**CS312 Course Project**

You are required to complete a course project in the area of Computer Vision or Graphics. This project can be in teams or individually. This proposal must be approved before you should start working it.

1) What is the title for you project?

The Room Manipulator

2) Groups members or Individual

|  |  |  |
| --- | --- | --- |
| Name | BYU-I Email Address | Role (Who is the leader) |
| Michael Hall | hal14018@byui.edu |  |
| Adam White | whi15011@byui.edu |  |
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3) What does your project plan to accomplish? (Give at least 3 items, more the better)

1. Create an application with a simple GUI
2. Have some built in images to manipulate
3. The minimum manipulations available will be to change to wallpaper
4. Use masks to implement better manipulation of textures (which will be the only manipulation available)

3a) Provide any photos and/or links to videos/web sites

NA

4) How will you and others know if you are successful? What will success look like? If you are adding to an existing project, what will you be adding?

I will be successful when I can show a program that allows a user to click an object and then select from a few textures and have that texture applied to the object that was clicked

4a) What are your goals? At least 4 to 5 goals. (What you indicate here will be used to grade your project.)

1. Find an efficient way to produce masks for objects within an image (whether photoshopping everything but the image out and changing all else to black, using edge detection, using color detection, or some other method. This part is so that the rest of the project is easier and more accurate and therefore the methodology is not as relevant.
2. Change the ENTIRE texture of the wall in the image. More objects would be added given time
3. Maintain the integrity of the object (the corner of the wall stays the corner of the wall and doesn’t meld into one flat surface
4. Provide a simple GUI that allows the above functionality to occur

5) List libraries or open source code that you will be using. This is important, if you are adding to something that already exists (project, research paper, github project, etc…), you need to indicate it here.

1. numpy, cv2, some library for gui (probably Tkinter)
2. May use Gimp (free photoshop basically)
3. May need other libraries or find algorithms to help with this as we actually do the project
4. Possibly Math library

6) Do I need to know anything else about your project?

Don’t think so.