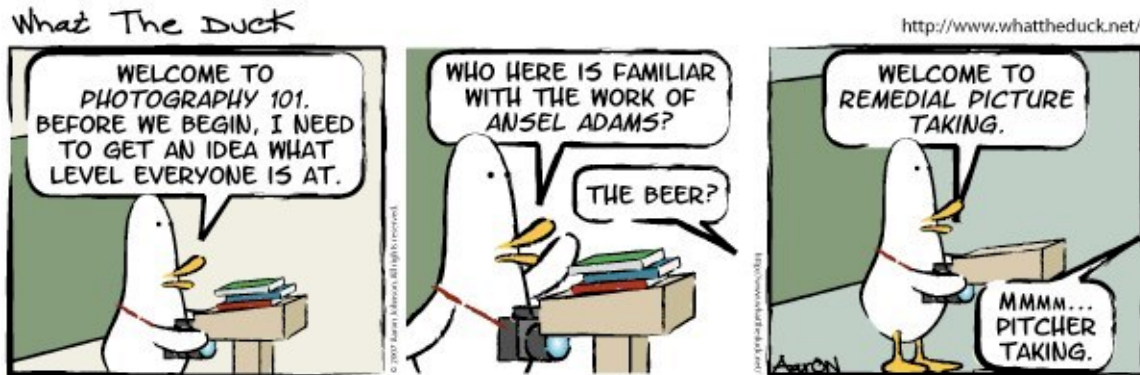


Keep an I[SO] Out

Project 1. Due 5:30PM on Monday, September 19, 2011.



Part I. Setup! (10 points)

The projects and problem sets in this course will require you to submit a variety of file types towards their completion. Over time you'll need to submit photos, Word documents (or plain text files), RAW images, and others. As a result of this mix, we will be using two major online tools for submission throughout the semester. Registration for both is free. Though both offer premium services for an additional cost, there is no need to spend money on these services for the purposes of this course.

Dropbox (<http://www.dropbox.com>) is an application that shares files between multiple computers. Once you set up Dropbox on your computer you can drag files into a special Dropbox folder where they will be uploaded to "the cloud" and automatically distributed to the other computers onto which you also have Dropbox installed. You can also access these files via the Dropbox website, and as you work with these files on any computer they are automatically updated everywhere. This is very handy if you have multiple computers and want to share files between them or if you need to access a document from afar! But it is also a great way for you to automatically submit your work to the staff.

Tumblr (<http://www.tumblr.com>) is a microblogging service that allows an author to quickly post text, pictures, video, and other media via an easy-to-use interface. The staff will be using this to post announcements, photos, and posts with links to things that are either directly or tangentially related to the course or class material. Submitting your work by Dropbox is a great way to share it with the staff but not the best way to share with your classmates, friends, and family. Tumblr is the means through which you will be publicly sharing select items! In fact, you will be posting directly to the Computer Science E-7 blog that is found at <http://blog.cse7.org>.

As part of your setup you will need to get accounts for each of these services. Feel free to use existing accounts for either if you have them!

1. **Sign up for Dropbox.** It is best, if you already have an account, to use that existing one as it can be tricky to have multiple Dropbox accounts on one computer. If you do have an account that you wish to use, please skip to step number 4. If you need an account, simply submit the registration form found at this link:

<http://cse7.org/dropbox>

Be sure to remember the email address you use to register for Dropbox! You'll need that later.

Note that this account will be private to you. You will submit to the staff the email address you used to register for Dropbox but we will not share it with others and we will not have access to your account. As a result, you may use your real name and email address if you wish and use Dropbox normally. As with all online services, however, it is essential to be prudent regarding the security of your account and the sensitivity of the documents you place into the Dropbox folder. Notifying us of the email address you used for registration will allow us to find your Dropbox account and share a folder with you that will act as your point of submission. We will describe this process in more detail later!

