

### <현재 개발하고 있는 프로그램의 절대주소>

s21800201@walab-HGU:~/2021OSS/mini\_project

### <main.c 소스>

```
#include "product.h"
```

```
#include "manager.h"
```

```
int main() {
```

```
    Product plist[100];
```

```
    int index = 0;
```

```
    int count = 0 , menu;
```

```
    count = loadProduct(plist);
```

```
    index = count;
```

```
    if(count == 0)
```

```
        printf("> NO FILE!!");
```

```
    else
```

```
        printf("> LOAD SUCCESS!!");
```

```
    while(1) {
```

```
        menu = selectProduct(&plist);
```

```
        if(menu == 0) break;
```

```
        if(menu == 1 || menu == 3 || menu == 4)
```

```
            if(count == 0) continue;
```

```

if(menu == 1) {

printf("\n=====Wn");

        printf("NoWt FruitWt PriceWt WeightWt GradeWt StarsWn");

        if(count > 0) listProduct(plist, index);

    }

else if(menu == 2) {

        count += addProduct(&plist[index++]);

    }

else if(menu == 3) {

        int no = selectDataNum(plist, index);

        if( no == 0 ) {

            printf("=> Canceled!!!");

            continue;

        }

        updateProduct(&plist[no-1]);

    }

else if(menu == 4) {

        int no = selectDataNum(plist, index);

        if(no == 0) {

            printf("=> Canceled!!!");

            continue;

        }

        int delok;

        printf("=> READY TO DELETE? (0) ");

        scanf("%d", &delok);

```

```

        if(delok == 1) {

            if(deleteProduct(&plist[no-1]))

                count--;

            printf("=> DELETED!!");

        }

    }

    else if(menu == 5) {

        saveProduct(plist, index);

    }

    else if(menu == 6) {

        searchProduct(plist, index);

    }

}

return 0;

}

```

### <manager.c>

```
#include "manager.h"
```

```
#include "product.h"
```

```

int loadProduct(Product *p) {

    int count = 0, i = 0;

    FILE *fp;

    fp = fopen("data.txt", "rt");

    if(fp == NULL) return 0;

```

```

else {

    for(i = 0 ; i < 100 ; i++) {

        fscanf(fp, "%s", p[i].name);

        if(feof(fp)) break;

        fscanf(fp, "%d", &p[i].price);

        fscanf(fp, "%d", &p[i].weight);

        fscanf(fp, "%d", &p[i].star_grade);

        fscanf(fp, "%d", &p[i].count_star);

    }

    fclose(fp);

    return i;

}

}

```

```

int selectDataNum(Product *p, int index) {

    int no;

    listProduct(p, index);

    printf("Select Number :");

    scanf("%d", &no);

    return no;

}

```

```

int listProduct(Product *p, int index) {

    for(int i = 0 ; i < index ; i++) {

        if(p[i].price == -1) continue;

        printf("%dWt", i+1);

```

```

        readProduct(&p[i]);

    }

}

```

```

int saveProduct(Product *p, int index) {

    FILE *fp;

    fp = fopen("data.txt", "wt");

    for(int i = 0 ; i < index ; i++) {

        if(p[i].price == -1) continue;

        fprintf(fp, "%s %d %d %d %d\n", p[i].name, p[i].price, p[i].weight, p[i].star_grade,
p[i].count_star);

    }

    fclose(fp);

    printf("=> Saved!!!\n");

}

```

```

int searchProduct(Product *p, int index) {

    int scnt = 0;

    char search[20];

    printf("Search the Fruit? :");

    scanf("%s", search);

    for(int i = 0 ; i < index ; i++) {

        if(p[i].price == -1) continue;

```

```

        if(strstr(p[i].name, search)) {

printf("\n=====Wn");

        printf("No\t Fruit\t Price\t Weight\t Grade\t Stars\n");

        printf("%d\t", i+1);

        readProduct(&p[i]);

        scnt++;

        }

    }

    if(scnt == 0) printf("=> No Data!!\n");

}

```

#### <manager.h>

```
#include "product.h"
```

```

int loadProduct(Product *p);

int selectDataNum(Product *p, int index);

int listProduct(Product *p, int index);

int saveProduct(Product *p, int index);

int searchProduct(Product *p, int index);

```

### <Makefile 소스코드>

```
CC = gcc

shop : main.c manager.o product.o

    $(CC) -o $@ $^

clean :

    rm *.o shop
```

### <Makefile\_macro 소스코드>

```
CC = gcc

TARGET = shop

OBJECTS = main.o manager.o product.o

all : $(TARGET)

$(TARGET) : $(OBJECTS)

    $(CC) -o $@ $^

clean:

    rm *.o shop
```

### <조건부 컴파일을 이용하여 debugging 코드 추가>

➔ 기존 product.h 파일에 debugging 코드를 추가하였음

```
#ifndef _HYUN__

#define _HYUN__

#include <stdio.h>

#include <string.h>

typedef struct {
```

```
    char name[20];

    int weight;

    int price;

    int star_grade;

    int count_star;

} Product;


int selectProduct();

int readProduct(Product *p);

int addProduct(Product *p);

int updateProduct(Product *p);

int deleteProduct(Product *p);

#endif
```

### <product.h와 product.c에서 수정한 부분>

1. Product.h에 한 개의 데이터만 추가할 경우 필요한 함수 이외에 다중 데이터를 처리할 때 필요한 함수까지 포함하였었는데 그 함수들을 Manager.h에서 선언을 해주었음.
2. product.h가 아닌 product.c에 include<stdio.h>, include <string.h>를 했었는데 이번엔 product.h에 포함하는 거로 변경했음.



