

```

/* Parity.c - Returns PAR_EVEN if parity is even
 *
 * Returns PAR_ODD if parity is odd
 * Returns PAR_ERROR if error in input
 * Copyright 2019 Graeme Judge
 */

```

```

#include "Parity.h"

```

```

PARITY ParityOnBytes(char* buf, int iBufLen) {
    int iSum=0;

    for (size_t i = 0; i < iBufLen; i++, buf++)
    {
        if ((*buf) == '1') {
            //its a one
            iSum++;
        }
        else if (*buf != '0') {
            return (PAR_ERROR);
        }
    }

    if (iSum % 2 == 1) {
        return (PAR_ODD);
    }
    else {
        return(PAR_EVEN);
    }
}

```

```

/* Parity.h - Defines parity enumerated datatype PAR_EVEN, PAR_ODD, PAR_ERROR
 *
 * Copyright 2019 Graeme Judge
 */

```

```

#ifndef PARITY_H
#define PARITY_H

enum PARITY { PAR_EVEN, PAR_ODD, PAR_ERROR };

PARITY ParityOnBytes(char* buf, int iBufLen);

#endif

```