

# Binghamton University

## State University of New York



Final Year Project On

Subject: **Image Cropping Tool**

By,

**Ripal Naik (B00443010)**  
**MS - Computer Science**

Under The Guidance Of

**Prof. Leslie Lander**  
Department of Computer Science  
Watson School of Engineering

# Binghamton University

## State University of New York



### **CERTIFICATE:**

This is to certify that the project titled

### **Image Cropping Tool**

Has been successfully completed in the academic year 2014-2015 by,

**Ripal Naik**

In fulfillment of Master's degree in Computer Science.

**Date:**

**Graduate Advisor**

## Project Report

When I met my project guide for the first time, he asked me about my interest and languages I am comfortable with. I told them that I want to create something which will be the combination of web technologies like HTML, CSS, PHP, JavaScript, jQuery etc. After looking at my interest carefully he suggested me to make “**Image cropping tool**” which is a web based application. He told me that few years ago one student has developed this application with the use of PHP but that student didn't give his code to the department under certain circumstances. My guide actually wants me to make this application with the use of javascript because javascript is a client side scripting language and helps to make the application more user friendly.

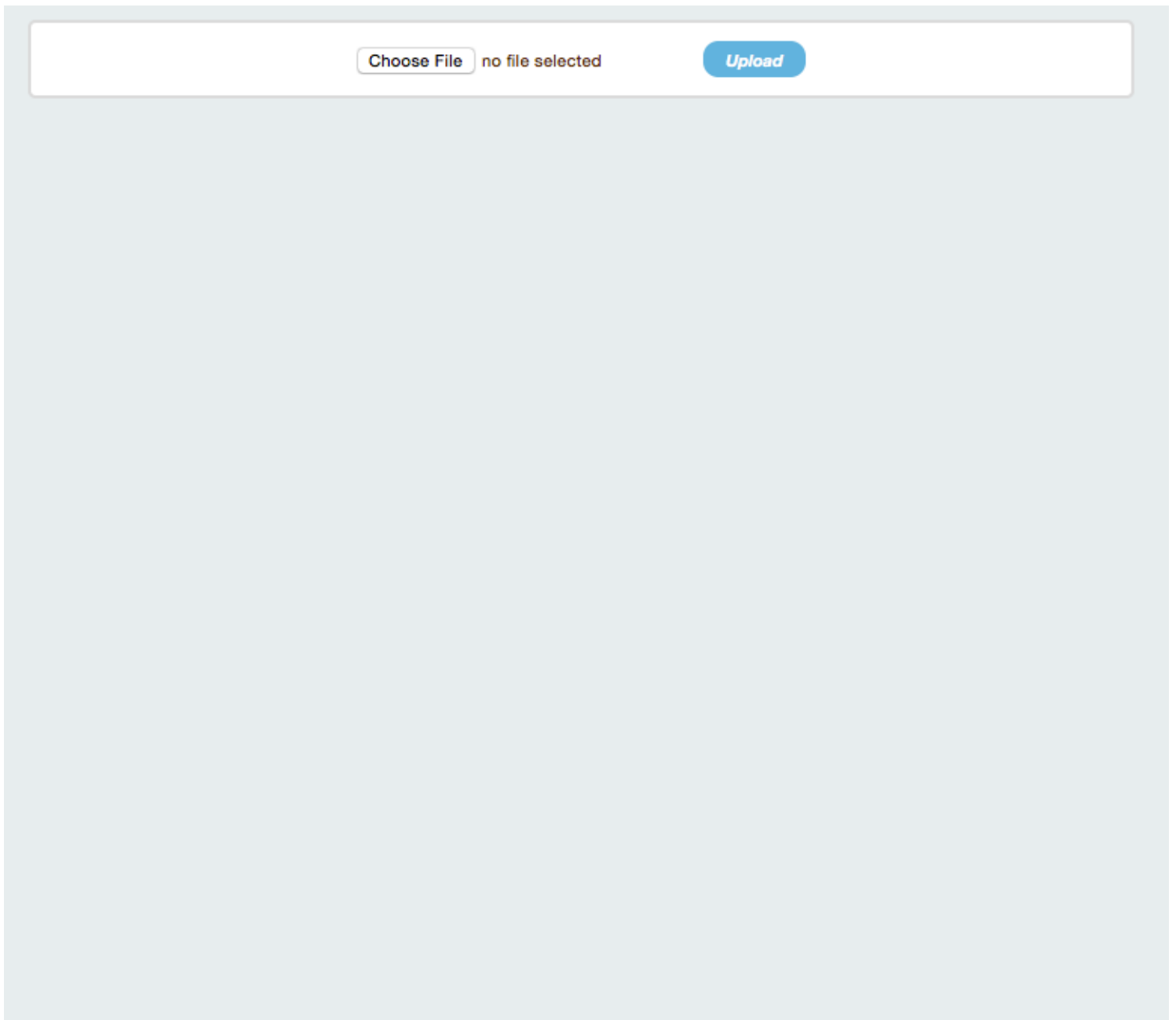
The reason why he wanted me to develop this application is to help Binghamton University students and faculties. With the use of this application students and faculties can easily crop their pictures and upload them to the university server. They can also set their the profile picture and add them to their university accounts within given size limit and aspect ratio. This application is built with the use of technologies like HTML, PHP, Javascript, jQuery plug-in, WampServer (for Windows), and MAMP (for Mac).

