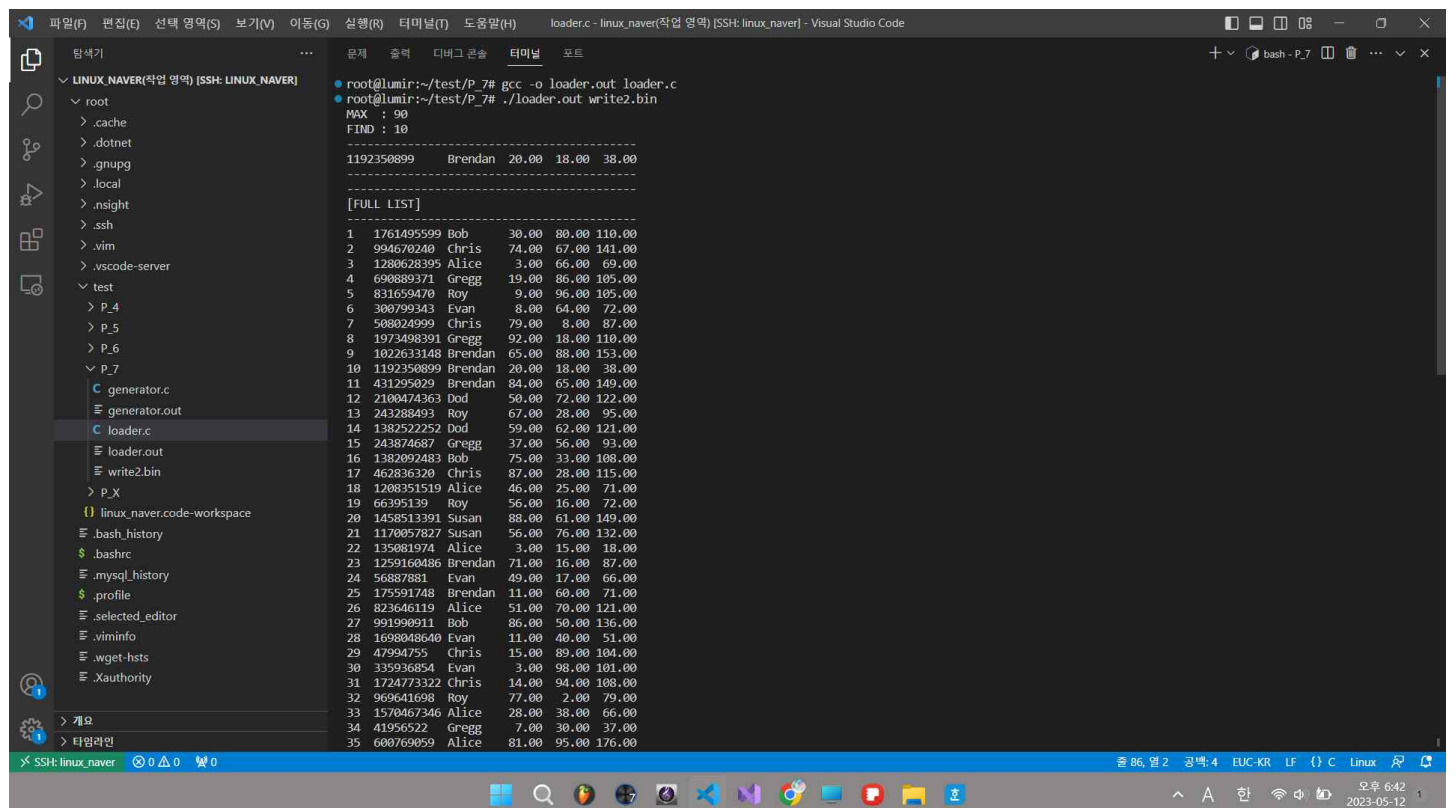
[loader.c]

loader.c - linux_naver[작업 영역] [SSH: linux_naver] - Visual Studio Code

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 typedef struct _pscore{
5     int num; //각면
6     char name[10]; //이름
7     float sc1; //점수1
8     float sc2; //점수2
9     float sum; //점수 합계
10 }pscore;
11
12 typedef struct _pscore_node{
13     pscore ps;
14     struct _pscore_node *next;
15 }pscore_node;
16
17 int main(int argc, char *argv[]) {
18     /* Error */
19     if(argc != 2) {
20         printf("< Usage: ./generator.c write2.bin >\n");
21         return 1;
22     }
23
24     /* Open */
25     FILE *fp;
26     if((fp = fopen(argv[1], "r")) == NULL) {
27         perror("Open");
28         return 1;
29     }
30
31     /* Read */
32     pscore_node *curr = (pscore_node *)calloc(1, sizeof(pscore_node)); curr->next = NULL;
33     pscore_node *head = curr;
34     pscore_node *prev = curr;
35     int MAX = 0;
36
37     while(fread(&curr->ps, sizeof(pscore), 1, fp) == 1) {
38         /* Node */
39         curr->next = (pscore_node *)calloc(1, sizeof(pscore_node));
40         prev = curr;
41         curr = curr->next;
42         curr->next = NULL;
43
44         /* Max */
45         MAX++;
46     }
47     prev->next = NULL;
48     if(head == curr) head = NULL;
49
50     /* Max */
51     printf("MAX = %d\n", MAX);
```



[loader의 실행파일 실행 및 결과 스크린샷]



loader.c - linux_naver(작업 영역) [SSH: linux_naver] - Visual Studio Code

탐색기

- Linux NAVER(작업 영역) [SSH: LINUX_NAVER]
 - root
 - .cache
 - .dotnet
 - .gnupg
 - .local
 - .nsight
 - .ssh
 - .vim
 - .vscode-server
 - test
 - P_4
 - P_5
 - P_6
 - P_7
 - generator.c
 - generator.out
 - loader.c
 - loader.out
 - write2.bin
 - P_X
 - linux_naver.code-workspace
 - .bash_history
 - .bashrc
 - .mysql_history
 - .profile
 - .selected_editor
 - .viminfo
 - .wget-hsts
 - .Xauthority
 - 개요
 - 타일라인

문제 출력 디버그 콘솔 터미널 포트

32	969641698	Roy	77.00	2.00	79.00
