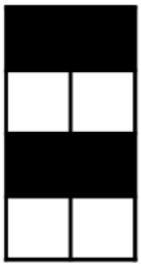
Activity (2.5 points) - Resource Protection - morning

Describe the steps you followed to make the following points:

1. Create a new user named "researcher" in a non-interactive way.
2. Assign a password to the user "researcher."
3. Create a group called "research_team."
4. Add the user "researcher" to the group "research_team."
5. Create a "temporary" user and set its home directory to be "/var/tmp."
6. Change the name of the user "temporary" to "temp_user."
7. Change the group name "research_team" to "research_group."
8. Create a directory named "research_data" in the home directory of "researcher" and assign read, write, and execute permissions for the owner, read and execute for the group, and no permissions for other users.
9. Create a file called "experiment_results.txt" inside the "research_data" directory so that the owner and the group have read and write permissions, and other users have no permissions.
10. Change the owner of the "research_data" directory and its contents to a user named "temp_user" and to "research_group."
11. Create an umask for the "research_data" directory so that all files and directories created thereafter have 640 and 750 permissions, respectively.
12. Create a file called "confidential.doc" and only the owner can modify and delete it.
13. Delete the "researcher" user along with their home directory and all related files.
14. Delete the group "research_group."
15. Create a user named "sys_admin" with superuser privileges and set its password.

Activity (2.5 points) - Image representation - morning

You need to represent these two images, each one in a separate file:



Design and explain a system to represent them using **as few bits as possible**. You must use the same representation system in both cases. The system should be able to represent images of similar characteristics.

Write the bit representation of each of these images using that system.

Activity (2.5 points) - Linux File Management - morning

Using a single command and absolute paths create the following file structure (assuming you are in your home directory /home/user). Note that this folder must be in the Linux root (in /Justice League):

Justice League

|----------Clark

|----------Powers.txt

|----------Enemies

|----------Lex Luthor.txt

|----------Diana

|----------Enemies

|----------Ares.txt

|----------Bruce

|----------Bat-Gadgets

|----------Batarangs.txt

|----------Utility belt.txt

|----------Enemies

|----------Joker.txt

From the directory /Justice League create a new file named Apokolips.txt inside of the Clark Kent folder using pipes or redirections and include the text "Darkseid has the 3 mother boxes"

Copying and moving files:

From /home/user do the next tasks:

Copy the file Joker.txt from /Justice League/Bruce Wayne/Enemies/ to /Justice League/Diana/Enemies.

Move the file Ares.txt to /Justice League/Oliver Queen/Enemies. This is a new folder.