WampServer is a local server package for Windows, allowing you to install and host web applications that use Apache, PHP and MySQL.

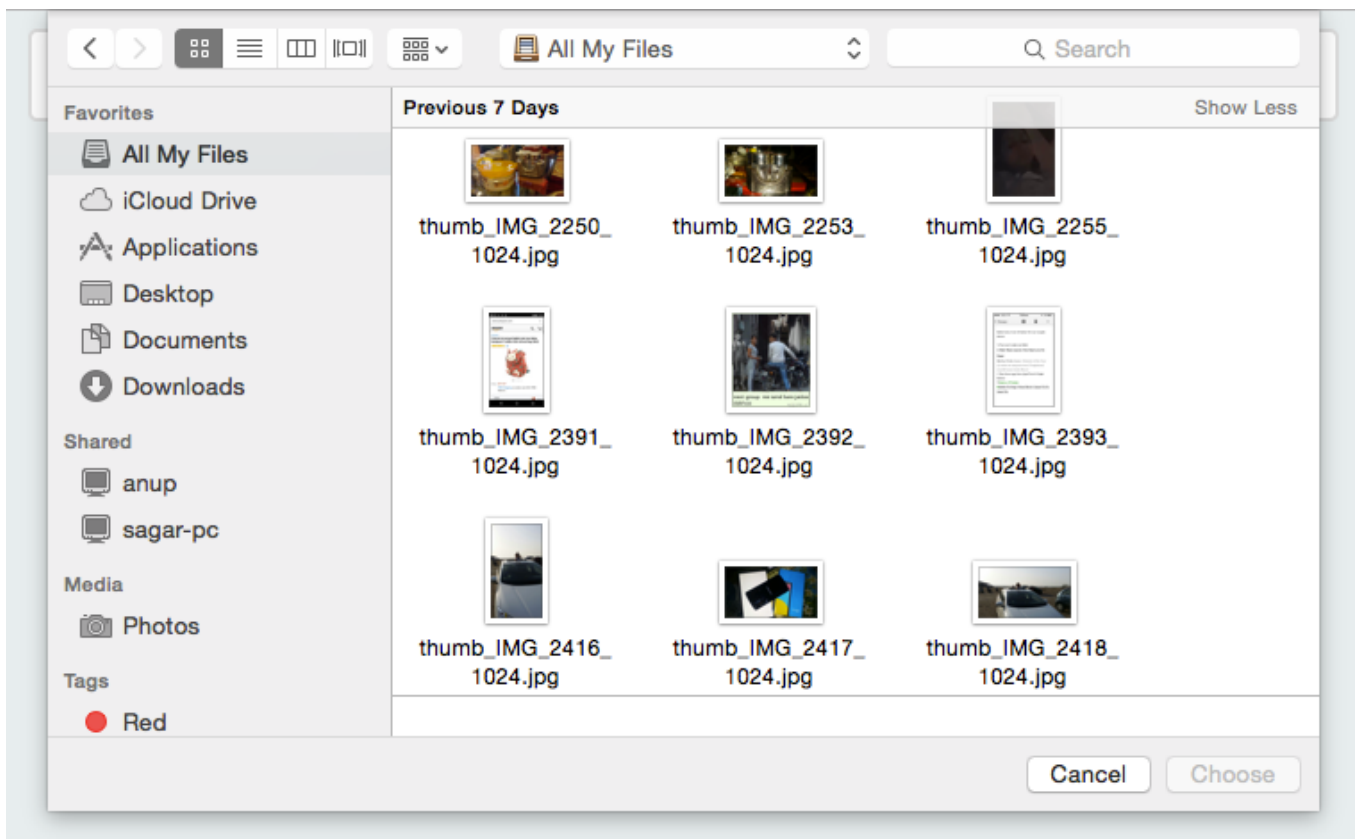
MAMP stands for Macintosh, Apache, MySQL, and PHP. MAMP is an application you can install on your Mac which allows you to have access to a local PHP server and MySQL server.

