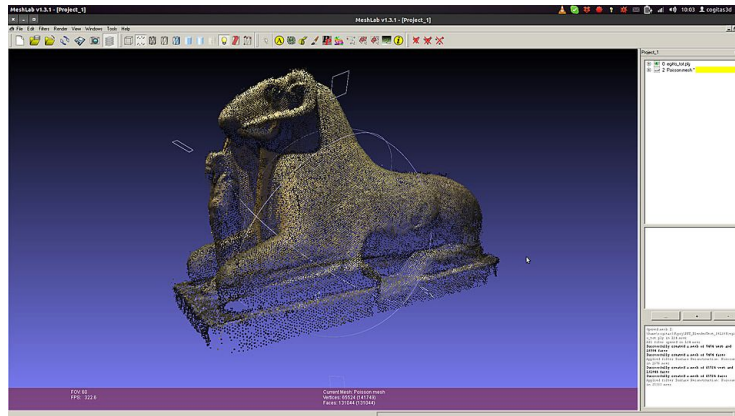


# Photogrammetry



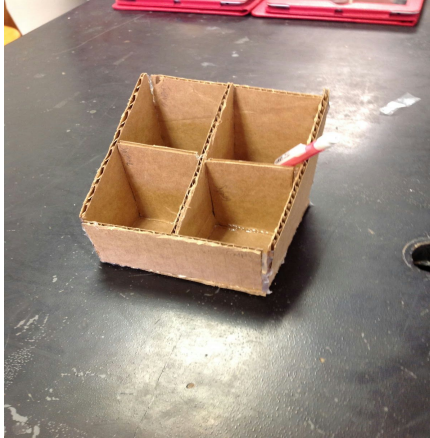
Photogrammetry is the use of photography in surveying and mapping to measure distances between objects.

We will be using photogrammetry processes to capture 3 Dimensional models of your desk top organizer prototypes.

\*Use this Google Document as a guide to go through the steps of the photogrammetry process.

When finished complete the conclusion questions below.

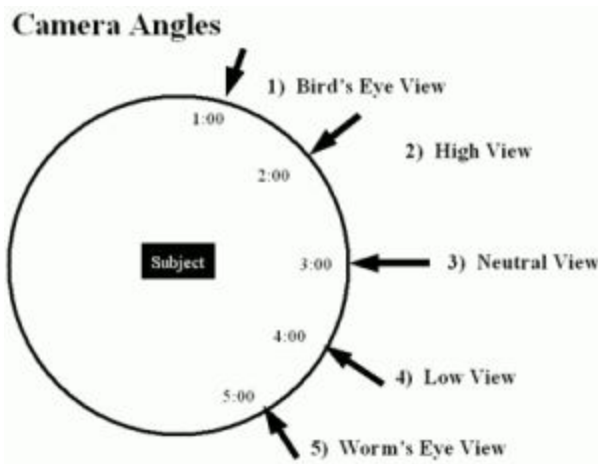
Step 1-



Place your desktop organizer on the desk so its not surrounded by other objects.

Items surrounding your prototype will decrease the quality of your model.

Step 2-



Use multiple angles when taking the photos. At least 2 elevations.

Hold the camera as close as possible to your prototype. with still making sure you get the whole prototype in each picture.

You are going to move around the organizer with the camera 360 degrees, taking a photo about every 10-15 degrees.

I suggest using:

**High View**  
**And Neutral View**

**Step 3-**Take 30-50 photos of your desktop organizer using the iPad.

\*See steps 4 for more information on photos.

Note: When taking photos make sure to stay as steady as possible. Your model will not be of high quality if your photos are not high quality

**Step 4-**



**Step 5-**

Save you photos on your desktop in a folder. Name the folder **Photogrammetry Model**.

You can save the photos from the ipad by highlighting all of them and dragging them into the new folder on your desktop.

## Step 6 -

One person in your group needs to create an account on Autodesk360's website.

