10. Illustrate the concept of inter-process communication usingmessage queue with a c program

A. Code:

```
#include <stdio.h>
#include <stdlib.h>
#include <errno.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>

#define PERMS 0644
struct my_msgbuf {
  long mtype;
  char mtext[200];
};

int main(void) {
  struct my_msgbuf buf;
  int msqid;
  int toend;
  key_t key;

  if ((key = ftok("msgq.txt", 'B')) == -1) {
    perror("ftok");
    exit(1);
  }

  if ((msqid = msgget(key, PERMS)) == -1) { /* connect to the queue */
    perror("msgget");
    exit(1);
  }
  printf("message queue: ready to receive messages.\n");
```

```
  for(;;) { /* normally receiving never ends but just to make conclusion
          /* this program ends wuth string of end */
    if (msgrcv(msqid, &buf, sizeof(buf.mtext), 0, 0) == -1) {
      perror("msgrcv");
      exit(1);
    }
    printf("recvd: \"%s\"\n", buf.mtext);
    toend = strcmp(buf.mtext,"end");
    if (toend == 0)
    break;
  }
  printf("message queue: done receiving messages.\n");
  system("rm msgq.txt");
  return 0;
}
```