CS 2110 Timed Lab 3

Due Date and Time

Day: Wednesday, April 1st, 2015

Time: Before the end of you lab section

Policy

Submission

TURN IN THIS ASSIGNMENT ELECTRONICALLY USING T-SQUARE. SUBMISSIONS WHICH ARE LATE WILL NOT BE ACCEPTED. EMAIL SUBMISSIONS WILL NOT BE ACCEPTED UNDER ANY CIRCUMSTANCES! IN ADDITION IF YOU FORGET TO HIT THE SUBMIT BUTTON YOU WILL GET A ZERO.

Questions

If you are unsure of what questions mean, the TA's will clarify them to the best of their ability. In the end you are solely responsible for what you submit. We will not be able to answer any questions about how to reach a solution to the lab questions.

What's Allowed

- The assignment files
- Your previous Homework and Lab submissions
- Your mind
- Blank paper for scratch work

What's Not Allowed

- The Internet (except the T-Square Assignment page to submit)
- Any resource on T-Square that is not given in the assignment.
- Dropbox (if your harddrive crashes we will let you retake it!)
- Notes on paper or saved on your computer.
- Textbook
- Email
- IM
- Contact in any form with any other person besides TA's
- If you have any questions on what you may not use then assume you can't use it and ask a TA.

Other Restrictions

1. You may not leave the classroom until we have verified that you have submitted the lab. If you leave the classroom without submitting you will receive a zero.

2. **YOU MUST SUBMIT BY THE END OF YOUR LAB PERIOD**. Bear in mind that the clock on your computer may be a few minutes slow. You are supposed to have a full class period to work, and we are letting you use the 10 minutes between classes to make sure you have submitted your work. **WE WILL NOT ACCEPT LATE SUBMISSIONS**, be they 1 second or 1 hour late.

3. The timed lab has been configured to accept one submission. If you accidentally submit or submit the wrong version, call one of the TA's and we will reopen submission for you. But PLEASE PLEASE PLEASE submit the right thing the first time. The TA's get busy at the end of the lab making sure everyone submitted, and it's tough doing that AND re-opening submissions for 5 students. Yes, it does happen. Don't let it happen to you.

Violations

Failure to follow these rules will be in violation of the Georgia Tech Honor Code. **AND YOU WILL RECIEVE A ZERO** and you will be reported to the professor and the Office of Student Integrity.

We take cheating and using of unauthorized resources **VERY SERIOUSLY** and you will be in serious trouble if you are caught.

Remember

1. Please don’t get stressed out during a timed lab. You have plenty of time however use your time effectively

2. Partial credit is given. If you don’t know something at least **TRY** do not just walk out of the lab or submit an empty file. Do the best you can!

3. Make sure your code can compile. Your code must compile to get any points for this assignment!

4. Remember what you can and can’t use. If you don’t know, ask a TA if you can use it. If we catch you with unauthorized resources we will give you a zero, so better to be safe than sorry.

The Assignment

Your assignment is to write a function that draws a portion of an arbitrary sized image at a given point on the screen using **DMA**. This function called “draw_image_portion” and is found in main.c.

You will be given a source image called “image”. For this image you will be given “source_row“, “source_col“, “source_width“ and “source_height“ which together tell you the bounding box around the portion of the image you are expected to draw on the screen.

You will be given the starting “destination_row“ and “destination_col“ which define the beginning row and column on the screen that the portion of the image should be drawn at.

NOTE: You cannot assume that the source image will be the size of the screen. The width of the image is image_width. You must implement this function using **DMA**.

To test your function we have provide an image of farnsworth and a spritesheet. The spritesheet is an image of size 480x480 and contains several small images of size 60x60.

