컴퓨터학부 20202920 조민혁

1. (1) ssu\_read.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <fcntl.h>

#include <unistd.h>

#include "ssu\_employee.h"

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

struct ssu\_employee record;

int fd;

int record\_num;

//\uc0ac\uc6a9\ud560 \ubcc0\uc218\uc5d0 \ub300\ud55c \uc120\uc5b8

if(argc <2){

fprintf(stderr,"Usage : %s file\n", argv[0]);

exit(1);

} //main\ud568\uc218\uc758 \ub9e4\uac1c\ubcc0\uc218\uac00 2\uac1c \uc774\ud558\uba74 \uc624\ub958\uac00 \ubc1c\uc0dd\ud558\uac8c\ub054 \uc608\uc678\ucc98\ub9ac

if((fd = open(argv[1], O\_RDONLY))<0){

fprintf(stderr,"open error for %s\n",argv[1]);

exit(1);

} //\ub450\ubc88\uc9f8 \uc778\uc790\ub85c \ubc1b\uc740 \ud30c\uc77c\uc5d0 \ub300\ud574 open \ud55c\ub2e4.

while (1){

printf("Enter reocord number : ");

scanf("%d", &record\_num);

//record\_num\uc744 \uc785\ub825\ubc1b\ub294\ub2e4.

if(record\_num <0)

break;//record\_num\uc774 0\ubcf4\ub2e4 \uc791\uc740 \uacbd\uc6b0\uc5d0 \ub300\ud55c \uc608\uc678\ucc98\ub9ac\ub2e4.

if(lseek(fd,(long)record\_num \* sizeof(record),0) <0){

fprintf(stderr, "lseek error\n");

exit(1);

} //\uc785\ub825\ubc1b\uc740 \ub118\ubc84\uae4c\uc9c0 \ud30c\uc77c offset\uc758 \uc704\uce58\ub97c \uc774\ub3d9\uc2dc\ud0a8\ub2e4.

if(read(fd, (char \*)&record, sizeof(record))>0)

printf("Employee : %s Salary : %d\n",record.name,record.salary);

//\uc77d\uc5b4\uc11c \uacb0\uacfc\ucd9c\ub825

else

printf("Record %d not found\n",record\_num);

//\ud30c\uc77c\uc5d0\uc11c \uc77d\uc5b4\uc11c \ud654\uba74\uc5d0 \ucd9c\ub825\ud574\uc900\ub2e4.

}

close(fd);

exit(0);

}

(2)실행화면

텍스트, 스크린샷, 폰트이(가) 표시된 사진

자동 생성된 설명

1. (1)ssu\_read\_2.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <fcntl.h>

#include <unistd.h>

#define BUFFER\_SIZE 1024

int main(void){

char buf[BUFFER\_SIZE];

char \*fname = "ssu\_test.txt";

int count;

int fd1, fd2;

fd1 = open(fname,O\_RDONLY, 0644);

fd2 = open(fname,O\_RDONLY, 0644);

//\ub9cc\ub4e4\uc5b4\uc9c4 \ud30c\uc77c\uc744 \uac01\uac01 \uc5f4\uc5b4\uc900\ub2e4

if(fd1 < 0 || fd2 < 0){

fprintf(stderr, "open error for %s\n", fname);

exit(1);

} //\ub458 \uc911\uc5d0 \ud558\ub098\ub77c\ub3c4 \uc5d0\ub7ec\uac00 \ubc1c\uc0dd\ud558\uba74 \uc885\ub8cc

count = read(fd1, buf, 25);

buf[count] = 0; //\ubc11\uc5d0\uc11c printf\ud558\uae30\ub54c\ubb38\uc5d0 Null \ubb38\uc790\ub97c \ub123\uc5b4\uc8fc\ub294 \uac83\uc774\ub2e4

printf("fd1's first printf : %s\n",buf);

