WEEK -5

1. **Problem Statement**: Write a C for the implementation of PIPE.

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

int main() {
    pid_t pid;
    char str[100], ans[100];
    int f[2];
    int bytesRead, bytesWrite;

    if (pipe(f) == -1) {
        perror("Pipe failed");
        exit(1);
    }

    pid = fork();

    if (pid < 0) {
        perror("Fork failed");
        exit(1);
    }

    if (pid == 0) {
        close(f[0]);
        printf("\nEnter the string: ");
```

```
        fgets(str, sizeof(str), stdin);

        str[strcspn(str, "\n")] = 0;

        bytesWrite = write(f[1], str, strlen(str));
        printf("The child has written %d bytes to the pipe.\n", bytesWrite);
        close(f[1]);
        exit(0);
    } else {
        close(f[1]);
        bytesRead = read(f[0], ans, sizeof(ans) - 1);
        ans[bytesRead] = '\0';
        printf("The parent has read %d bytes from the pipe.\n", bytesRead);
        printf("Read string: %s\n", ans);
        close(f[0]);
    }

    printf("Terminated.\n");
    return 0;
}
```

OUTPUT

```
Enter the string: My name is Saloni Gupta
The child has written 23 bytes to the pipe.
The parent has read 23 bytes from the pipe.
Read string: My name is Saloni Gupta
Terminated.
```