<mini\_project 폴더에서 ls -al 실행결과 및 make 컴파일, 빌드 화면>

```
s21800201@walab-HGU:~/2021OSS/mini_project$ ls -al
total 40
drwxrwxr-x 2 s21800201 s21800201 4096  4월 10 11:42 .
drwxrwxr-x 6 s21800201 s21800201 4096  4월 10 00:30 ..
-rw-rw-r-- 1 s21800201 s21800201   81  4월 10 11:42 Makefile
-rw-rw-r-- 1 s21800201 s21800201  136  4월 10 11:37 Makefile_macro
-rw-rw-r-- 1 s21800201 s21800201   94  4월 10 11:11 data.txt
-rw-rw-r-- 1 s21800201 s21800201  1314  4월 10 11:16 main.c
-rw-rw-r-- 1 s21800201 s21800201  1515  4월 10 11:13 manager.c
-rw-rw-r-- 1 s21800201 s21800201   215  4월 10 00:58 manager.h
-rw-rw-r-- 1 s21800201 s21800201  1281  4월 10 11:10 product.c
-rw-rw-r-- 1 s21800201 s21800201   323  4월 10 00:51 product.h
```

```
s21800201@walab-HGU:~/2021OSS/mini_project$ make shop
gcc -c -o manager.o manager.c
gcc -c -o product.o product.c
gcc -o shop main.c manager.o product.o
```

```
s21800201@walab-HGU:~/2021OSS/mini_project$ ls -al
total 72
drwxrwxr-x 2 s21800201 s21800201 4096  4월 10 11:43 .
drwxrwxr-x 6 s21800201 s21800201 4096  4월 10 00:30 ..
-rw-rw-r-- 1 s21800201 s21800201   81  4월 10 11:42 Makefile
-rw-rw-r-- 1 s21800201 s21800201  136  4월 10 11:37 Makefile_macro
-rw-rw-r-- 1 s21800201 s21800201   94  4월 10 11:11 data.txt
-rw-rw-r-- 1 s21800201 s21800201  1314  4월 10 11:16 main.c
-rw-rw-r-- 1 s21800201 s21800201  1515  4월 10 11:13 manager.c
-rw-rw-r-- 1 s21800201 s21800201   215  4월 10 00:58 manager.h
-rw-rw-r-- 1 s21800201 s21800201  4864  4월 10 11:43 manager.o
-rw-rw-r-- 1 s21800201 s21800201  1281  4월 10 11:10 product.c
-rw-rw-r-- 1 s21800201 s21800201   323  4월 10 00:51 product.h
-rw-rw-r-- 1 s21800201 s21800201  4640  4월 10 11:43 product.o
-rwxrwxr-x 1 s21800201 s21800201 13272  4월 10 11:43 shop
```

```
s21800201@walab-HGU:~/2021OSS/mini_project$ ./shop
=> LOAD SUCCESS!!
***** Menu *****
1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu
6. Search Fruit
0. Exit the program
Enter the Menu:
```

<프로그램 실행 결과화면 텍스트 복사 및 붙여넣기(데이터 2개 추가 및 조회)>

```
s21800201@walab-HGU:~/2021OSS/mini_project$
```

```
s21800201@walab-HGU:~/2021OSS/mini_project$ ./shop
```

```
=> LOAD SUCCESS!!
```

```
***** Menu *****
```

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu
6. Search Fruit
0. Exit the program

```
Enter the Menu: 1
```

```
=====
```

No	Fruit	Price	Weight	Grade	Stars
1	Apple	5000	800	5	14323
2	Banana	7500	300	4	1232
3	Orange	8000	1300	4	43211

\*\*\*\*\* Menu \*\*\*\*\*

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu
6. Search Fruit
0. Exit the program

Enter the Menu: 2

Fruit?: Kiwi

Price?: 15000

Weight?: 500

Grade?: 5

Star?: 1234

\*\*\*\*\* Menu \*\*\*\*\*

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu
6. Search Fruit
0. Exit the program

Enter the Menu: 2

Fruit?: PineApple

Price?: 5000

Weight?: 100

Grade?:

4

Star?: 124

\*\*\*\*\* Menu \*\*\*\*\*

1. List Menu

2. Add Menu

3. Update Menu

4. Delete Menu

5. Save Menu

6. Search Fruit

0. Exit the program

Enter the Menu: 1

=====

No	Fruit	Price	Weight	Grade	Stars
1	Apple	5000	800	5	14323

2	Banana	7500	300	4	1232
3	Orange	8000	1300	4	43211
4	Kiwi	15000	500	5	1234
5	PineApple	5000	100	4	124

\*\*\*\*\* Menu \*\*\*\*\*

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu
6. Search Fruit
0. Exit the program

Enter the Menu: 6

Search the Fruit? :Banana

=====

No	Fruit	Price	Weight	Grade	Stars
2	Banana	7500	300	4	1232

\*\*\*\*\* Menu \*\*\*\*\*

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu
6. Search Fruit
0. Exit the program

Enter the Menu: 6

Search the Fruit? :Apple

=====

No	Fruit	Price	Weight	Grade	Stars
1	Apple	5000	800	5	14323

\*\*\*\*\* Menu \*\*\*\*\*

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
5. Save Menu

6. Search Fruit

0. Exit the program

Enter the Menu: 0