lseek(fd1, 1 , SEEK\_CUR);//\uac1c\ud589\ubb38\uc790\ub97c \uac74\ub108\ub6f0\uae30 \uc704\ud574\uc11c \uc0ac\uc6a9

count = read(fd1, buf, 24);// 24\ubc14\uc774\ud2b8\ub9cc\ud07c \uc77d\uc5b4\uc11c \uc800\uc7a5

buf[count] = 0; //\uc704\uc758 buf[count] =0\uacfc \ub3d9\uc77c\ud55c \uc5ed\ud560\uc744 \ud55c\ub2e4

printf("fd1's second printf : %s\n",buf);

count = read(fd2, buf,25);//fd2\uc5d0\uc11c 25 \ubc14\uc774\ud2b8\ub9cc\ud07c \uc77d\uc74c

buf[count] = 0;

//fd1\uacfc \uac19\uc740 \uacfc\uc815\uc744 fd2\uc5d0\uc11c \ubc18\ubcf5

printf("fd2's first printf : %s\n",buf);

lseek(fd2, 1, SEEK\_CUR);//\uac1c\ud589\ubb38\uc790 \uac74\ub108\ub6f0\uae30

count = read(fd2, buf, 24);

buf[count] = 0;

printf("fd2's second printf : %s\n",buf);

exit(0);

}

(2)실행화면

텍스트, 스크린샷, 폰트이(가) 표시된 사진

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1. (1) ssu\_read\_3A.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <fcntl.h>

int main(void)

{

char c;

int fd;

if((fd = open("ssu\_test.txt", O\_RDONLY))<0){

fprintf(stderr ,"open error for %s\n","ssu\_test.txt");

exit(1);

}

//ssu\_test.txt\ud30c\uc77c\uc744 \uc5f4\uc5b4\uc900\ub2e4.

while (1) {

if ( read(fd,&c,1) > 0)

putchar(c);

else

break;

}

//ssu\_test.txt \ud30c\uc77c\uc5d0 \uc788\ub294 \uac83\ub4e4\uc744 \ud55c\uae00\uc790\uc529 \ud654\uba74\uc5d0 \ucd9c\ub825\ud55c\ub2e4.

exit(0);

}

(2)ssu\_read\_3B.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <fcntl.h>

int main(void){

char character;

int fd;

int line\_count = 0;

if((fd = open("ssu\_test.txt",O\_RDONLY))<0){

fprintf(stderr, "open error for %s\n","ssu\_test.txt");

exit(1);

} //ssu\_test.txt \ud30c\uc77c\uc744 \uc5f4\uc74c

while (1){

if(read(fd, &character, 1) > 0){

if(character == '\n')

line\_count++;

}

else

break;

}//\ud55c\uae00\uc790\uc529 \uc77d\ub294\ub370 \uac1c\ud589\ubb38\uc790\uac00 \ub098\uc624\uba74 line\_count\ub97c \ud558\ub098\uc529 \uc99d\uac00\uc2dc\ud0a8\ub2e4.

printf("Total line : %d\n",line\_count);

exit(0);

}

(3)ssu\_read\_3A.c와 ssu\_read\_3B.c의 실행결과

텍스트, 스크린샷, 폰트이(가) 표시된 사진

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1. (1)ssu\_read\_4.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <fcntl.h>

#include <unistd.h>

#define TABLE\_SIZE 128

#define BUFFER\_SIZE 1024

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

static struct {

long offset;

int length;

}table [TABLE\_SIZE];

char buf[BUFFER\_SIZE];

long offset;

int entry;

int i;

int length;

int fd;

if(argc < 2){

fprintf(stderr, "usage:%s <file>\n",argv[0]);

exit(1);

}//main\ud568\uc218\uc758 \ub9e4\uac1c\ubcc0\uc218\uc758 \uac2f\uc218\uac00 2\uac1c \ubcf4\ub2e4 \uc791\uc73c\uba74 \uc5d0\ub7ec\ub97c \ucd9c\ub825

if((fd = open(argv[1], O\_RDONLY)) <0){

fprintf(stderr, "open error for %s\n",argv[1]);

exit(1);

