Task Details:

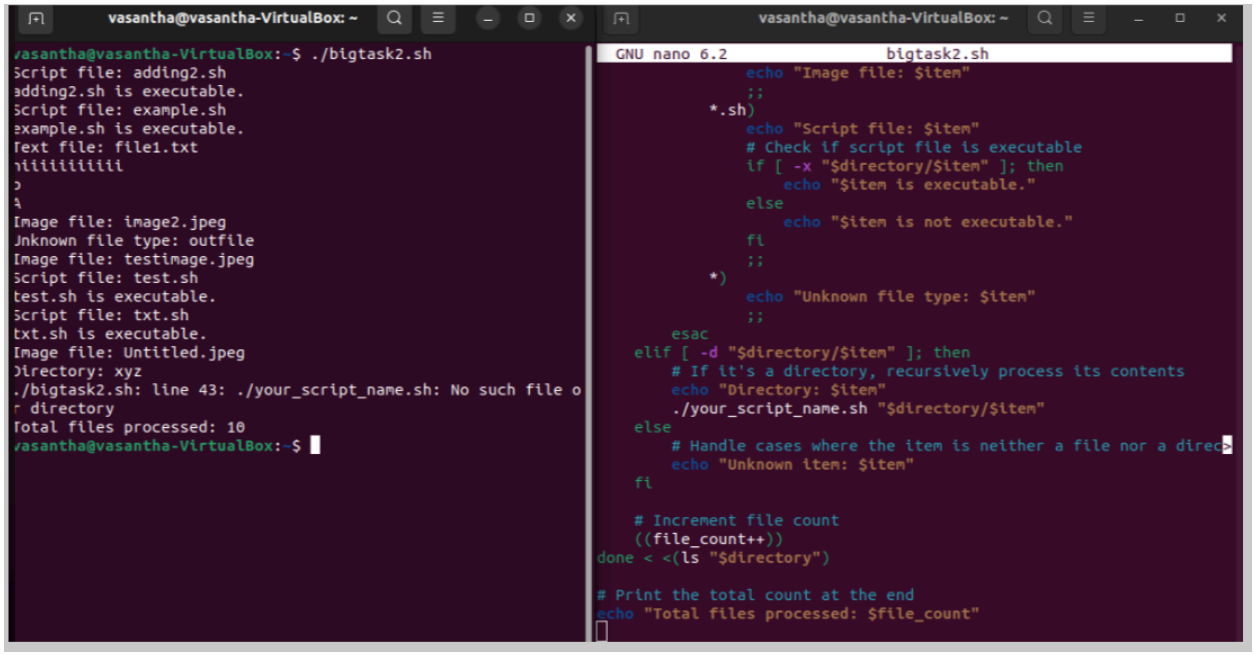
1. Start by checking if the directory exists. If not, print an error message and exit.
2. Use a while loop to iterate through each file in the directory.
3. Inside the loop, use an if statement to check if the current item is a file or a directory.
4. If it's a file, use a case statement to determine its file type (e.g., text file, image, script).
5. For text files, print the first three lines. For images, display a message about its format. For script files, check if they are executable and print whether they are or not.
6. If it's a directory, print a message indicating that and recursively process the contents of that directory.
7. Implement an elif statement to handle cases where the item is neither a file nor a directory and print an appropriate message.
8. Use a counter to keep track of the number of files processed and print the total count at the end.

Script with Details:

```
!/bin/bash

#1  Check if the directory exists

directory="/home/vasantha/saanvi"

if [ ! -d "$directory" ]; then
    echo "Error: Directory does not exist."
    exit 1
fi

# Initialize counter
file_count=0

#2 Iterate through each file in the directory using a while loop
while IFS= read -r item; do
   #3 Check if the current item is a file or directory
   if [ -f "$directory/$item" ]; then
      #4 If it's a file, use case statement to determine its type
      case "$item" in
         *.txt)
            echo "Text file: $item"
                                #5.1 For text files, print the first three lines
            head -n 3 "$directory/$item"
            ;;
                                #5.2 For images, display a message about its format
```

```
        *.jpeg)
            echo "Image file: $item"
            ;;
        *.sh)
            echo "Script file: $item"
            #5.3 For script files, check if they are executable and print whether they are or not
            if [ -x "$directory/$item" ]; then
                echo "$item is executable."
            else
                echo "$item is not executable."
            fi
            ;;
        *)
            echo "Unknown file type: $item"
            ;;
    esac
  elif [ -d "$directory/$item" ]; then
    #6 If it's a directory, recursively process its contents
    echo "Directory: $item"
    ./your_script_name.sh "$directory/$item"
  else
    #7 Handle cases where the item is neither a file nor a directory
    echo "Unknown item: $item"
  fi

  #8.1 Increment file count
  ((file_count++))
done < <(ls "$directory")

#8.2 Print the total count at the end
echo "Total files processed: $file_count"
```

Output:


vasantha@vasantha-VirtualBox: ~
vasantha@vasantha-VirtualBox:~$ ./bigtask2.sh
Script file: adding2.sh
adding2.sh is executable.
Script file: example.sh
example.sh is executable.
Text file: file1.txt
iiiiiiiiiii
Image file: image2.jpeg
Unknown file type: outfile
Image file: testimage.jpeg
Script file: test.sh
test.sh is executable.
Script file: txt.sh
txt.sh is executable.
Image file: Untitled.jpeg
Directory: xyz
./bigtask2.sh: line 43: ./your_script_name.sh: No such file o
r directory
Total files processed: 10
vasantha@vasantha-VirtualBox:~$
vasantha@vasantha-VirtualBox: ~
GNU nano 6.2
bigtask2.sh
echo "Image file: $item"
;;
*.sh)
echo "Script file: $item"
# Check if script file is executable
if [-x "$directory/$item"]; then
echo "$item is executable."
else
echo "$item is not executable."
fi
;;
*)
echo "Unknown file type: $item"
;;
esac
elif [-d "$directory/$item"]; then
If it's a directory, recursively process its contents
echo "Directory: $item"
./your_script_name.sh "$directory/$item"
else
# Handle cases where the item is neither a file nor a direc
echo "Unknown item: $item"
fi
Increment file count
((file_count++))
done < <(ls "$directory")
Print the total count at the end
echo "Total files processed: $file_count"