lab1 과제

상태	In progress
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1번

```
#include <stdio.h>

int main() {
    FILE *fp;
    char ch;

    if ((fp = fopen("f1.txt", "r")) == NULL) {
        printf("파일을 열 수 없습니다.");
        return 0;
    }

    while (fscanf(fp, "%c", &ch) == 1) {
        printf("%c", ch);
    }

    fclose(fp);
}
```

2번

```
#include <stdio.h>

int main() {
    FILE *fp;
    int num, cnt = 0;
    int arr[100001];
```

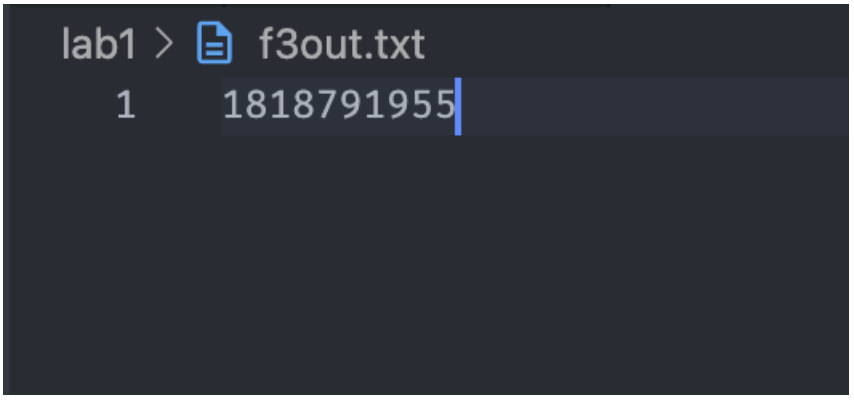
```
    fp = fopen("f2.txt", "r");
    if (fp == NULL) {
        printf("파일을 열 수 없습니다.");
        return 0;
    }

    while (fscanf(fp, "%d", &num) == 1) {
        if (num >= 90) {
            arr[cnt++] = num;
        }
    }

    printf("%d\n", cnt);
    for (int i = 0; i < cnt; i++) {
        printf("%d\n", arr[i]);
    }

    fclose(fp);

    return 0;
}
```

```
~/gi/knu-/2/프로그래밍기초/lab1 main !1 ?2 ./2
4
91
90
94
93
```

3번

```
#include <stdio.h>

int main() {
    FILE *fp, *fpo;
    char ch;
    int sum = 0;

    if ((fp = fopen("f3.txt", "r")) == NULL) {
        printf("파일을 열 수 없습니다(f3.txt).");
        return 0;
    }
```

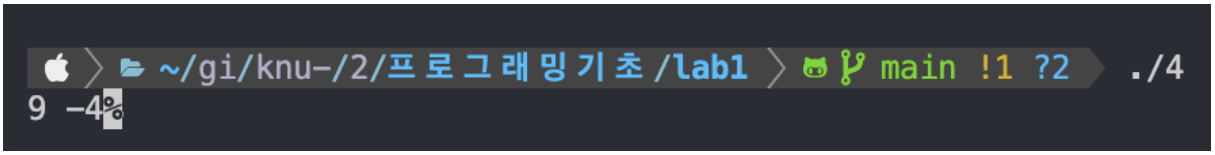
```
    if ((fpo = fopen("f3out.txt", "w")) == NULL) {
        printf("파일을 열 수 없습니다(f3out.txt).");
        return 0;
    }

    while (fscanf(fp, "%c", &ch) == 1) {
        if (ch >= '0' && ch <= '9') {
            // printf("%c", ch);
            fprintf(fpo, "%c", ch);
            sum += ch - '0';
        }
    }

    printf("%d", sum);
}
```

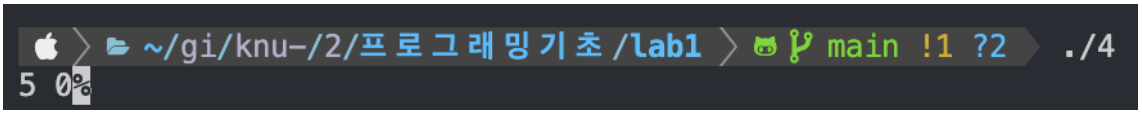


4번

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

void minMax(int data[], int n, int *min, int *max) {
    for (int i = 0; i < n; i++) {
        if (*min > data[i]) {
            *min = data[i];
        }

