/\*\*

\* bmp.h

\*

\* Computer Science 50

\* Problem Set 4

\*

\* BMP-related data types based on Microsoft's own.

\*/

#include <stdint.h>

/\*\*

\* Common Data Types

\*

\* The data types in this section are essentially aliases for C/C++

\* primitive data types.

\*

\* Adapted from http://msdn.microsoft.com/en-us/library/cc230309.aspx.

\* See http://en.wikipedia.org/wiki/Stdint.h for more on stdint.h.

\*/

typedef uint8\_t BYTE;

typedef uint32\_t DWORD;

typedef int32\_t LONG;

typedef uint16\_t WORD;

/\*\*

\* BITMAPFILEHEADER

\*

\* The BITMAPFILEHEADER structure contains information about the type, size,

\* and layout of a file that contains a DIB [device-independent bitmap].

\*

\* Adapted from http://msdn.microsoft.com/en-us/library/dd183374(VS.85).aspx.

\*/

typedef struct

{

WORD bfType;

DWORD bfSize;

WORD bfReserved1;

WORD bfReserved2;

DWORD bfOffBits;

} \_\_attribute\_\_((\_\_packed\_\_))

BITMAPFILEHEADER;

/\*\*

\* BITMAPINFOHEADER

\*

\* The BITMAPINFOHEADER structure contains information about the

\* dimensions and color format of a DIB [device-independent bitmap].

\*

\* Adapted from http://msdn.microsoft.com/en-us/library/dd183376(VS.85).aspx.

\*/

typedef struct

{

DWORD biSize;

LONG biWidth;

LONG biHeight;

WORD biPlanes;

WORD biBitCount;

DWORD biCompression;

DWORD biSizeImage;

LONG biXPelsPerMeter;

LONG biYPelsPerMeter;

DWORD biClrUsed;

DWORD biClrImportant;

} \_\_attribute\_\_((\_\_packed\_\_))

BITMAPINFOHEADER;

/\*\*

\* RGBTRIPLE

\*

\* This structure describes a color consisting of relative intensities of

\* red, green, and blue.

\*

\* Adapted from http://msdn.microsoft.com/en-us/library/aa922590.aspx.

\*/

typedef struct

{

BYTE rgbtBlue;

BYTE rgbtGreen;

BYTE rgbtRed;

} \_\_attribute\_\_((\_\_packed\_\_))

RGBTRIPLE;