}//\ub450\ubc88\uc9f8 \uc778\uc790\ub85c \ub4e4\uc5b4\uc628 \uac83\uc744 \ud30c\uc77c\uc758 \uc774\ub984\uc73c\ub85c \ud558\uc5ec open\ud55c\ub2e4

entry =0;

offset=0;

while((length = read(fd,buf,BUFFER\_SIZE))>0){

for(i = 0 ; i < length; i++){

table[entry].length++;

offset++;

if(buf[i] == '\n')

table[++entry].offset = offset;

}

}

//\uac1c\ud589\ubb38\uc790\uac00 \ub098\uc624\uba74 entry\ub97c \uc99d\uac00\uc2dc\ud0a4\uace0 \uc9c0\uae08\uae4c\uc9c0\uc758 offset\uc744 \uc800\uc7a5\ud55c\ub2e4 \ub610\ud55c \uadf8 \uc804\uae4c\uc9c0\ub294 \uac01 entry\uc758 length\ub97c \uc99d\uac00\uc2dc\ud0a8\ub2e4.

#ifdef DEBUG

for(i = 0; i<entry;i++)

printf("%d : %ld, %d\n", i+1, table[i].offset, table[i].length);

//DEBUG\uac00 \uc815\uc758\ub41c \uacbd\uc6b0\uc5d0\ub294 \ud14c\uc774\ube14 offset \uacfc \uae38\uc774\ub97c \uac01\uac01 \ucd9c\ub825\ud55c\ub2e4.

#endif

while(1){

printf("Enter line number : ");

scanf("%d",&length);

//length \uc5d0 \uac12\uc744 \uc800\uc7a5\ud55c\ub2e4.

if(--length<0)

break;

//\uae38\uc774\uac00 1\uc774\ud558\uba74 \uc885\ub8cc

lseek(fd,table[length].offset,0);

//\ucc98\uc74c\ubd80\ud130 \ud14c\uc774\ube14\uc758 offset\ub9cc\ud07c \ud30c\uc77c \uc624\ud504\uc14b \uc704\uce58\ub97c \uc774\ub3d9\uc2dc\ud0a8\ub2e4.

if(read(fd,buf,table[length].length)<=0)

continue;

buf[table[length].length] = '\0';

// buf\ub97c \uc8fc\uc5b4\uc9c4 \uc870\uac74\uc5d0 \ub04a\uc5b4\ubc84\ub9b0\ub2e4.

printf("%s",buf);

}

close(fd);

exit(0);

}

(2 실행결과

텍스트, 스크린샷, 폰트이(가) 표시된 사진

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5.(1)ssu\_write\_1.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#define BUFFER\_SIZE 1024

int main(void){

char buf[BUFFER\_SIZE];

int length;

length = read(0,buf,BUFFER\_SIZE);

//\ud45c\uc900\uc785\ub825\uc744 \ud1b5\ud574\uc11c read\ub97c \ud55c\ub2e4.

write(1, buf, length);

//\ud45c\uc900\ucd9c\ub825\uc5d0 write\ub97c \ud574\uc11c \ucd9c\ub825\uc744 \ud55c\ub2e4.

exit(0);

}

(2)실행결과

텍스트, 스크린샷, 폰트이(가) 표시된 사진

자동 생성된 설명

6.(1)ssu\_write\_2.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <fcntl.h>

#define S\_MODE 0664

#define BUFFER\_SIZE 1024

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

char buf[BUFFER\_SIZE];

int fd1, fd2;

int length;

if(argc != 3){

fprintf(stderr, "Usage : %s filein fileout\n",argv[0]);

exit(1);