2. **Install Dropbox.** After you have created a Dropbox account, you should install the Dropbox software onto your computer. This isn't required, but if you decide against it you will be missing out on the full capabilities of Dropbox and a slightly easier submission process! You can download the software from the following link:

<https://www.dropbox.com/install>

3. Now is the perfect time to get to know Dropbox if you are unfamiliar. If you have multiple computers, try installing the software on both. You only need one account even if you have multiple installations; just be sure to log in with the same credentials on both. No matter the number of computers you have, try dragging files into your Dropbox folder and wait a few moments as the sync occurs. In a short while, you will find those files in the Dropbox website (after you log in) and on however many computers you installed the software. Take a look at the tour on Dropbox's website to make you more comfortable with this concept and the features of the service:

<https://www.dropbox.com/tour>

4. **Sign up for Tumblr.** Once you're done getting setup with Dropbox it's time to register with Tumblr! If you have an existing account that you don't mind using for the course then feel free to skip this step. If you need an account or if you wish to create a new one, simply submit the registration form on the Tumblr homepage:

<https://www.tumblr.com/>

This will create your own Tumblr account and blog. You can feel free to use the just-created blog for your own purposes as we won't be using it for this course. In a moment, we will have you tell us the email address that you used to register for Tumblr and we will add you as a member of the Computer Science E-7 Blog, which will give you permissions to author posts for the course's Tumblr. To get used to this service, try posting something on your own new blog!

5. **Submit the e7 setup form.** Now that you have accounts on both services, you'll need to tell us a little bit about your accounts so we can complete the setup with the course. Submit the following setup form:

<http://cse7.org/setup>

And after 24 to 48 hours we will complete our portion of the setup. This involves a couple of steps:

- a. Creating a folder on the staff Dropbox account and sharing that folder with you. We don't have any visibility into the contents of your Dropbox account, but when we share a folder with you it

becomes possible for you to place files into that shared folder and those files will be synced back to our account for submission. Only the files you place in that shared folder are shared back to us. More information on shared folders can be found on:

<http://www.dropbox.com/help/19>

Realize that the above link is for information, and we ask that you **do not** share a folder of your own with us. Once we have created and shared the folder with you, you will receive an email and can place it in your Dropbox folder.

- b. We will send an invitation to the email address you used for Tumblr to participate in the course blog, where you can author posts of your own that will appear on the [Computer Science E-7 blog](#).

Please be sure to check your inbox for both of these emails! If you don't receive anything after 24 hours, check your Spam folder to see if one of these invitations might have been considered junk. If you still do not find it, please email staff@cse7.org and we will re-send your invitations.

Part II. Drop some photos in Dropbox. (80 points)

Now that you are ready to submit assignments, it's time to dive in and start taking some photographs! In general, every project will require a series of photographs to be taken. Over time, the requirements and guidelines we specify for your photographs might change, so please do be sure to read through the entire project and understand the various requirements before you attempt it.

The following are general guidelines that apply for every photograph that you submit for this project:

- The **EXIF data** associated with your photo must remain wholly intact. If you are unsure if your modifications will result in the erasure of this metadata, please submit the photo directly from the camera. We'll discuss EXIF data in upcoming lectures, but here is some preliminary information: <http://en.wikipedia.org/wiki/Exif>
- The photo **must not be resized**. We should be able to view the photo at its full resolution. Aspect ratio crops for composition are acceptable. Again, if you are in doubt, use the photo directly from the camera.
- Small modifications to the image such as color tweaks, contrast enhancement, *etc.*, are acceptable. However, please be sure that your image still meets all of the other requirements; notably, the EXIF data must be preserved and the image must be submitted at its original size.
- All submissions should be **original photos** taken by you for the purposes of this problem set.
- Be sure to submit the photos in the **JPEG** file format; this should be the default for many, if not all, cameras. If you prefer taking photos in RAW format, note your camera may have a "RAW+JPEG" setting where it will save a photo in both formats. You may also submit a photo that was taken in RAW and processed to JPEG, but you must ensure the preservation of the EXIF data. No need to be concerned if you are unfamiliar with RAW, we will be talking about it later in the course. If you're curious, there is some information about it here: http://en.wikipedia.org/wiki/Raw_image_format
- To submit these photos by the due date, simply place them in the "**1-Keep An ISO Out**" folder in the Dropbox directory we shared with you. Please be sure to place them in the directory with

enough time for them to upload to the servers before the project is due. You may submit early and modify the images as many times as you wish before the due date. However, take special care not to modify any of the files in this directory after the due date or your entire submission will be considered late.

1. (20 points) Take at least, but submit no more and no fewer than, **4 photographs** for this question. Each photograph should be of unique subjects (in other words, don't submit 4 photos of your cat!) and taken specifically for this problem set. The idea is for you to take photographs that you typically take with the camera you typically use.

Be sure at least one of the photographs you submit are of subjects or locations you can re-shoot in the future. We will ask you in a future assignment to revisit some of these photographs and attempt to retake them (after some modification and re-interpretation) so that you can observe how far your photographic skill has improved over the course of the semester!

