

Lab 4



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Task 1

Firstly changed compiler to use the -ansi flag.

In order to read from file unbuffered we used the int solution.

```
"int fd = open("./input.txt", O_RDONLY, 0);"
```

fd references the file, in order to do this the The buf_in function uses two parameters the reference to the file and a "Boolean" which is used to identify if it's the first time the function is called. Since the first time the function is called its supposed to read 16 bytes and subsequent calls only read 1 byte.

The buffer was tested with a poem that was more than 32 bytes and it worked as intended.

```

#include <stdio.h>
#include <stdlib.h>
#include <sys/types.h>
#include <fcntl.h>
#include <unistd.h>

#define b 16

void buf_in (int source, int first) {
    char *buffer = (char *) calloc(b, sizeof(char));
    int size;
    /* First call 16 bytes */
    if (first == 0) {

        size = read(source, buffer, b);
        }
        /* Subsequent call */
    else {
        size = read(source, buffer, 1);
    }
    buffer[size] = '\0';
    printf("%s", buffer);
    free(buffer);
}

int main () {
    int fd = open("./input.txt", O_RDONLY, 0);
    int i;
    printf("%d\n", fd);
    buf_in(fd, 0);
    for (i = 0; i < 500; i++) {
        buf_in(fd, 1);
    }

    close(fd);
    return 0;
}

```