INTRODUCTION

In this assignment, you are to write a program for generating an ASCII art image. The image data has the following format:

```
<height> <width>
<row> <column> <character>
<row> <column> <character>
<row> <column> <character>
<row> <column> <character>
....
```

You are to place the individual characters into a matrix at the specified row and column locations. For example, if the image data was:

```
4 10
0 0 @
1 0 |
2 0 |
3 0 |
0 1 _
1 1 @
2 1 @
3 1 _
0 2 @
1 2 |
2 2 @
3 2 |
0 3 @
1 3 _
2 3 _
3 3 @
0 4 @
1 4 |
2 4 @
3 4 |
0 5 _
1 5 @
2 5 @
3 5 _
0 6 @
1 6 |
2 6 |
3 6 |
0 7 @
1 7 |
```

```
2 7 |
3 7 |
0 8 _
1 8 @
2 8 @
3 8 _
0 9 @
1 9 |
2 9 |
3 9 |
```

your program should produce the following output:

```
 _   _  _
| |_| || |
|  _  || |
|_| |_||_|
```

Note: your program should translate @ characters into spaces.

INPUT/OUTPUT

Create a directory *art* which hangs off *clab* directory. Develop your program in *art.c* file located in *art* directory. Your program should take the name of the file containing the image data as a command line argument.

STRATEGY

Open the given file using a file operator *fopen* function and read the height and the width. Use these numbers to create a matrix (you may use the code from the last activity). Then read each triplet and place the just-read character (perhaps translated) into the matrix at the specified row and column position. Use *fscanf* to read row and column index number. Use *fgetc* to read single character.

char-read = fgetc(filePointer);

Once you have read in all the data, print out the matrix one row at a time. You will need to print each character in a row individually (rather than print the entire row).

TESTING YOUR PROGRAM

Test your program by downloading this image file from LMS or your dropbox account:

```
who.dat
```

Can you figure out who is in this image? You will need to adjust the font-size of your terminal to 6 point in order to see the image clearly (Edit/Preferences/Appearance/Font). Rerun your program with the smaller font in effect.

Create a file named after the mystery person.

SUBMISSION

Do a directory listing (`ls`); you should see, at a minimum, something like:

```
art.c  bozo  who.dat
```

(if the mystery person is Bozo the Clown, which it is not).

Run the command:

```
submit clab mr art <your-iiitb.org-email-address>
```