33	1570467346	Alice	28.00	38.00	66.00
34	41956522	Gregg	7.00	30.00	37.00
35	600769059	Alice	81.00	95.00	176.00
36	1612077697	Susan	34.00	92.00	126.00
37	1150051943	Alice	81.00	37.00	118.00
38	1124071756	Evan	0.00	58.00	58.00
39	1268578406	Dod	17.00	77.00	94.00
40	1567379822	Chris	79.00	41.00	120.00
41	670770272	Bob	79.00	94.00	173.00
42	727978559	Gregg	24.00	1.00	25.00
43	124795308	Roy	96.00	43.00	139.00
44	2130465647	Bob	1.00	85.00	86.00
45	54747363	Evan	88.00	43.00	131.00
46	1202826268	Alice	1.00	89.00	90.00
47	132643436	Brendan	65.00	45.00	110.00
48	557676629	Roy	52.00	61.00	113.00
49	1120806711	Brendan	55.00	66.00	121.00
50	2006077233	Gregg	33.00	95.00	128.00
51	329039296	Bob	3.00	76.00	79.00
52	567202152	Bob	60.00	100.00	160.00
53	1767367405	Roy	42.00	83.00	125.00
54	1174252260	Gregg	71.00	35.00	106.00
55	1601701424	Brendan	46.00	39.00	85.00
56	1064432277	Gregg	0.00	25.00	25.00
57	1034751256	Fint	91.00	43.00	134.00
58	426911983	Chris	3.00	13.00	16.00
59	1131753463	Brendan	89.00	73.00	162.00
60	1271752048	Dod	38.00	29.00	67.00
61	134654843	Gregg	11.00	27.00	38.00
62	1360172005	Brendan	29.00	16.00	45.00
63	127298126	Roy	55.00	93.00	148.00
64	582609247	Dod	17.00	33.00	50.00
65	953173200	Fint	42.00	74.00	116.00
66	1737648907	Chris	87.00	12.00	99.00
67	1689467419	Roy	51.00	29.00	80.00
68	1422069551	Bob	58.00	82.00	140.00
69	273518639	Susan	76.00	90.00	166.00
70	1985727046	Chris	72.00	31.00	103.00
71	366737812	Evan	90.00	84.00	174.00
72	1046022809	Chris	83.00	91.00	174.00
73	1207816727	Bob	30.00	75.00	105.00
74	2022401043	Alice	87.00	56.00	143.00
75	129392100	Brendan	51.00	46.00	97.00
76	92619920	Bob	94.00	26.00	120.00

줄 86, 열 2 공백: 4 EUC-KR LF {} C Linux

오류 0 경고 0 정보 0

오류 642 2023-05-12

loader.c - linux_naver(작업 영역) [SSH: linux_naver] - Visual Studio Code

탐색기

- Linux NAVER(작업 영역) [SSH: LINUX_NAVER]
 - root
 - .cache
 - .dotnet
 - .gnupg
 - .local
 - .nsight
 - .ssh
 - .vim
 - .vscode-server
 - test
 - P_4
 - P_5
 - P_6
 - P_7
 - generator.c