Both WampServer and MAMP is used to store all the images of students and faculties in a secure environment.

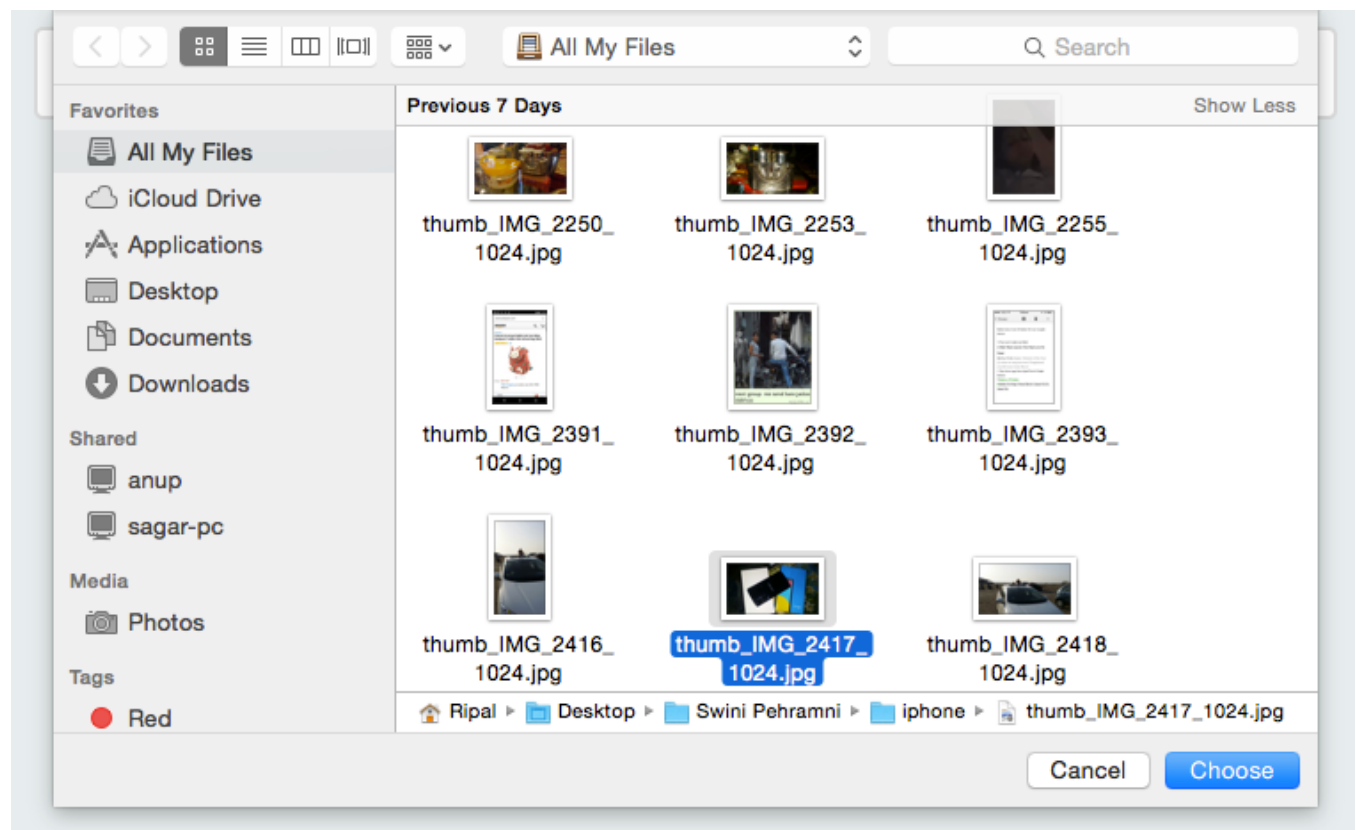
User Interface of this application is simply attractive and developed with developed with the use of of HTML and CSS.



