Assignment 4:

Write a script that creates a directory named Test Dir and inside it creates ten files named File1.txt, File2.txt,... File10.txt. Each file should contain its filename as its content (e.g., File1.txt contains "File1.txt").

Sol:

#!/bin/bash

Define the directory name

dir_name="TestDir"

Create the directory if it doesn't exist

if [! -d "$dir_name"]; then

   mkdir "$dir_name"

   echo "Directory '$dir_name' created."

else

   echo "Directory '$dir_name' already exists."

fi

Change to the directory

cd "$dir_name" || exit

Create ten files with their filenames as content

for i in {1..10}; do

   file_name="File$i.txt"

   echo "$file_name" > "$file_name"

   echo "Created file '$file_name' with content '$file_name'."

done

Explanation

1. **Shebang (`#!/bin/bash`):**

   - This line specifies that the script should be executed using the Bash shell.

2. **Directory Name Definition**:

- **`dir_name="TestDir"`:** The `dir_name` variable is set to the name of the directory to be created.

3. **Directory Creation**:

   - **`if [ ! -d "$dir_name" ]; then`:** Checks if the directory does not exist.
   - **`mkdir "$dir_name"`:** Creates the directory.
   - **`echo "Directory '$dir_name' created."`:** Prints a message indicating that the directory has been created.
   - **`else ... fi`:** If the directory already exists, it prints a message indicating that.

4. **Change Directory**:

   - **`cd "$dir_name" || exit`:** Changes to the newly created directory or exits the script if the directory change fails.

5. **File Creation Loop**:

   - **`for i in {1..10}; do`:** Loops from 1 to 10.
   - **`file_name="File$i.txt"`:** Sets the filename for each iteration.
   - **`echo "$file_name" > "$file_name"`:** Writes the filename as content into each file.
   - **`echo "Created file '$file_name' with content '$file_name'."`:** Prints a message for each file created.