

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.
```