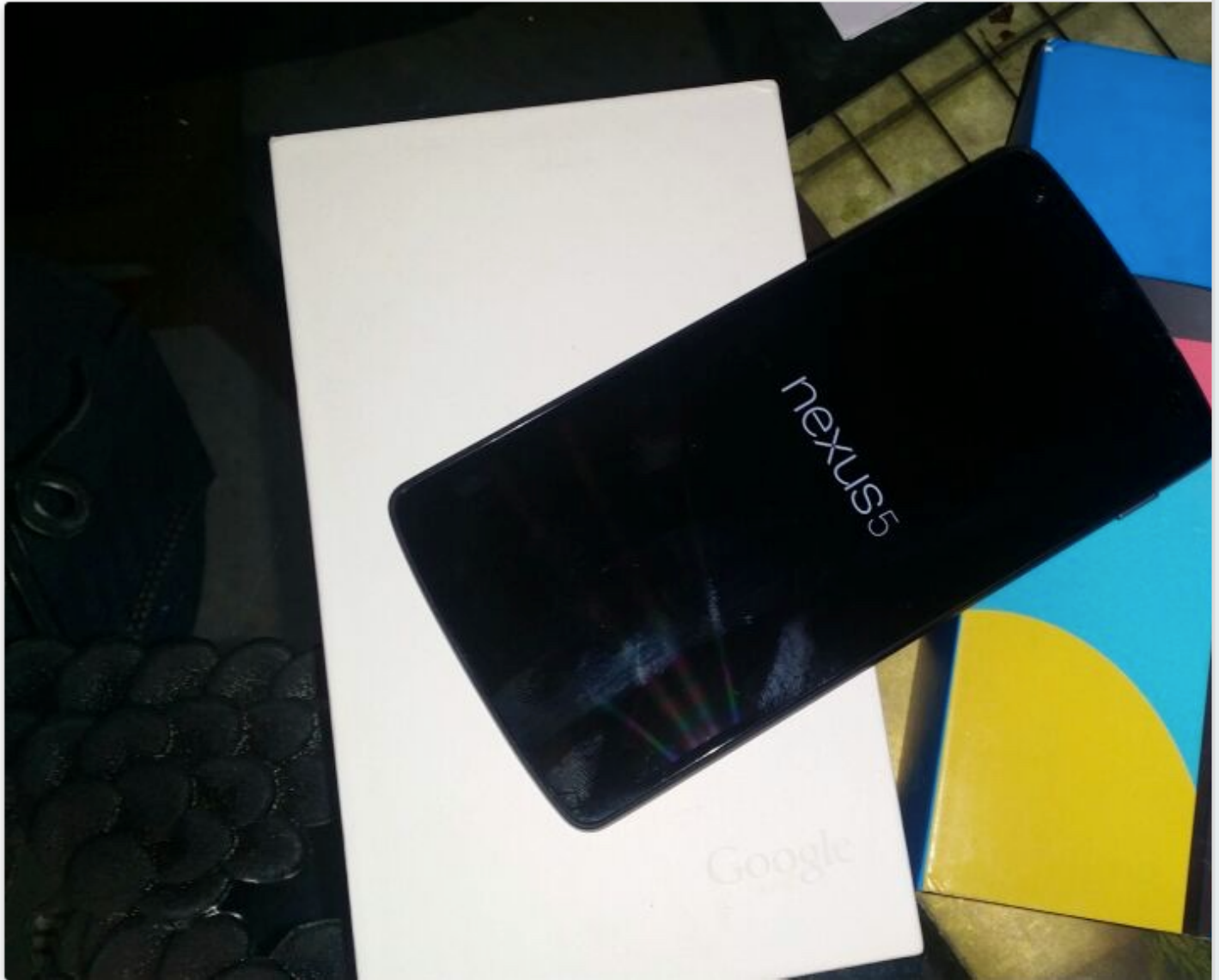
Above image show the screen shot of the actual interface. If any user wants to upload their image then firstly, he has to choose their image from a folder or internal/external drive attached with the system by clicking on the "Choose File" button. Click on the "Choose File" button will pop up the box as shown on the next page.



Once user gets the pop-up box as shown in above image, he can select whatever the picture he wants to upload on the server.



Once the selection gets done, user must require to click on the “choose” button as shown in the image on the previous page to generate that picture in a browser interface. Once the picture gets generated user can select it's area and start cropping. Below screen shot shows the selected image open in a browser for cropping.



