

C Q1.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <unistd.h>
4
5  #define BUFFER_SIZE 1024
6
7  int main() {
8      char buffer[BUFFER_SIZE];
9      ssize_t bytes_read, bytes_written;
10
11
12      bytes_read = read(STDIN_FILENO, buffer, BUFFER_SIZE);
13      if (bytes_read == -1) {
14          perror("Error reading from standard input");
15          exit(EXIT_FAILURE);
16      }
17
18
19      bytes_written = write(STDOUT_FILENO, buffer, bytes_read);
20      if (bytes_written == -1) {
21          perror("Error writing to standard output");
22          exit(EXIT_FAILURE);
23      }
24
25      return 0;
26  }
```

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

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  #define BUFFER_SIZE 1024
5
6  int main(int argc, char *argv[]) {
7      if (argc != 3) {
8          printf("Usage: %s <source> <destination>\n", argv[0]);
9          exit(EXIT_FAILURE);
10     }
11
12     FILE *source_file = fopen(argv[1], "rb");
13     if (source_file == NULL) {
14         perror("Error opening source file");
15         exit(EXIT_FAILURE);
16     }
17
18     FILE *destination_file = fopen(argv[2], "wb");
19     if (destination_file == NULL) {
20         perror("Error opening destination file");
21         exit(EXIT_FAILURE);
22     }
23
24     char buffer[BUFFER_SIZE];
25     size_t bytes_read;
26
27     while ((bytes_read = fread(buffer, 1, BUFFER_SIZE, source_file)) > 0) {
28         if (fwrite(buffer, 1, bytes_read, destination_file) != bytes_read) {
29             perror("Error writing to destination file");
30             fclose(source_file);
31             fclose(destination_file);
32             exit(EXIT_FAILURE);
33         }
34     }
35
36     fclose(source_file);
37     fclose(destination_file);
38     printf("File copied successfully.\n");
39
40     return 0;
41 }
```

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$
```

C Q3.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  #define BUFFER_SIZE 1024
5
6  int main(int argc, char *argv[]) {
7      if (argc < 2) {
8          printf("Usage: %s <file1> [<file2> ...]\n", argv[0]);
9          exit(EXIT_FAILURE);
10     }
11
12     for (int i = 1; i < argc; i++) {
13         FILE *file = fopen(argv[i], "r");
14         if (file == NULL) {
15             perror("Error opening file");
16             continue; // Skip to the next file
17         }
18
19         char buffer[BUFFER_SIZE];
20         size_t bytes_read;
21
22         while ((bytes_read = fread(buffer, 1, BUFFER_SIZE, file)) > 0) {
23             if (fwrite(buffer, 1, bytes_read, stdout) != bytes_read) {
24                 perror("Error writing to stdout");
25                 fclose(file);
26                 exit(EXIT_FAILURE);
27             }
28         }
29
30         fclose(file);
31     }
32
33     return 0;
34 }
```

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/Assignment

C Q4.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <string.h>
4
5  #define BUFFER_SIZE 1024
6
7  int main(int argc, char *argv[]) {
8      if (argc < 3) {
9          printf("Usage: %s <pattern> <file1> [<file2> ...]\n", argv[0]);
10         exit(EXIT_FAILURE);
11     }
12
13     char *pattern = argv[1];
14
15     for (int i = 2; i < argc; i++) {
16         FILE *file = fopen(argv[i], "r");
17         if (file == NULL) {
18             perror("Error opening file");
19             continue; // Skip to the next file
20         }
21
22         char buffer[BUFFER_SIZE];
23
24         while (fgets(buffer, BUFFER_SIZE, file) != NULL) {
25             if (strstr(buffer, pattern) != NULL) {
26                 printf("%s", buffer);
27             }
28         }
29
30         fclose(file);
31     }
32
33     return 0;
34 }
```

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$
```