

OS GUI Project

GUI Name: Micro-OS

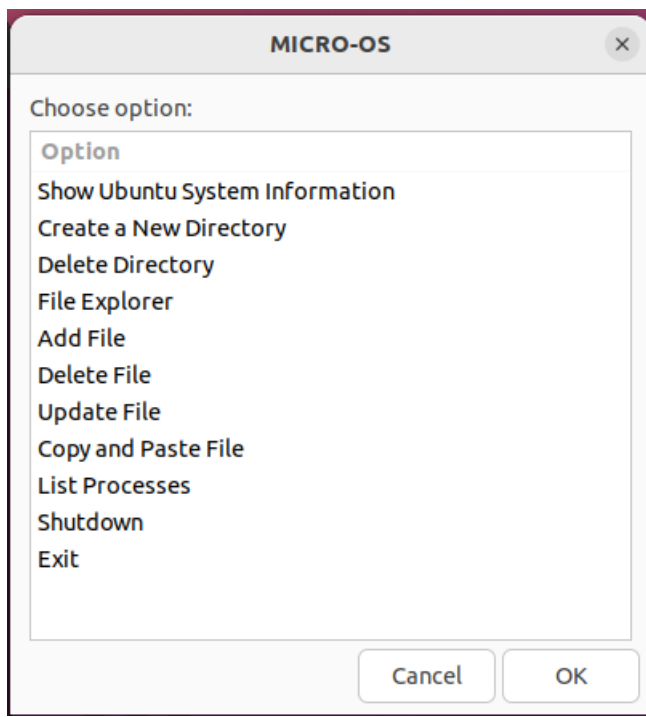
Tool Used: Zenity

Created on: Nano Editor Ubuntu

- **Brief Overview of Zenity:**

Zenity is a lightweight utility for creating graphical user interfaces (GUIs) in shell scripts. It allows you to display dialogs, prompts, and message boxes, enhancing user interaction in a graphical manner. I used Zenity to create the GUI for my operating system project, leveraging its dialog boxes and widgets to develop a visually appealing and user-friendly interface. Zenity played a crucial role in enhancing the usability and accessibility of my operating system by providing a smooth and engaging user interface.

- **GUI:**



- **Code:**

```
#!/bin/bash
# Function to show Ubuntu system information
function show_system_info {
    info=$(lsb_release -ds)
    zenity --info --title "System Information" --text "Ubuntu System
Information:\n$info"
    show_menu
}

# Function to create a new directory
function create_directory {
    directory=$(zenity --file-selection --directory --title "Select
Directory to Create New Folder")
    if [ -n "$directory" ]; then
        new_folder=$(zenity --entry --title "Create Directory" --text
"Enter the name of the new directory:")
        if [ -n "$new_folder" ]; then
            mkdir "$directory/$new_folder"
            zenity --info --title "Directory Created" --text "New
directory '$new_folder' created successfully."
        else
            zenity --warning --title "Invalid Input" --text "No directory
name entered."
        fi
    fi
    show_menu
}

# Function to delete a directory
function delete_directory {
```

```
directory=$(zenity --file-selection --directory --title "Select
Directory to Delete")
if [ -n "$directory" ]; then
    rm -r "$directory"
    zenity --info --title "Directory Deleted" --text "Directory
deleted successfully."
fi
show_menu
}
```

Function to open a file explorer

```
function open_file_explorer {
    zenity --file-selection --title "File Explorer"
    show_menu
}
```

Function to add a file

```
function add_file {
    directory=$(zenity --file-selection --directory --title "Select
Directory to Add File")
    if [ -n "$directory" ]; then
        file=$(zenity --file-selection --title "Select File to Add")
        if [ -n "$file" ]; then
            cp "$file" "$directory"
            zenity --info --title "File Added" --text "File added to
directory successfully."
        fi
    fi
    show_menu
}
```

Function to delete a file

```
function delete_file {
    file=$(zenity --file-selection --title "Select File to Delete")
    if [ -n "$file" ]; then
        rm "$file"
        zenity --info --title "File Deleted" --text "File deleted
successfully."
    fi
    show_menu
}
```

Function to update a file

```
function update_file {
    file=$(zenity --file-selection --title "Select File to Update")
    if [ -n "$file" ]; then
        text=$(zenity --text-info --editable --title "Update File" --
filename "$file")
        if [ -n "$text" ]; then
            echo "$text" > "$file"
            zenity --info --title "File Updated" --text "File updated
successfully."
        fi
    fi
    show_menu
}
```

Function to copy and paste a file

```
function copy_paste_file {
    source=$(zenity --file-selection --title "Select File to Copy")
    if [ -n "$source" ]; then
        destination=$(zenity --file-selection --directory --title "Select
Destination Directory")
        if [ -n "$destination" ]; then
```

```

        cp "$source" "$destination"
        zenity --info --title "File Copied" --text "File copied
successfully."
    fi
fi
show_menu
}

# Function to list processes
function list_processes {
    processes=$(ps aux)
    zenity --text-info --title "Processes" --width 800 --height 600 --
filename=/dev/stdin <<< "$processes"

    show_menu
}

# Function to shut down the system
function shut_down {
    zenity --question --title "Shutdown" --text "Are you sure you
want to shut down the system?"
    if [ $? = 0 ]; then
        shutdown -h now
    fi
}

# Function to display the main menu
function show_menu {
    choice=$(zenity --list --title "MICRO-OS" --text "Choose
option:" --column "Option" \
        "Show Ubuntu System Information" "Create a New Directory"
        "Delete Directory" \

```

```
"File Explorer" "Add File" "Delete File" "Update File" \
"Copy and Paste File" "List Processes" "Shutdown" "Exit" \
--height 400 --width 400)
```

```
# Check if cancel button or close button is clicked
if [ -z "$choice" ]; then
    exit 0 # Close the GUI
fi
```

```
case "$choice" in
    "Show Ubuntu System Information")
        show_system_info
        ;;
    "Create a New Directory")
        create_directory
        ;;
    "Delete Directory")
        delete_directory
        ;;
    "File Explorer")
        open_file_explorer
        ;;
    "Add File")
        add_file
        ;;
    "Delete File")
        delete_file
        ;;
    "Update File")
        update_file
        ;;
    "Copy and Paste File")
```

```
        copy_paste_file
        ;;
    "List Processes")
        list_processes
        ;;
    "Shutdown")
        shut_down
        ;;
    "Exit")
        exit 0 # Close the GUI
        ;;
    *)
        zenity --error --title "Invalid Option" --text "Invalid option
selected."
        show_menu
        ;;
    esac
}
# Display the initial menu
show_menu
```