C Q1.c

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

#define BUFFER_SIZE 1024

int main() {
    char buffer[BUFFER_SIZE];
    ssize_t bytes_read, bytes_written;


    bytes_read = read(STDIN_FILENO, buffer, BUFFER_SIZE);
    if (bytes_read == -1) {
        perror("Error reading from standard input");
        exit(EXIT_FAILURE);
    }


    bytes_written = write(STDOUT_FILENO, buffer, bytes_read);
    if (bytes_written == -1) {
        perror("Error writing to standard output");
        exit(EXIT_FAILURE);
    }

    return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
prakul95@ubuntu:~/Desktop/Assignment 4$ gcc Q1.c -o Q1_Output
prakul95@ubuntu:~/Desktop/Assignment 4$ ./Q1_Output
hello sehaj
hello sehaj
prakul95@ubuntu:~/Desktop/Assignment 4$
```

C Q2.c

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

#define BUFFER_SIZE 1024

int main(int argc, char *argv[]) {
    if (argc != 3) {
        printf("Usage: %s <source> <destination>\n", argv[0]);
        exit(EXIT_FAILURE);
    }

    FILE *source_file = fopen(argv[1], "rb");
    if (source_file == NULL) {
        perror("Error opening source file");
        exit(EXIT_FAILURE);
    }

    FILE *destination_file = fopen(argv[2], "wb");
    if (destination_file == NULL) {
        perror("Error opening destination file");
        exit(EXIT_FAILURE);
    }

    char buffer[BUFFER_SIZE];
    size_t bytes_read;

    while ((bytes_read = fread(buffer, 1, BUFFER_SIZE, source_file)) > 0) {
        if (fwrite(buffer, 1, bytes_read, destination_file) != bytes_read) {
            perror("Error writing to destination file");
            fclose(source_file);
            fclose(destination_file);
            exit(EXIT_FAILURE);
        }
    }

    fclose(source_file);
    fclose(destination_file);
    printf("File copied successfully.\n");

    return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
prakul95@ubuntu:~/Desktop/Assignment 4$ gcc Q2.c -o Q2_Output
prakul95@ubuntu:~/Desktop/Assignment 4$ ./Q2_Output Source.txt Dest.txt
File copied successfully.
prakul95@ubuntu:~/Desktop/Assignment 4$
```

Q3.c

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

#define BUFFER_SIZE 1024

int main(int argc, char *argv[]) {
    if (argc < 2) {
        printf("Usage: %s <file1> [<file2> ...]\n", argv[0]);
        exit(EXIT_FAILURE);
    }

    for (int i = 1; i < argc; i++) {
        FILE *file = fopen(argv[i], "r");
        if (file == NULL) {
            perror("Error opening file");
            continue; // Skip to the next file
        }

        char buffer[BUFFER_SIZE];
        size_t bytes_read;

        while ((bytes_read = fread(buffer, 1, BUFFER_SIZE, file)) > 0) {
            if (fwrite(buffer, 1, bytes_read, stdout) != bytes_read) {
                perror("Error writing to stdout");
                fclose(file);
                exit(EXIT_FAILURE);
            }
        }

        fclose(file);
    }

    return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
prakul95@ubuntu:~/Desktop/Assignment 4$ gcc Q3.c -o Q3_Output
prakul95@ubuntu:~/Desktop/Assignment 4$ ./Q3_Output Source.txt
Hi Sehaj,
This is a Sample text for my assignment 4 Question no.2prakul95@ubuntu:~/Desktop/Assignm
```

C Q4.c

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

#define BUFFER_SIZE 1024

int main(int argc, char *argv[]) {
    if (argc < 3) {
        printf("Usage: %s <pattern> <file1> [<file2> ...]\n", argv[0]);
        exit(EXIT_FAILURE);
    }

    char *pattern = argv[1];

    for (int i = 2; i < argc; i++) {
        FILE *file = fopen(argv[i], "r");
        if (file == NULL) {
            perror("Error opening file");
            continue; // Skip to the next file
        }

        char buffer[BUFFER_SIZE];

        while (fgets(buffer, BUFFER_SIZE, file) != NULL) {
            if (strstr(buffer, pattern) != NULL) {
                printf("%s", buffer);
            }
        }

        fclose(file);
    }

    return 0;
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
prakul95@ubuntu:~/Desktop/Assignment 4$ ./Q4_Output "Sample text" Source.txt
prakul95@ubuntu:~/Desktop/Assignment 4$ ./Q4_Output "Sample text" Source.txt
prakul95@ubuntu:~/Desktop/Assignment 4$ ./Q4_Output "Sehaj" Source.txt
Hi Sehaj,
prakul95@ubuntu:~/Desktop/Assignment 4$
```