}// main\uc758 \ub9e4\uac1c\ubcc0\uc218\ub85c \ubc1b\uc740 \uac83\uc774 3\uac1c\uac00 \uc544\ub2c8\uba74 \uc5d0\ub7ec\ub85c \ucc98\ub9ac\ud55c\ub2e4.

if((fd1 = open(argv[1],O\_RDONLY))< 0){

fprintf(stderr,"open error for %s\n",argv[1]);

exit(1);

}// \ub450\ubc88\uc9f8 \ub9e4\uac1c\ubcc0\uc218\ub97c readonly\ub85c \uc5f0\ub2e4.

if((fd2 = open(argv[2],O\_WRONLY|O\_CREAT|O\_TRUNC,S\_MODE))<0){

fprintf(stderr, "open error for %s\n",argv[2]);

exit(1);

}// \uc138\ubc88\uc9f8 \uc778\uc790\ub85c \ubc1b\uc740 \uac83\uc744 \uc5ec\ub294\ub370 \uc5c6\uc73c\uba74 \ub9cc\ub4e4\uace0 \uc788\uc73c\uba74 \ucd08\uae30\ud654\uc2dc\ud0a8\ub2e4.

while ((length = read(fd1,buf,BUFFER\_SIZE))>0)

write(fd2,buf,length);

//fd1\uc73c\ub85c \uc5f0 \uac83\uc758 \ub0b4\uc6a9\uc744 fd2\uc5d0 \uc801\uc5b4\uc900\ub2e4.

exit(0);

}

(2)실행결과

텍스트, 스크린샷, 폰트이(가) 표시된 사진

자동 생성된 설명

7.(1)ssu\_write\_3.c의 소스코드

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <fcntl.h>

#include "ssu\_employee.h"

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

struct ssu\_employee record;

int fd;

if(argc < 2){

fprintf(stderr, "usage : %s file\n",argv[0]);

exit(1);

}

//\ub9e4\uac1c\ubcc0\uc218\uac00 2\uac1c\ubcf4\ub2e4 \uc791\uc73c\uba74 \uc5d0\ub7ec\ub97c \ucd9c\ub825\ud558\uace0 \ud504\ub85c\uadf8\ub7a8\uc744 \uc885\ub8cc\ud55c\ub2e4.

if((fd = open(argv[1],O\_WRONLY | O\_CREAT | O\_EXCL , 0640))<0){

fprintf(stderr, "open error for %s\n",argv[1]);

exit(1);

}

//\ub450\ubc88\uc9f8 \ub9e4\uac1c\ubcc0\uc218\ub97c \ud30c\uc77c\uba85\uc73c\ub85c \ud558\ub294 \ud30c\uc77c\uc744 open\ud55c\ub2e4.

while (1) {

printf("Enter employee name <SPACE> salary: ");

scanf("%s",record.name);

//\uae30\ub85d\ud560 \uc774\ub984\uc744 \uc785\ub825\ubc1b\ub294\ub2e4.

if(record.name[0] =='.')

break;

//.\uc73c\ub85c \uc2dc\uc791\ub418\ub294 \uc774\ub984\uc744 \uc785\ub825\ubc1b\uc73c\uba74 \uc885\ub8cc\ud55c\ub2e4.

scanf("%d", &record.salary);

//\ubd09\uae09\uc744 \uc785\ub825\ubc1b\ub294\ub2e4.

record.pid = getpid();

//\ud568\uc218\ub97c \ud638\ucd9c\ud55c \ud504\ub85c\uc138\uc2a4\uc758 id \ub97c \uc800\uc7a5\ud55c\ub2e4.

write(fd,(char \*)&record , sizeof(record));

//\uc544\uae4c \uc5f4\uc5b4\ub454 \ud30c\uc77c\uc5d0 record\ub97c \uc801\ub294\ub2e4

}

close(fd);

exit(0);

}

(2)실행결과

텍스트, 스크린샷, 폰트이(가) 표시된 사진

자동 생성된 설명