 - generator.out
 - loader.c
 - loader.out
 - write2.bin
 - P_X
 - linux_naver.code-workspace
 - .bash_history
 - .bashrc
 - .mysql_history
 - .profile
 - .selected_editor
 - .viminfo
 - .wget-hsts
 - .Xauthority
 - 개요
 - 타일라인

문제 출력 디버그 콘솔 터미널 포트

48	557676629	Roy	52.00	61.00	113.00
49	1120806711	Brendan	55.00	66.00	121.00
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51	329039296	Bob	3.00	76.00	79.00
52	567202152	Bob	60.00	100.00	160.00
53	1767367405	Roy	42.00	83.00	125.00
54	1174252260	Gregg	71.00	35.00	106.00
55	1601701424	Brendan	46.00	39.00	85.00
56	1064432277	Gregg	0.00	25.00	25.00
57	1034751256	Fint	91.00	43.00	134.00
58	426911983	Chris	3.00	13.00	16.00
59	1131753463	Brendan	89.00	73.00	162.00
60	1271752048	Dod	38.00	29.00	67.00
61	134654843	Gregg	11.00	27.00	38.00
62	1360172005	Brendan	29.00	16.00	45.00
63	127298126	Roy	55.00	93.00	148.00
64	582609247	Dod	17.00	33.00	50.00
65	953173200	Fint	42.00	74.00	116.00
66	1737648907	Chris	87.00	12.00	99.00
67	1689467419	Roy	51.00	29.00	80.00
68	1422069551	Bob	58.00	82.00	140.00
69	273518639	Susan	76.00	90.00	166.00
70	1985727046	Chris	72.00	31.00	103.00
71	366737812	Evan	90.00	84.00	174.00
72	1046022809	Chris	83.00	91.00	174.00
73	1207816727	Bob	30.00	75.00	105.00
74	2022401043	Alice	87.00	56.00	143.00
75	129392100	Brendan	51.00	46.00	97.00
76	92619920	Bob	94.00	26.00	120.00
77	1060758772	Roy	15.00	60.00	75.00
78	717833602	Evan	57.00	85.00	142.00
79	1279823298	Dod	68.00	95.00	163.00
80	113605997	Bob	51.00	32.00	83.00
81	1088104352	Brendan	6.00	79.00	85.00
82	334739079	Chris	0.00	21.00	21.00
83	1137629521	Roy	67.00	55.00	122.00
84	399804061	Chris	81.00	37.00	118.00
85	360178182	Roy	63.00	1.00	64.00
86	1601675892	Chris	52.00	62.00	114.00
87	950237827	Gregg	57.00	18.00	75.00
88	207193119	Dod	16.00	44.00	60.00
89	56841542	Fint	89.00	86.00	175.00
90	1701525737	Dod	7.00	78.00	85.00

줄 86, 열 2 공백: 4 EUC-KR LF {} C Linux

오류 0 경고 0 정보 0

오류 642 2023-05-12

root@lumir:~/test/P_7#