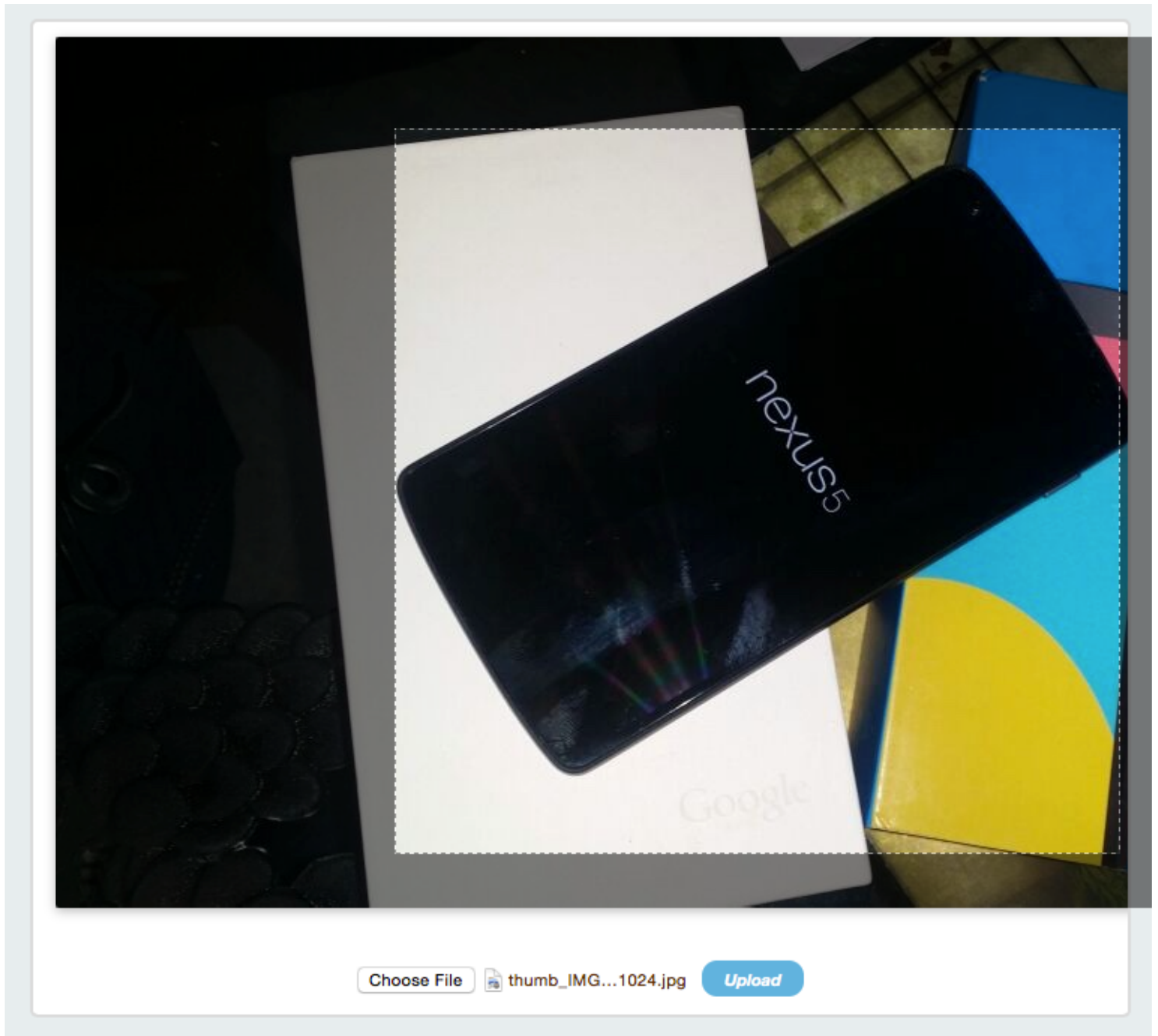
Choose File



thumb\_IMG...1024.jpg

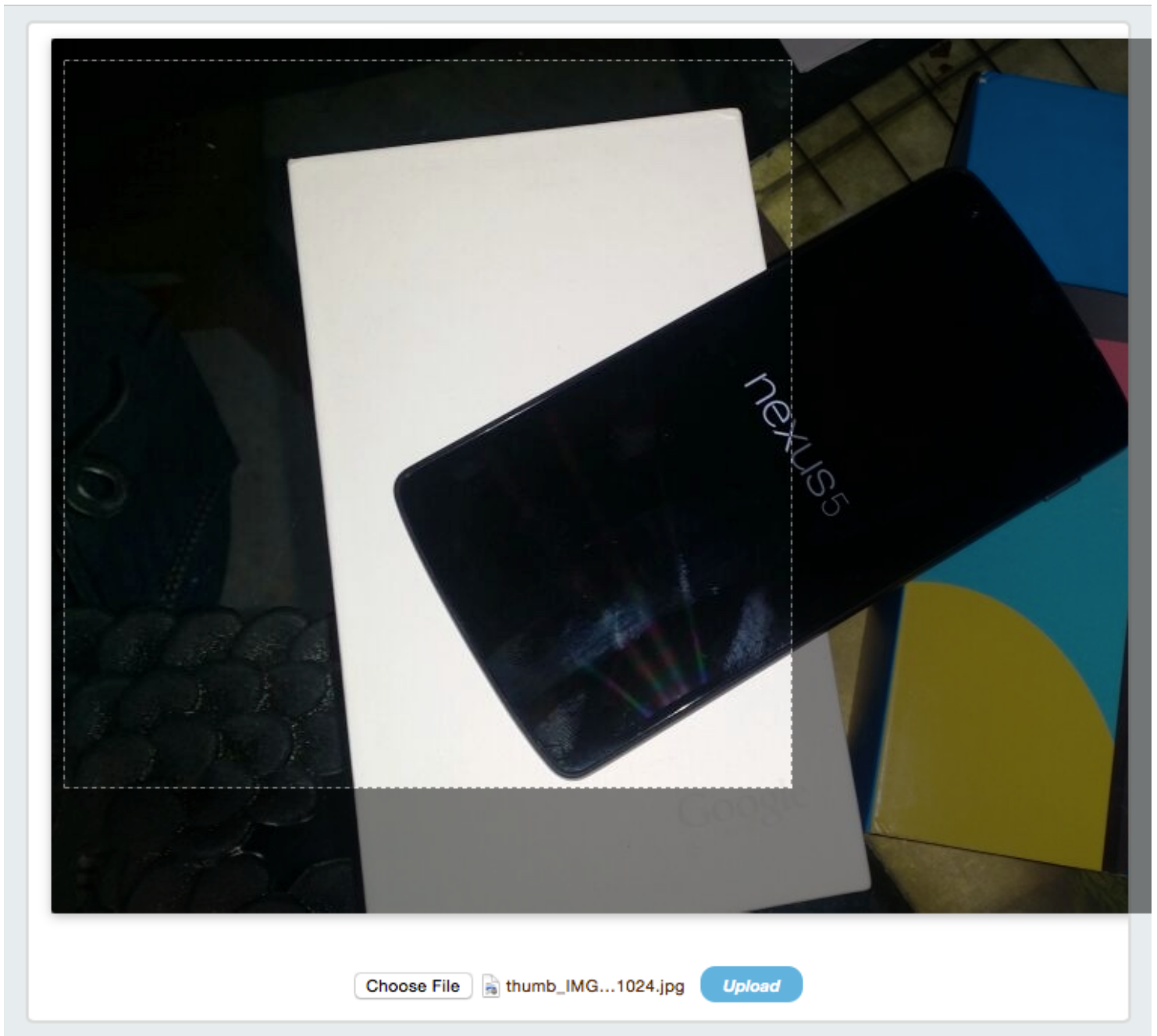
Upload

User can start cropping by clicking at any place and dragging the mouse cursor in a fixed size 1:1 aspect ratio (like a square shape) as show in below image.



Once user has selected the area of picture for cropping, he can also move the square to select different area of the picture as show in the image on the next page.



