**Queue assignments**

Mandatory

1. Refer the example code of queue using array in socodery. Modify the data structure as below and accordingly update the code to add support to keep MAX\_QUEUE\_SIZE user input strings read at runtime. Consider a configurable queue capacity

#define MAX\_QUEUE\_SIZE 5

typedef struct queue

{

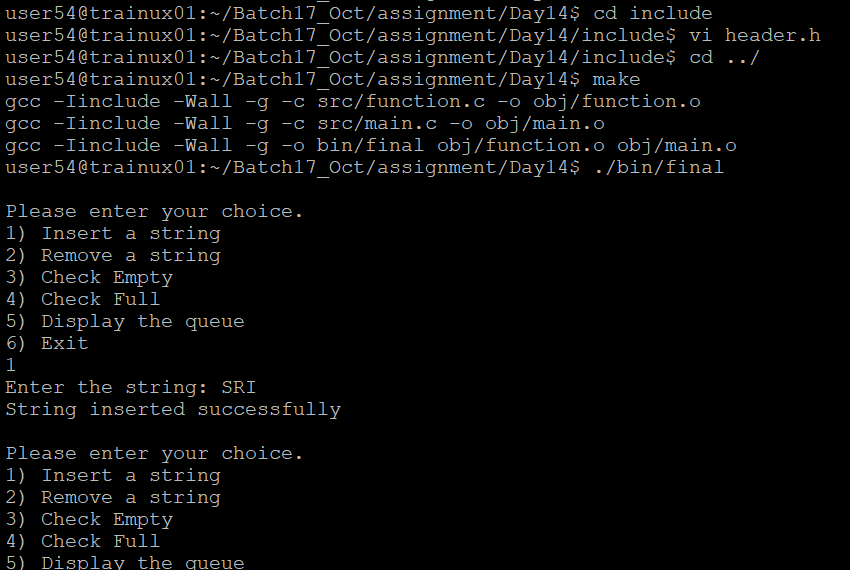
int arr[MAX\_QUEUE\_SIZE];

char \*\*data;

int front;

int rear;

}queue\_t;



2. Refer the example code of queue using list in socodery. Modify the data structure as below and accordingly update the code to add support to keep string data read from user (of maximum length 80 characters) at runtime. Ensure 0 memory leaks.

typedef struct node\_q

{

Int data;

char \*data; //data read from user at runtime

struct node\_q \*next;

}node;

A screenshot of a computer program

Description automatically generated