Create an account on with autodesk [HERE](#)

Email: **SCHOOL EMAIL.**

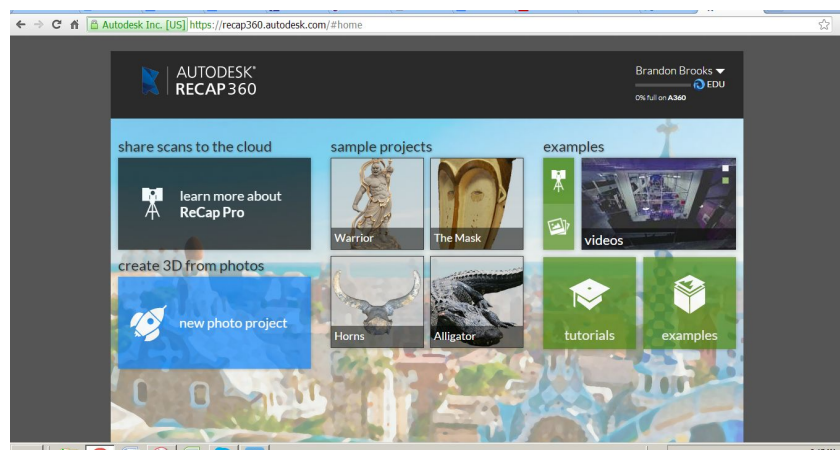
Autodesk ID: **COMPUTER LOGIN NAME**

PASSWORD: **SAME AS EMAIL PASSWORD**

Sign in.

## Step 7-

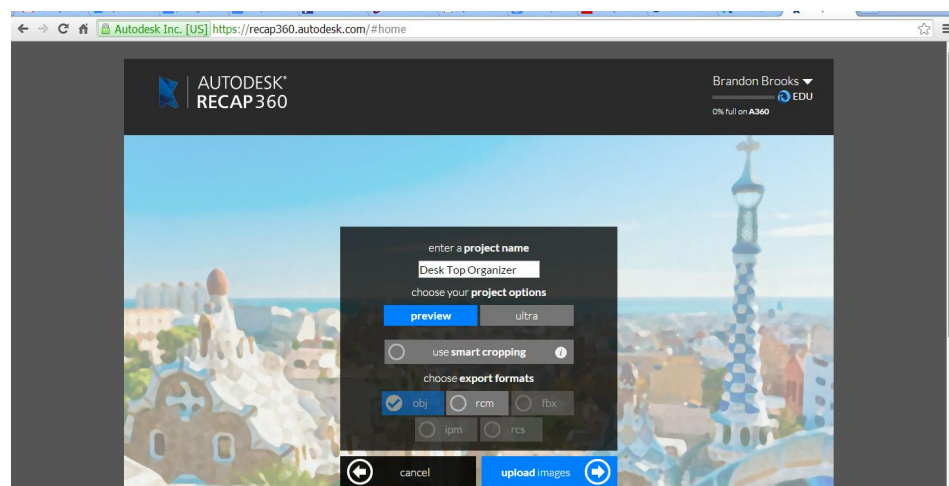
Click on the new photo project tab



## Step 8-

Name of project will be Desktop Organizer Model

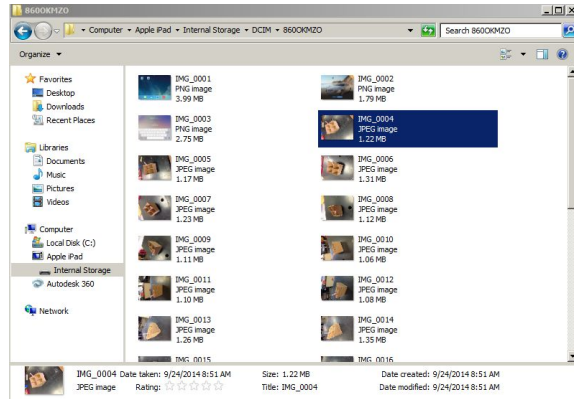
Click-Preview  
Check-OBJ



Then select upload images-

### Step 9 -

Go to your folder on the desktop and find your images taken with the ipad.



