

<2021OSS/mini_project에 접속>

```
s21800201@walab-HGU:~$ ls
2021OSS  data2.txt  data4.txt  data_sf_link  examples.desktop  examples_link  lab5  magic.mgc
Test     data3.txt  data_link  error         examples.desktop2  html          list.txt  webapps
s21800201@walab-HGU:~$ cd 2021OSS
s21800201@walab-HGU:~/2021OSS$ ls
lab4  lab5  mini_project
s21800201@walab-HGU:~/2021OSS$ cd mini_project
s21800201@walab-HGU:~/2021OSS/mini_project$ ls
```

<product.h와 product.c 파일 생성>

```
s21800201@walab-HGU:~/2021OSS/mini_project$ ls
product  product.c  product.h
```

<product.h파일 생성 및 저장>

```
s21800201@walab-HGU:~/2021OSS/mini_project$ cat product.h
typedef struct {
    char name[20];
    int weight;
    int price;
    int star_grade;
    int count_star;
} Product;

int loadProduct(Product *p);
int selectProduct();
int selectDataNum(Product *p, int index);
int listProduct(Product *p, int index);
int readProduct(Product *p);
int addProduct(Product *p);
int updateProduct(Product *p);
int saveProduct(Product *p, int index);
int searchProduct(Product *p, int index);
int deleteProduct(Product *p);
```

<product.c 파일 생성 및 CRUD 함수 코딩>

```
s21800201@walab-HGU:~/2021OSS/mini_project$ cat product.c
#include <stdio.h>
#include <string.h>

#include "product.h"

int selectProduct(Product *p) {
    int menu;
    printf("\n***** Menu *****\n");
    printf("1. List Menu\n");
    printf("2. Add Menu\n");
    printf("3. Update Menu\n");
    printf("4. Delete Menu\n");
    printf("0. Exit the program\n");
    printf("Enter the Menu: ");
    scanf("%d", &menu);
    printf("\n");

    return menu;
}

int readProduct(Product *p) {
    printf("%s\t\t %d\t\t %d\t\t %d\t\t %d\n", p->name, p->price, p->weight, p->date
```

<product.c 파일 소스코드>

```
#include <stdio.h>
```

```
#include <string.h>
```

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

```
int selectProduct(Product *p) {
```

```
    int menu;
```

```
    printf("\n***** Menu *****\n");
```

```
    printf("1. List Menu\n");
```

```
    printf("2. Add Menu\n");
```

```
    printf("3. Update Menu\n");
```

```
    printf("4. Delete Menu\n");
```

```
    printf("0. Exit the program\n");
```

```

        printf("Enter the Menu: ");

        scanf("%d", &menu);

        printf("\n");


        return menu;
    }


int readProduct(Product *p) {

    printf("%s\t %d\t %d\t %d\t %d\n", p->name, p->price, p->weight, p->star_grade,
p->count_star);

    return 1;
}


int addProduct(Product *p) {

    printf("Fruit?: ");

    scanf("%s", p->name);

    printf("Price?: ");

    scanf("%d", &p->price);

    printf("Weight?: ");

    scanf("%d", &p->weight);

    printf("Grade?: ");

    scanf("%d", &p->star_grade);

    printf("Star?: ");

    scanf("%d", &p->count_star);

    return 1;
}

```

```
int updateProduct(Product *p) {  
  
    printf("Fruit?: ");  
  
    scanf("%s", p->name);  
  
    printf("Price?: ");  
  
    scanf("%d", &p->price);  
  
    printf("Weight?: ");  
  
    scanf("%d", &p->weight);  
  
    printf("Grade?: ");  
  
    scanf("%d", &p->star_grade);  
  
    printf("Star?: ");  
  
    scanf("%d", &p->count_star);  
  
    printf("Update Success!!!\n\n");  
  
    return 1;  
  
}
```

```
int deleteProduct(Product *p) {  
  
    strcpy(p->name, "NULL");  
  
    p->price = -1;  
  
    p->weight = -1;  
  
    p->star_grade = -1;  
  
    p->count_star = -1;  
  
    return 1;  
  
}
```

```

int main() {

    Product p;

    int count = 0 , menu;

    while(1) {

        menu = selectProduct(&p);

        if(menu == 0) break;

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

            if(count == 0) continue;

        if(menu == 1) {

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

            printf("Fruit\t Price\t Weight\t Grade\t Stars\n");

            readProduct(&p);

        }

        else if(menu == 2) {addProduct(&p); count++;}

        else if(menu == 3) updateProduct(&p);

        else if(menu == 4) deleteProduct(&p);

    }

    return 0;

}

```

<mini_project의 ls -al 실행결과>

```
s21800201@walab-HGU:~/2021OSS/mini_project$ ls -al
total 32
drwxrwxr-x 2 s21800201 s21800201 4096 4월  4 18:34 .
drwxrwxr-x 5 s21800201 s21800201 4096 3월 31 20:38 ..
-rwxrwxr-x 1 s21800201 s21800201 12776 4월  4 18:34 product
-rw-rw-r-- 1 s21800201 s21800201 1747 4월  1 21:43 product.c
-rw-rw-r-- 1 s21800201 s21800201  437 3월 31 20:49 product.h
```

<product.c 컴파일 및 실행>

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

***** Menu *****

```
1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
0. Exit the program
Enter the Menu: 2
```

```
Fruit?: Apple
Price?: 10000
Weight?: 200
Grade?: 5
Star?: 3253
```

***** Menu *****

```
1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
0. Exit the program
Enter the Menu: 1
```

```
=====
Fruit    Price    Weight    Grade    Stars
Apple    10000    200       5        3253
```

***** Menu *****

```
1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
0. Exit the program
Enter the Menu: 3
```

```
Fruit?: Banana
Price?: 9000
Weight?: 100
Grade?: 4
Star?: 1134
Update Success!!!
```

<실행파일>

***** Menu *****

1. List Menu
 2. Add Menu
 3. Update Menu
 4. Delete Menu
 0. Exit the program
- Enter the Menu: 2

Fruit?: Apple

Price?: 10000

Weight?: 200

Grade?: 5

Star?: 3253

***** Menu *****

1. List Menu
 2. Add Menu
 3. Update Menu
 4. Delete Menu
 0. Exit the program
- Enter the Menu: 1

=====

Fruit	Price	Weight	Grade	Stars
-------	-------	--------	-------	-------

Apple	10000	200	5	3253
-------	-------	-----	---	------

***** Menu *****

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
0. Exit the program

Enter the Menu: 3

Fruit?: Banana

Price?: 9000

Weight?: 100

Grade?: 4

Star?: 1134

Update Success!!!

***** Menu *****

1. List Menu
2. Add Menu
3. Update Menu
4. Delete Menu
0. Exit the program

Enter the Menu: 1

=====

Fruit	Price	Weight	Grade	Stars
Banana	9000	100	4	1134

***** Menu *****

1. List Menu
 2. Add Menu
 3. Update Menu
 4. Delete Menu
 0. Exit the program
- Enter the Menu: 4

***** Menu *****

1. List Menu
 2. Add Menu
 3. Update Menu
 4. Delete Menu
 0. Exit the program
- Enter the Menu: 1

=====

Fruit	Price	Weight	Grade	Stars
NULL	-1	-1	-1	-1

***** Menu *****

1. List Menu
 2. Add Menu
 3. Update Menu
 4. Delete Menu
 0. Exit the program
- Enter the Menu: 0