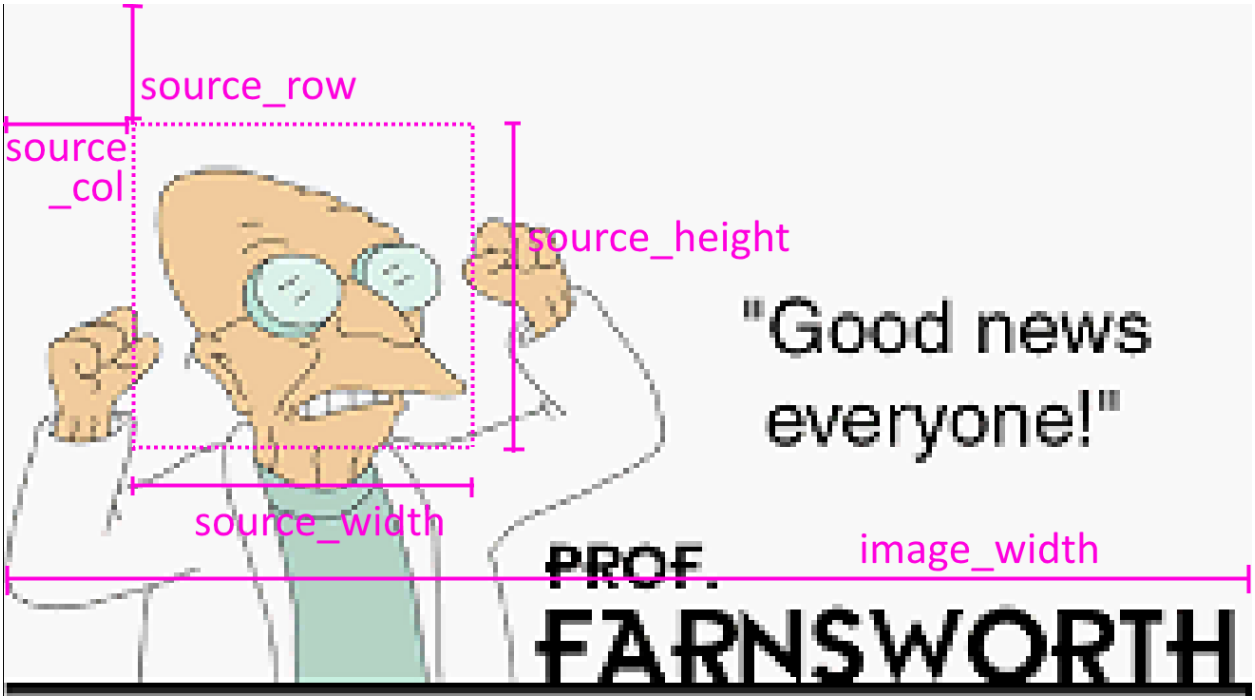
Noncompiling submissions will receive a 0. Your submission must compile!

Example
Here is an example of how this function would work using an image of Professor Farnsworth. We will crop his head out of the source image and place it at an arbitrary location on the screen.

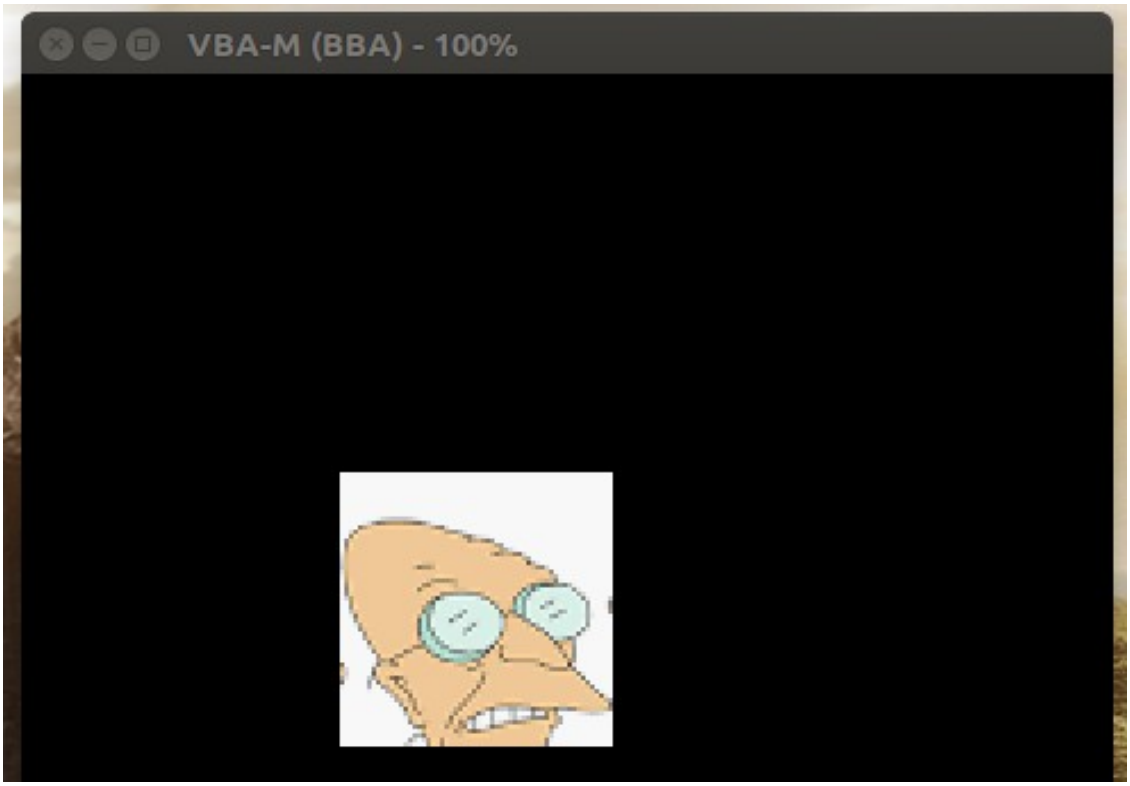
The example source image:

