**Assignment:**

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

* Converted address
* Converted data

**Requirement: (Violate any req, will be marked as 0)**

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

Separate the program to layers: parse, app.

Not allow sharing any global variable between layers.

The prototype of parse function is required as below:

typedef enum {

    e\_parseStatus\_done = 0x00U,

e\_parseStatus\_start = 0x01U,

    e\_parseStatus\_inprogress = 0x02U,

    e\_parseStatus\_error = 0xFFU,

} parse\_status\_t;

typedef struct

{

    uint32\_t address;

    uint8\_t data[MAX\_LINE\_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:**

Start – When parsing S0 line

Inprogress – when parsing S1 or 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)>