

A. Develop a C program which reads a text file, whose name is given as an argument to your program (i.e. in `argv[1]`), and then creates and dumps a binary file. The first line in the text file describes the formats and lengths of the fields contained in the following lines. Any line is of at most 1024 bytes in length. Each field is specified by a character indicating its type, and a width. Types can be **I** for signed integer, **D** for decimal value, and **C** for character arrays. This types are internally represented as follows: **I** type corresponds to long, **D** type is represented using two long integers, one for the integral part and one for the decimal part, **C** type is represented as a C character string (ASCII). These specifiers are separated by commas. The binary file retains this information in a 1024 bytes block stored as first record in the file. This record is an array of records with the following structure:

```
struct {
    char type;
    int width;
}
```

Create this file, with the name derived from the input file name, by appending the extension **".dbj"**.

The input file is **16.A** (given on the web page).

Use the dumper program, **dump16A.exe**, provided on the web page, to check your output.

Output of dumper is:

```
I;10 C;40 D;20 D;10
0000000001;Abababa ghgghjjhg uyuyy      ,0000000030.25      ,00012.3
0000000002;Cbd saDrfwert                  ,0000000011.25      ,00017.30
0000000003;Klkjklj uyuyy                  ,0000000004.15      ,00107.30
0000000004;Poioioio ghgghjjhg uyuyy      ,0000000003.99      ,00033.2
0000000005;Uncndcm ghgghjjhg uyuyy      ,0000000299.99      ,00010.0
0000000006;Rmdfldsm ghgghjjhg uyuyy      ,0000000039.99      ,00112.3
0000000007;Tdsfnsfdkj ghgghjjhg uyuyy    ,0000000130.25      ,00011.0
0000000008;Flfdksdk ghgghjjhg uyuyy      ,0000000000.25      ,00212.1
0000000009;YUyuuyuy ghgghjjhg uyuyy      ,0000000000.99      ,00103.1
0000000010;Vbbvvbn uyuyy                  ,0000000930.25      ,00212.5
0000000011;IOPIopii ghgghjjhg uyuyy      ,0000000330.25      ,00013.0
0000000012;ESEseses ghgghjjhg uyuyy      ,0000000530.11      ,00022.0
```

B. Develop a C program which reads a text file, whose name is given as an argument to your program (i.e. in `argv[1]`), and then creates and dumps a binary file. The first line in the text file describes the formats and lengths of the fields contained in the following lines. Any line is of at most 2048 bytes in length. Each field is specified by a character indicating its type, and a width. Types can be **I** for signed integer, **D** for decimal value, and **C** for character arrays. This types are internally represented as follows: **I** type corresponds to long, **D** type is represented using two long integers, one for the integral part and one for the decimal part, **C** type is represented as a C character string (ASCII). These specifiers are separated by semicolons.

The binary file retains this information in a 1024 bytes block stored as first record in the file. This record is an array of records with the following structure:

```
struct {
    int width;
    char type;
}
```

Create this file, with the name derived from the input file name, by appending the extension **".dbj"**.

The input file is **16.B** (given on the web page).

Use the dumper program, **dump16B.exe**, provided on the web page, to check your output.

Output of dumper is:

```
I;10 C;30 D;15 D;8
0000000001;Abababa ghgghjjhg uyuyy      ;00000030.25      ;0012.3
0000000002;Cbd saDrfwert                  ;00000011.25      ;0017.30
0000000003;Klkjklj uyuyy                  ;00000004.15      ;0107.30
0000000004;Poioioio ghgghjjhg uyuyy      ;00000003.99      ;0033.2
0000000005;Uncndcm ghgghjjhg uyuyy      ;00000299.99      ;0010.0
0000000006;Rmdfldsm ghgghjjhg uyuyy      ;00000039.99      ;0112.3
0000000007;Tdsfnsfdkj ghgghjjhg uyuyy    ;00000130.25      ;0011.0
0000000008;Flfdksdk ghgghjjhg uyuyy      ;00000000.25      ;0212.1
0000000009;YUyuuyuy ghgghjjhg uyuyy      ;00000000.99      ;0103.1
0000000010;Vbbvvbn uyuyy                  ;00000930.25      ;0212.5
0000000011;IOPIopii ghgghjjhg uyuyy      ;00000330.25      ;0013.0
0000000012;ESEseses ghgghjjhg uyuyy      ;00000530.11      ;0022.0
```