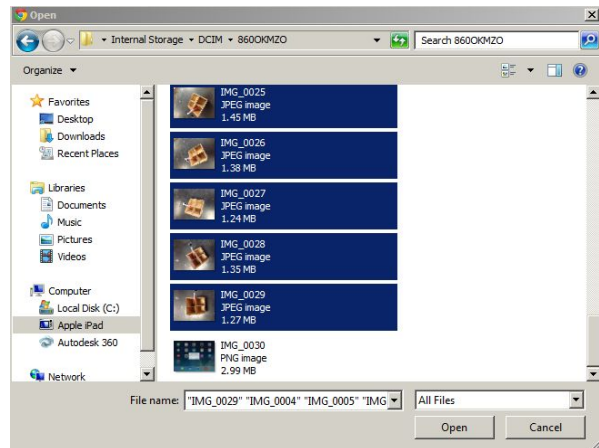
### Step 10-

Click on the first picture you want to upload

Hold the **SHIFT** button.

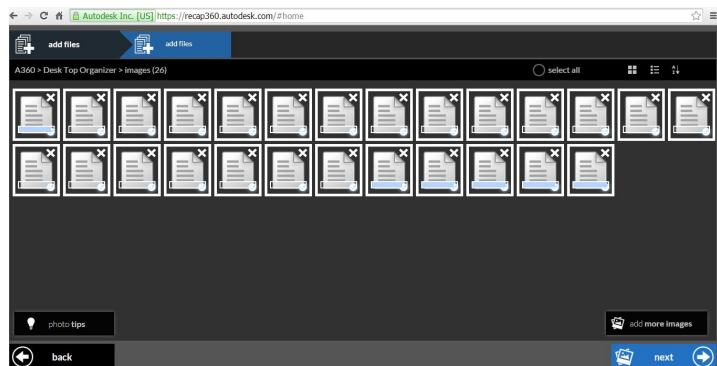
Click on the last photo you want to uplaod. (it should automatically select all photos between.)

Once all photos are selected, hit the **OPEN** button.



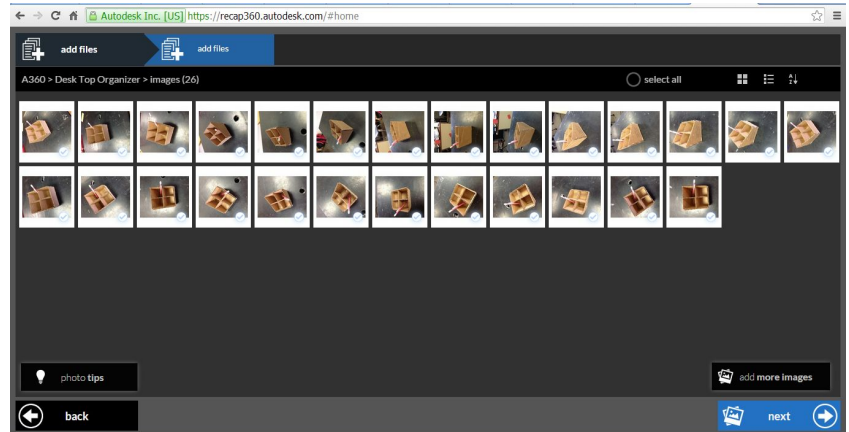
### Step 11-

Wait for your photos to upload.



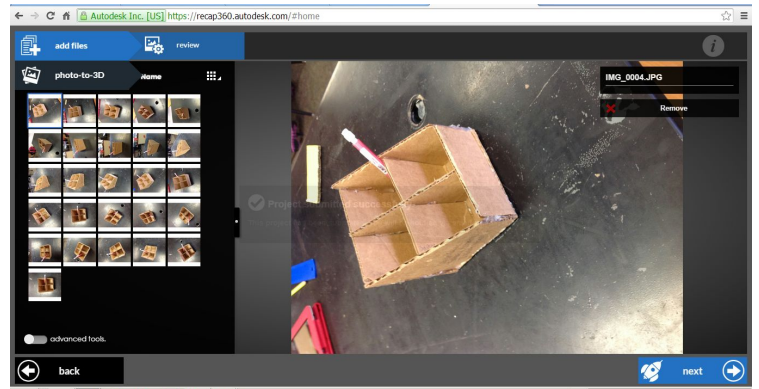
## Step 12-

once all photos appear select the **NEXT** button.



