6.12   Code 39 - barcode generation

Write a function which encodes a text using Code 39 barcode (the same task as for MIPS project). The function should be written in Intel x86 (32 and 64 bit) assembly language. The C/C++ declaration of the function should be

```
int encode39(unsigned char *dest_bitmap,
             int bar_width,
             char *text)
```

where:
- *dest bitmap* is a pointer to generated image (header and pixel data),
- *bar width* - the width in pixels of narrowest bar,
- *text* – text to be encoded.

The function should return a 0 (OK) or a positive number indicating an error (e.g. barcode does not fit in bitmap of given size, text contains characters which can not be encoded).

Input
- the width in pixels of narrowest bar,
- text to be encoded.

Output
- BMP file containing the barcode image:
  - Sub format: 24 bits RGB – no compression,
  - Image size: 600x50 px,
  - Colors: bars – black, background – white.
- file name: "output.bmp"

Remarks:
1. Do not store bars and spaces patterns in coding table as character strings.
2. File I/O, memory allocation, displaying of messages should be done in C/C++ program.

References:
[1] "**file-format-bmp**", https://www.daubnet.com/en/file-format-bmp
[2] "**Code 39**", https://en.wikipedia.org/wiki/Code_39
[3] Example images, http://galera.ii.pw.edu.pl/~zsz/ecoar/images/barcodes