Names: _____ _____

_____ _____

Grade	

Project Workday II

Part 1: Project Work

This PC → Astronomy_Lab_images → Galaxy/Nebula/Cluster → Object Name

On the lab computer, navigate to the appropriate folder containing images of the object your group chose to study. Images are labeled in the following format: ObjectName_Filter_ExposureTime

Note: While we do our best to fulfill all observation requests, occasionally observations cannot be completed due to weather or technical constraints. At this point, you are allowed to either continue with the filters and exposure times you originally requested or select different filters and exposure times. Discuss as a group how you would like to proceed based on the available data for your object.

1. List the three filters you will use to create your tri-color image and their associated exposure times in the table below.

Object Name	Filters	Exposure Time (seconds)

2. Do these differ from what you originally requested in Project Workday I? If so, justify why your group chose to use different filters or exposure times.

3. Create a tri-color image in Maxim DL, listing the filter and weighted value assigned to each color channel in the table below. Remember you can adjust image contrast with the screen stretch tool (ctrl+h). Once you are satisfied with your image, save it as a .PNG (this can be done by taking a screenshot of your image within Maxim DL). Email yourself and your group members a copy of the .PNG file(s) for incorporation into your presentation and papers and upload it to the "Project Image" assignment on ICON (one submission per group is fine).

Channel	R	G	B
Assigned Filter			
Value			

4. Decide whether you want to calculate the distance to your object, or the object's physical size. What additional pieces of information will you need in order to complete your chosen calculation?

   Hint: If you are not sure, go back and review the Small Angle Formula.

5. Use the internet to find the additional information you need, then perform your calculation below, reaching out to your TA if you need any assistance. Record all steps below.

   Note: Assume the pixel scale for all images is 0.45”/pixel.

6. You will continue to work on your project during lab today, but collaboration outside of this time will also be necessary. Discuss what tools might be useful to your lab group for sharing project information and keeping track of project progress. Which tools have you decided to utilize and why?

7. What additional information or resources will you need to complete your project presentation and paper? This may include (but is certainly not limited to): image exposure times, filter information, captures of individual filtered images, object distance, etc. Record **ALL** relevant information below and share it among all group members via the collaborative tool of your choice.

8. Decide on and briefly describe the process your group members will follow for producing your 10-minute group presentation and your individual papers. Will you work on meeting all the criteria of the presentation simultaneously or divide up the work? When do you plan to practice your presentation? Since collaboration outside of lab time is necessary to complete a robust lab presentation, mark some dates on your calendar when your lab project group will meet to work on your presentation.

9. What software will your group use to create your group slideshow presentation? During your presentation, each student in your group should talk for at least 2 minutes. How will you divide up your talk by group member? Who will present on which criteria of the project?

10. On the lab project presentation day, there is time for students to ask questions of their peers. Each student is expected to ask at least 1 question about another group's project (3 questions total for your group). Brainstorm some questions you could ask other groups below.

11. Begin work on your 10-minute group slideshow presentation. Refer to the Presentation Rubric (linked on the lab website) and take notes below on the information required.

12. List any article links, books, or other resources you used to collect the information above. Also do some additional searching for resources, links, books, or articles you intend to use as possible sources for your final project papers/presentation (**this cannot include Wikipedia**). List at least three reputable resources below.