Name the photographs **Q1-1.JPG** through **Q1-4.jpg** so that it is made clear which images are associated with this question.

2. (60 points) Take a series of three photographs that demonstrate how each of the three exposure factors (ISO, shutter speed, F-number) can impact the look of a photograph. Each photograph should showcase exactly one of those factors, and that photo should be a clear demonstration of that particular factor. In other words, if you take a photograph that is meant to demonstrate the effect of shutter speed on an image then the effect of the F-number or ISO should not be distracting. A person knowledgeable in exposure factors and the intention of the photograph should be able to look at your image and decide that it is clearly meant to reflect a slow shutter speed, for example. When attempting to isolate each factor, you might consider using one of the extreme ends of the possible ranges for each. In other words, extremely fast (1/8000s) or slow (30s) shutter speeds, very high ($f/16$) or low ($f/1.8$) F-numbers, and so on.

You only have one image to demonstrate each factor! Be sure to spend some time setting up an image that will satisfy the requirements of this question. In addition, try to take an image that is worthwhile with the effect you are trying to accomplish. In other words, if you decide to take a photo to isolate shutter speed it might be a bit silly to take a photo of a still object. As mentioned in class, taking many photos and selecting only a few from a large set is a great way to hone the quality of your photo.

Most of all, be creative and have fun with your photograph! Outside of the stated limitations for this question you have the freedom to capture any sort of photo you would like.

Speaking of limitations, here are the technical requirements for your images:

- Submit **1 photograph** per exposure factor to act as a demonstration of how that factor affects the image. You should therefore submit exactly 3 photographs for this question.
- Name the photographs **Q2-1.JPG** through **Q2-3.jpg** so that it is made clear which images are associated with this question.
- You should be sure that your **intended effect is clear** in each photo, as stated above.
- You must **isolate the effect** as best as you can. Even though you will have to modify other settings to keep your photos properly exposed you should minimize the effects of those settings as much as possible. When illustrating the effects of F-number, for example, you should keep

motion blur at a minimum. Some overlap is unavoidable; but again, we should know which exposure factor you are demonstrating simply by looking at the photograph.

- Your photos should be **perfectly exposed**. Remember, we are not asking you to show how each factor affects the end *exposure*, we want to make sure you understand how each factor affects the *appearance* of the photograph while keeping exposure relatively constant. Your subject should not have any loss of detail in shadows or the bright regions. Under-exposing or over-exposing the background is sometimes unavoidable but it should not be distracting.
- Only use the **Manual Mode**. You will need (either by trial-and-error, calculation, or even good guessing) to set your own exposure values for all exposure settings. Various modes such as aperture priority, shutter speed priority, or any of the "basic" modes do not count as manual modes as the camera is still setting exposure values based on its own calculations. If your camera's manual mode does not let you override all three values, you will need to borrow one of the course's from Church Street lab. You do not need to manually focus; you may use autofocus.

Part III. Tumble some stuff into Tumblr. (10 points)

Finally, to get yourself used to the [Computer Science E-7 blog](#) we ask that you submit something to it! You may submit anything you'd like that is directly or tangentially related to the course or the material presented therein. Take a look at some of the early posts on the blog to get a sense of what sorts of things we're looking for. You may post a photo of your own, somebody else's publicly-available photo you find particularly fantastic, a relevant link or video, or any similar thing that you find interesting with respect to the class and its material.

If you do decide to post material that is not your own, you must be sure to attribute it properly back to its original source.

Once your post is complete, find its "permalink" and submit it to us as record of your submission. A permalink is a link that will always point to your one specific post. For example, the following is a permalink to the pinhole photo post on the blog:

<http://blog.cse7.org/post/9574604017/pinhole-photo-of-the-good-looking-bunch-of-folks>

In order to find the permalink, simply find your completed post on the blog and click on the text that says when it was posted (for example, "Posted 1 minute ago", or "Posted 20 hours ago"). Clicking on that text takes you to the page that holds only that one post, and the URL of that page is the permalink.

Place this permalink into a text file (a Word document, PDF, or plain text file is fine) and save it as "Tumblr" in the "**1-Keep An ISO Out**" folder in the Dropbox directory we shared with you. Be sure this is done before the due date, or your entire submission will be considered late.

Once all that is done, give yourself a pat on the back! You've finished your first project for this course!