(example continued on next page)

Source image with the bounding box and image_width shown:

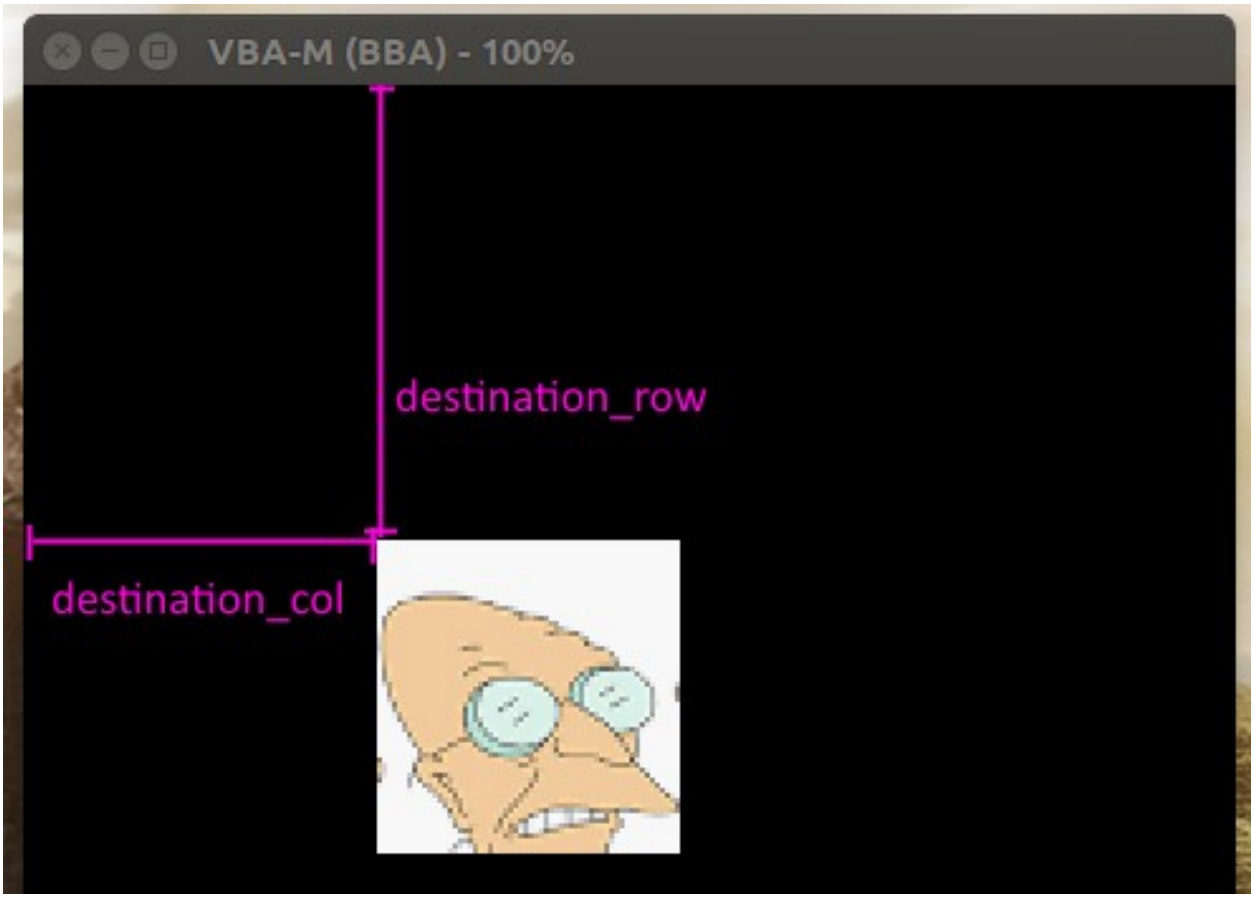


Desired result screen:



(example continued on next page)

Desired result with destination_row and destination_col shown:



Deliverables

1) main.c

You should not need to modify any additional files.