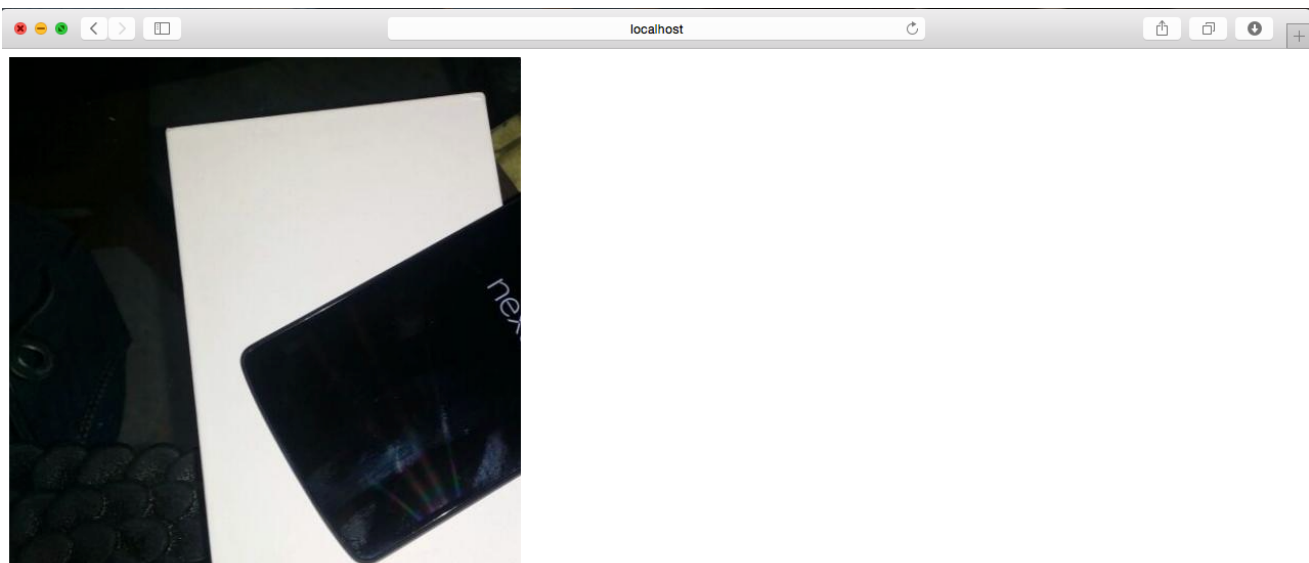
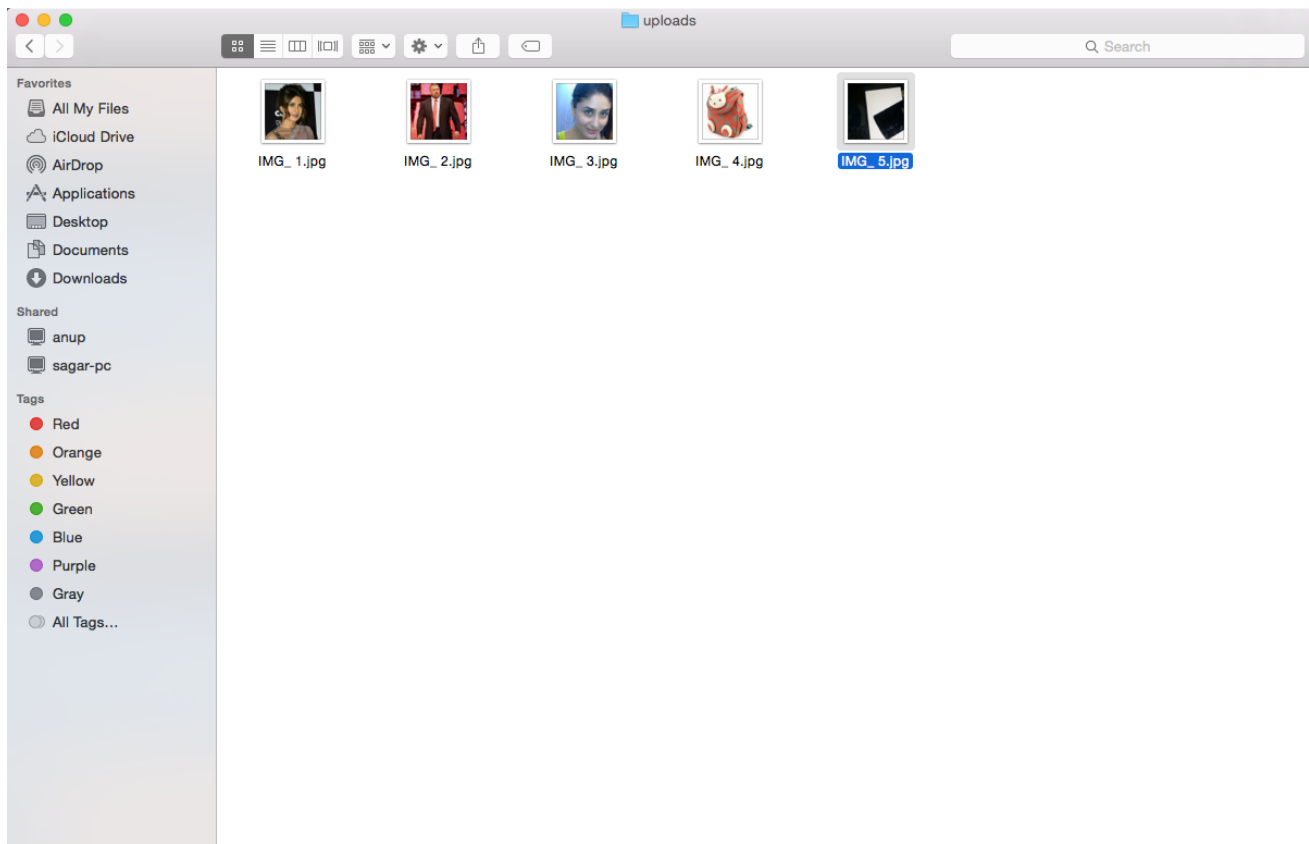


The main important web technologies which are need of project guide to build this features and used to develop cropping, dragging, and moving functionality are jQuery, javascript, and jQuery plugin “image.areaselect.pack.js”.

