**File Permission on Linux**

**10 mins**

**Step 1: Creating a Directory Structure**

1. Open the shell terminal.
2. Make sure you are in your home directory (*/home/username*)
3. Create a directory called Work:
4. Navigate to the Work directory:
5. Inside Work, create two directories Docs and Scripts:

**Step 2: Creating Files**

1. Navigate to the Docs directory:
2. Create two text files named doc1.txt and doc2.txt:
3. Check if all the dir and files have been created correctly

Your output should be similar to this:

**A black screen with white text

Description automatically generated**

**Step 3: Using chmod (Symbolic)**

1. Use a command line to show the permissions for all directories and files under “Work” directory. The output should be as follow:

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1. Navigate to /Work/Docs directory
2. Set the following permissions for doc1.txt using symbolic notation:
   * Owner: Read, write, and execute.
   * Group: Read and write.
   * Others: No permissions.
3. Verify the permissions:
4. Modify the permissions for doc2.txt using symbolic notation:
   * Add execute permission for the group.
   * No one can modify the document.
5. Verify the permissions:

ls -l doc2.txt

**Step 4: Using chmod (Numeric)**

1. Set the following permissions for doc1.txt using numeric notation:
   * Owner: Full permissions
   * Group: Read and execute.
   * Others: No permissions.
2. Verify the permissions:
3. Navigate back to the “Work” directory (one level up), and then change the permissions for Docs directory to:
   * Owner: Full permission.
   * Group: Can only create and delete files, and access its files and subfolders.
   * Others: Can only list the content of the directory.
4. Verify the permissions:

**Step 5: Setting Default Permissions with umask**

1. Set a umask so that newly created files have the following permissions:
   * Owner: Read and write.
   * Group: Read only.
   * Others: No permissions.
2. Create a new file doc3.txt and:
3. check doc3.txt permissions

**Step 6: Checking and Cleaning Up**

1. The permission under your Work directory should be as follow:

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1. Remove the entire Work directory and its contents at from your home directory using relative path: