lab3 과제

상태	In progress
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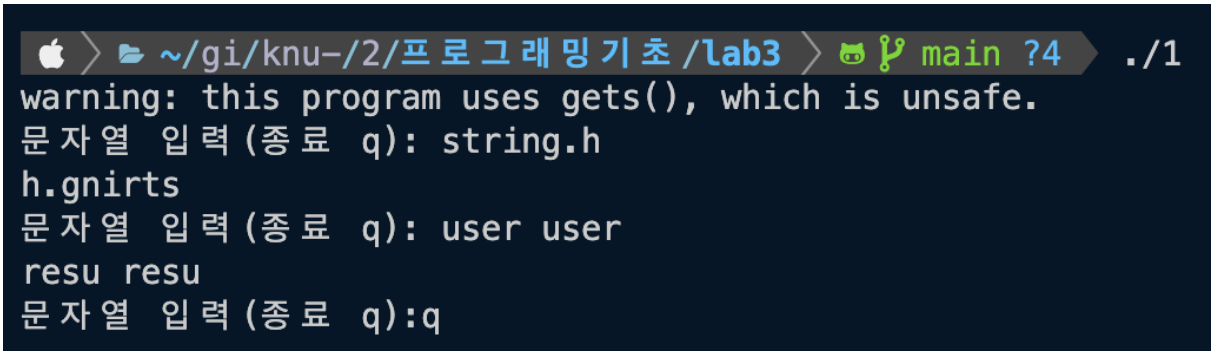
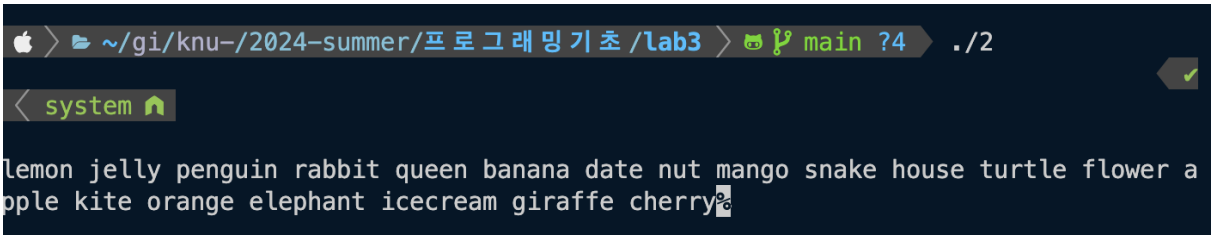
1번

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

void reverse(char str[]) {
    for (int i = 0, j = (int)strlen(str) - 1; i < j; i++, j--) {
        char c = str[i];
        str[i] = str[j];
        str[j] = c;
    }
}

int main() {
    char line[81];
    while (1) {
        printf("문자열 입력(종료 q): ");
        gets(line);
        if (strcmp(line, "q") == 0) {
            break;
        }
        reverse(line);
        puts(line);
    }
}
```



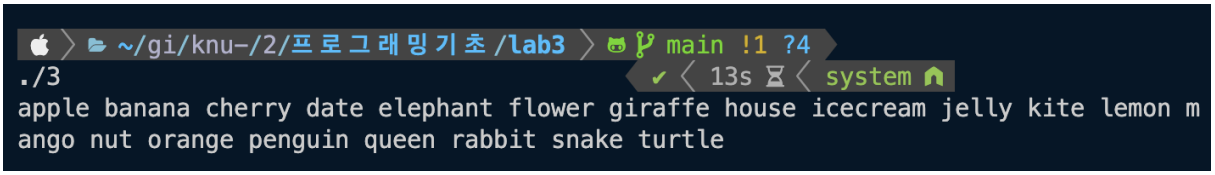
2번

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

void printWords(char str[]) { printf("%s", str); }

int main() {
    FILE *fp;
    int n;
    char temp_c;

    fp = fopen("f2.txt", "r");
    fscanf(fp, "%d", &n);
    char **words = (char **)malloc(sizeof(char *) * n);

    for (int i = 0; i < n; i++) {
        char temp_str[10001];
        int idx = 0;
        while (1) {
            if (fscanf(fp, "%c", &temp_c) != 1) {
                break;
            }
            temp_str[idx++] = temp_c;
        }
        temp_str[idx] = '\0';

        words[i] = (char *)malloc(sizeof(char) * (strlen(temp_str) + 1));
        strcpy(words[i], temp_str);
        printWords(words[i]);
    }

    for (int i = 0; i < n; i++) {
        free(words[i]);
    }
    free(words);
    fclose(fp);
}
```



3번

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#define MAX 20

void printWords(char str[]) { printf("%s ", str); }

int compare(const void *a, const void *b) { return strcmp((char *)a, (char
*)b); }

int main() {
    FILE *fp;
    int n;
    char words[MAX][MAX];
    char temp_c;

    fp = fopen("f3.txt", "r");

    while (n < MAX && fscanf(fp, "%20s", words[n]) == 1) {
        n++;
    }

    qsort(words, n, sizeof(words[0]), compare);
    for (int i = 0; i < n; i++) {
        printWords(words[i]);
    }

    fclose(fp);
}
```



4번

```
#include <stdio.h>
#include <string.h>
#define MAX_PASSWORD_LENGTH 100

int isValidLength(char *pass1) {
    gets(pass1);
    int passLength = strlen(pass1);
    if (passLength >= 5 && passLength <= 10) {
        return 1;
    }
    return 0;
}

int isValidEqualSecPass(char *pass1, char *pass2) {
    gets(pass2);
    if (strcmp(pass1, pass2) == 0) {
        return 1;
    }
    return 0;
}

int main() {
    char pass1[MAX_PASSWORD_LENGTH], pass2[MAX_PASSWORD_LENGTH];

    while (1) {
        if (isValidLength(pass1) && isValidEqualSecPass(pass1, pass2)) {
            printf("Done\n");
            return 0;
        }
        printf("Retry\n");
    }
}
```

```
 ~/gi/knu-/2/프로그래밍기초/lab3  main !1 ?4  ./4
warning: this program uses gets(), which is unsafe.
password
passw
Retry
retry
retry
Done
```

```
 ~/gi/knu-/2/프로그래밍기초/lab3  main !1 ?4  ./4
warning: this program uses gets(), which is unsafe.
invalid password length
Retry
C Programming Language
Retry
abcdef
abcdef
Done
```

5번

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

int main(int argc, char *argv[]) {
    char ch = argv[1][0];
    int num1 = atoi(argv[2]), num2 = atoi(argv[3]), res;

    if (argc != 4) {
        printf("사용방법: %s <operation> <num1> <num2>", argv[0]);
        return 0;
    }

    switch (ch) {
    case '+':
        res = num1 + num2;
        break;
    case '-':
        res = num1 - num2;
        break;
    case '*':
        res = num1 * num2;
```

```
        break;
    case '/':
        if (num2 == 0) {
            printf("0으로 나눌 수 없습니다.");
            return 0;
        }
        res = num1 / num2;
        break;
    }

    printf("Result = %d", res);
}
```