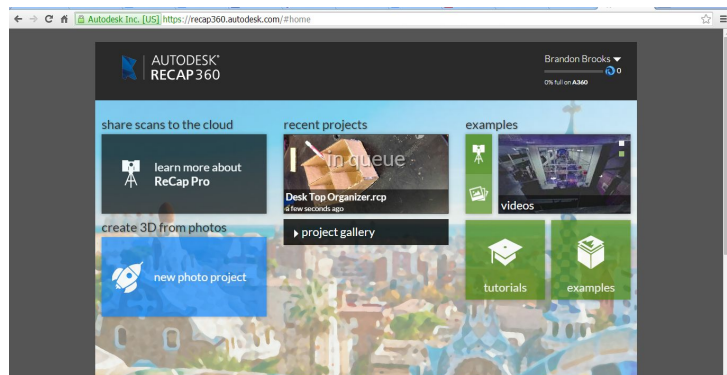
## Step 13-

After making sure your photos are of high quality. Select **NEXT** again.

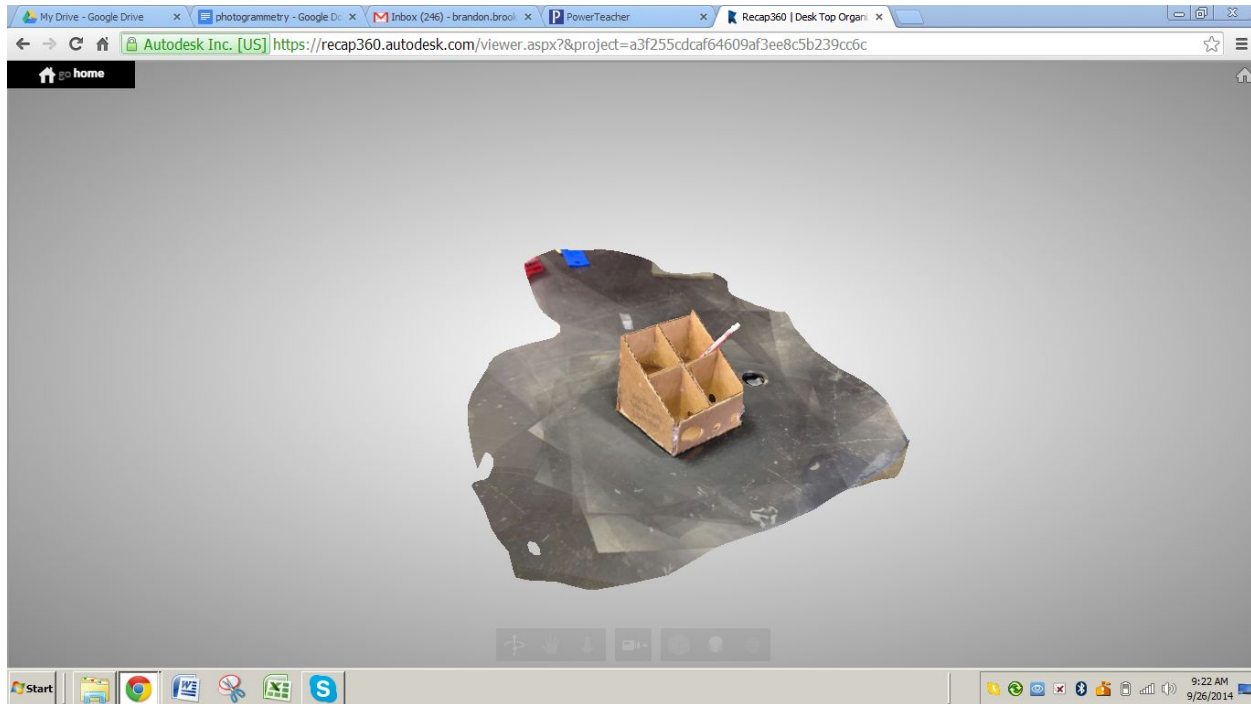


## Step 14-

Your model will take a few hours to complete.



When your model is complete it should look something like this:



1. What is 3D Modeling?
2. Why is 3D Modeling important?
3. What is the benefit to using photogrammetry as opposed to drawing the parts out by hand or on the computer?
4. What is a trade-off to using photogrammetry?(what is a negative result from it?)