After the user gets done with cropping, the final step is to upload his picture on a server or set on his university account profile. To do that he just simply need to click on the “upload” button given on the bottom of the interface in the above image.

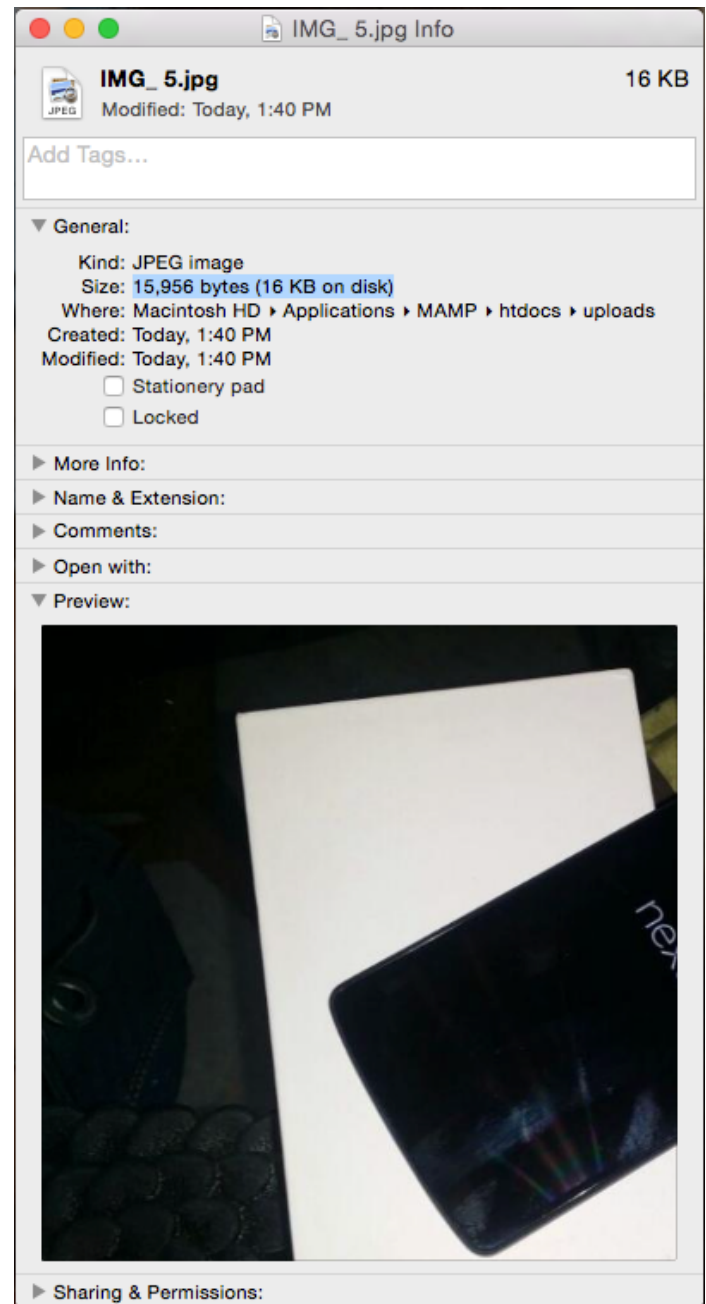


Click on the “upload” button will store the picture on the server with their name in ascending order as show in the below images. Once this application will be hosted on Binghamton University server by the engineering team, students and faculties can use it’s features to upload pictures on their university accounts.



One of the special features of this application is that the size of file which is uploaded on the server is reduced to 70% of it's actual size with the help of auto compression feature which is an efficient way to save memory on the server.

Actual size of the Image:



Size after cropping with auto compress:

In conclusion, **Image Cropping Tool** provides all the necessary feature mentioned in this report. I assure that once this application will be hosted on Binghamton University server, it will help students and faculties to upload their files securely on server as well as on their university accounts.

I would like to give special thanks my project guide 'Prof. Leslie Lander' and my friend 'Rajesh Mahajan' who helped me in successfully completing this project.