        if (*max < data[i]) {
            *max = data[i];
        }
    }
```

```
}

int main() {
    FILE *fp;
    int temp, n, min = INT_MAX, max = INT_MIN, idx = 0;
    int arr[101];

    if ((fp = fopen("f4.txt", "r")) == NULL) {
        // if ((fp = fopen("f4_2.txt", "r")) == NULL) {
        printf("파일을 열 수 없습니다.");
        return 0;
    }

    if (fscanf(fp, "%d", &temp) == 1) {
        n = temp;
    }

    while (fscanf(fp, "%d", &temp) == 1) {
        arr[idx++] = temp;
    }

    minMax(arr, n, &min, &max);

    printf("%d %d", max, min);

    fclose(fp);
}
```

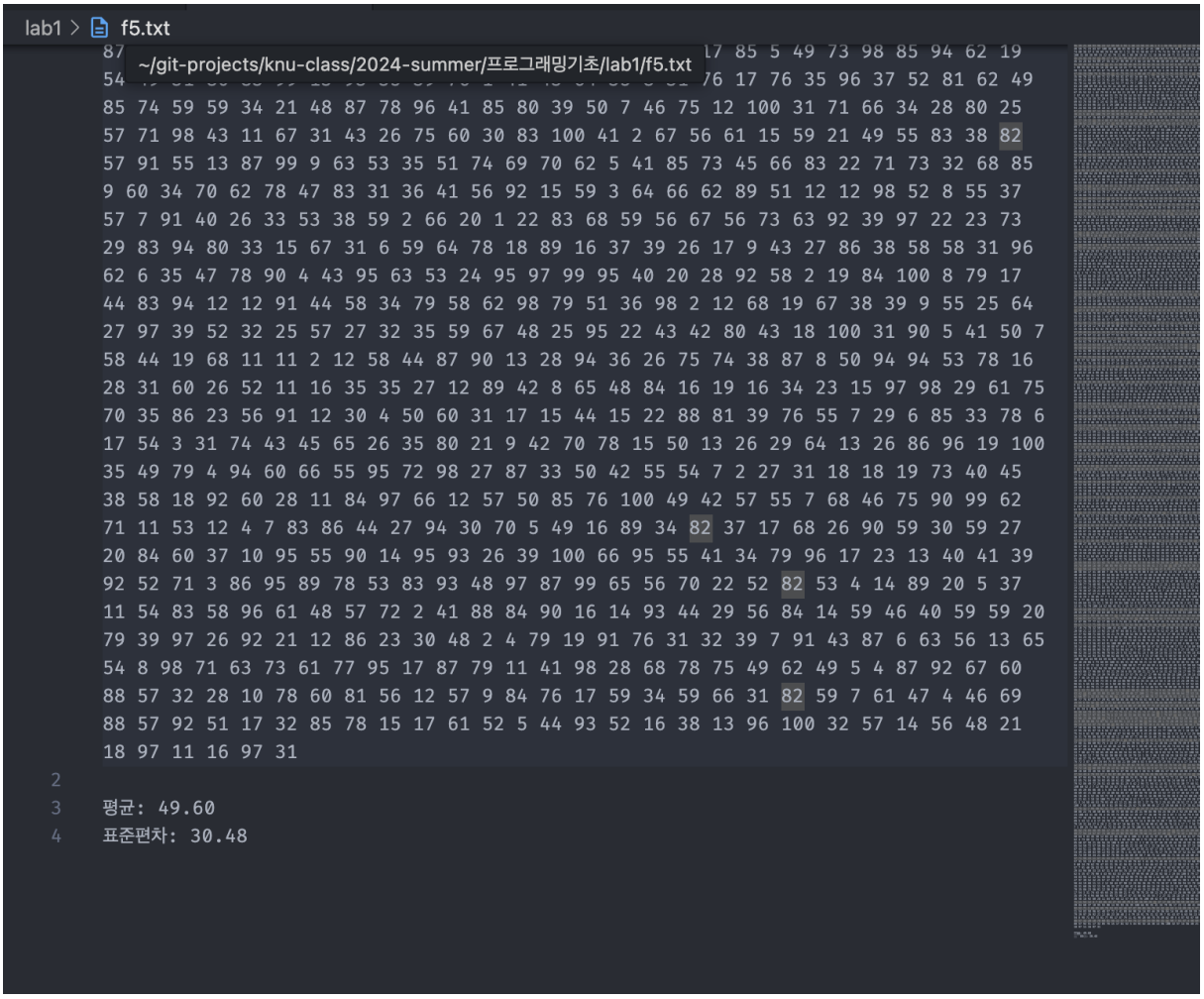




5번

```
#include <math.h>
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
#define MAX 10000
```

