**Assignment:**

Write a program to parse s-record file. Print out the info:

* Line number
* Converted address
* Converted data

**Requirement:**

Not allow to use functions to allocate dynamic memory such as malloc, calloc.

The prototype of parse function is required as below:

typedef enum {

    e\_parseStatus\_done = 0U,

    e\_parseStatus\_inprogress = 1U,

    e\_parseStatus\_error = 2U,

    e\_parseStatus\_undefined = 3U

} parse\_status\_t;

typedef struct

{

    uint32\_t address;

    uint8\_t data[MAX\_DATA\_SIZE];

    uint8\_t dataLength;

} parse\_data\_struct\_t;

parse\_status\_t parseData(uint8\_t pInput[], parse\_data\_struct\_t \*pOutput);

**Param:**

* pInput[] – srec line
* pOutput – output of parsed data

**Return:**

Undefined – when initializing

Inprogress – when parsing S0 or 1,2,3,4,5 or 6 line

Done – when parsing S7 or 8, 9 line

Error – When error

**Reference:**

<https://en.wikipedia.org/wiki/SREC_(file_format)>