```
int main() {
    srand(time(NULL));

    FILE *fpw, *fpr;
    int sum = 0, sumx2 = 0, num;

    if ((fpw = fopen("f5.txt", "w")) == NULL) {
        printf("파일을 열 수 없습니다.");
        return 0;
    }

    if ((fpr = fopen("f5.txt", "r")) == NULL) {
        printf("파일을 열 수 없습니다.");
        return 0;
    }

    for (int i = 0; i < MAX; i++) {
        fprintf(fpw, "%d ", rand() % 100 + 1);
    }

    while (fscanf(fpr, "%d", &num) == 1) {
        sum += num;
        sumx2 += num * num;
    }

    fprintf(fpw, "\n\n평균: %.2lf\n", (double)sum / MAX);
    fprintf(fpw, "표준편차: %.2lf", sqrt((double)(sumx2 / MAX) - ((sum / MA
X) * (sum / MAX))));

    fclose(fpw);
    fclose(fpr);
}
```


lab1 > f5.txt
~/git-projects/knu-class/2024-summer/프로그래밍기초/lab1/f5.txt
85 74 59 59 34 21 48 87 78 96 41 85 80 39 50 7 46 75 12 100 31 71 66 34 28 80 25
57 71 98 43 11 67 31 43 26 75 60 30 83 100 41 2 67 56 61 15 59 21 49 55 83 38 82
57 91 55 13 87 99 9 63 53 35 51 74 69 70 62 5 41 85 73 45 66 83 22 71 73 32 68 85
9 60 34 70 62 78 47 83 31 36 41 56 92 15 59 3 64 66 62 89 51 12 12 98 52 8 55 37
57 7 91 40 26 33 53 38 59 2 66 20 1 22 83 68 59 56 67 56 73 63 92 39 97 22 23 73
29 83 94 80 33 15 67 31 6 59 64 78 18 89 16 37 39 26 17 9 43 27 86 38 58 58 31 96
62 6 35 47 78 90 4 43 95 63 53 24 95 97 99 95 40 20 28 92 58 2 19 84 100 8 79 17
44 83 94 12 12 91 44 58 34 79 58 62 98 79 51 36 98 2 12 68 19 67 38 39 9 55 25 64
27 97 39 52 32 25 57 27 32 35 59 67 48 25 95 22 43 42 80 43 18 100 31 90 5 41 50 7
58 44 19 68 11 11 2 12 58 44 87 90 13 28 94 36 26 75 74 38 87 8 50 94 94 53 78 16
28 31 60 26 52 11 16 35 35 27 12 89 42 8 65 48 84 16 19 16 34 23 15 97 98 29 61 75
70 35 86 23 56 91 12 30 4 50 60 31 17 15 44 15 22 88 81 39 76 55 7 29 6 85 33 78 6
17 54 3 31 74 43 45 65 26 35 80 21 9 42 70 78 15 50 13 26 29 64 13 26 86 96 19 100
35 49 79 4 94 60 66 55 95 72 98 27 87 33 50 42 55 54 7 2 27 31 18 18 19 73 40 45
38 58 18 92 60 28 11 84 97 66 12 57 50 85 76 100 49 42 57 55 7 68 46 75 90 99 62
71 11 53 12 4 7 83 86 44 27 94 30 70 5 49 16 89 34 82 37 17 68 26 90 59 30 59 27
20 84 60 37 10 95 55 90 14 95 93 26 39 100 66 95 55 41 34 79 96 17 23 13 40 41 39
92 52 71 3 86 95 89 78 53 83 93 48 97 87 99 65 56 70 22 52 82 53 4 14 89 20 5 37
11 54 83 58 96 61 48 57 72 2 41 88 84 90 16 14 93 44 29 56 84 14 59 46 40 59 59 20
79 39 97 26 92 21 12 86 23 30 48 2 4 79 19 91 76 31 32 39 7 91 43 87 6 63 56 13 65
54 8 98 71 63 73 61 77 95 17 87 79 11 41 98 28 68 78 75 49 62 49 5 4 87 92 67 60
88 57 32 28 10 78 60 81 56 12 57 9 84 76 17 59 34 59 66 31 82 59 7 61 47 4 46 69
88 57 92 51 17 32 85 78 15 17 61 52 5 44 93 52 16 38 13 96 100 32 57 14 56 48 21
18 97 11 16 97 31
평균: 49.60
표준편차: 30.48