Placement Empowerment Program

Cloud Computing and DevOps Centre

Create a Simple Backup Script: Create a script that backs up your entire Git repository to a local folder daily.

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Introduction 🚀

Backing up Git repositories is essential to safeguard your work from accidental deletions, hardware failures, or corruption. Automating this process saves time and ensures regular updates without manual effort.

Overview 🔍

This solution automates Git repository backups on a Windows machine using a batch script and Task Scheduler. The script pulls the latest changes daily, stores them in a backup directory, and compresses the repository with a timestamped archive for easy organization. This ensures your codebase and version history remain secure and accessible.
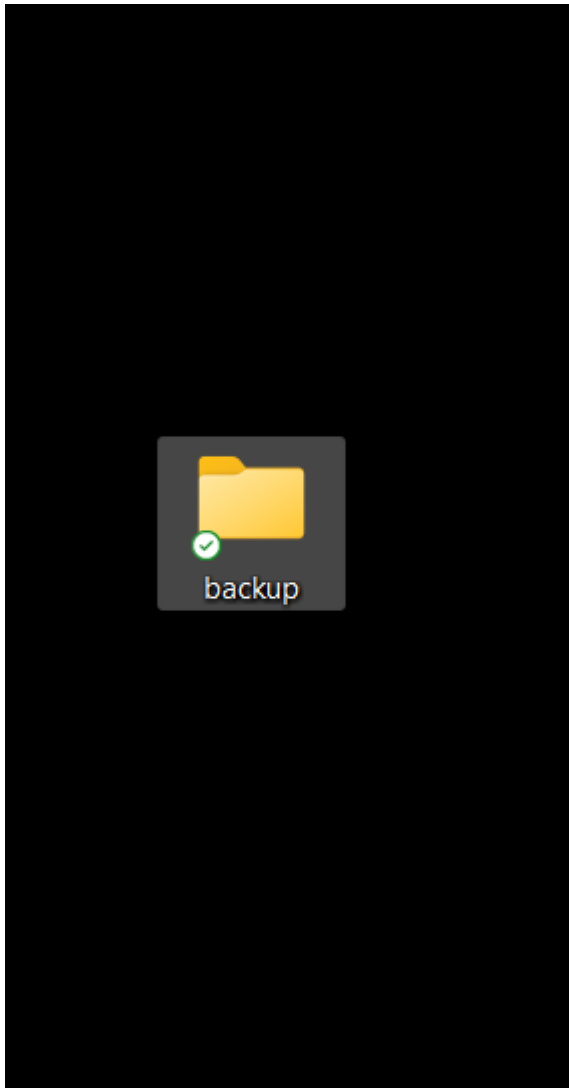
Key Components

Batch Script: A .bat file is used to execute commands such as cloning the repository, pulling updates, and compressing the backup.

Task Scheduler: A built-in Windows tool is used to automate the script, ensuring it runs daily without manual intervention.

Step-by-Step Overview

Step 1:

Create a folder named GitHub Backup Folder to store your Backup files

Step 2:

Open Notepad and type this script . Make sure that in set REPO_URL give the URL of the repository you want to backup and in set BACK_DIR give the file path of the folder which you created in first step . Then save it as **.bat format** (eg:backup.bat)

```
@echo off
:: Variables
set REPO_URL=https://github.com/Jayadasan777/backup.git
set BACKUP_DIR=C:\Users\jayadasan\OneDrive\Desktop\backup
set CURRENT_DATE=%date:~10,4%-%date:~4,2%-%date:~7,2%

:: Ensure backup directory exists
if not exist "%BACKUP_DIR%" mkdir "%BACKUP_DIR%"

:: Navigate to the backup directory
cd /d "%BACKUP_DIR%"

:: Check if the repository is already cloned
if not exist "repo" (
    echo Cloning repository for the first time...
    git clone %REPO_URL% repo
) else (
    echo Repository already exists. Pulling the latest changes...
    cd repo
    git pull
    cd ..
)
```
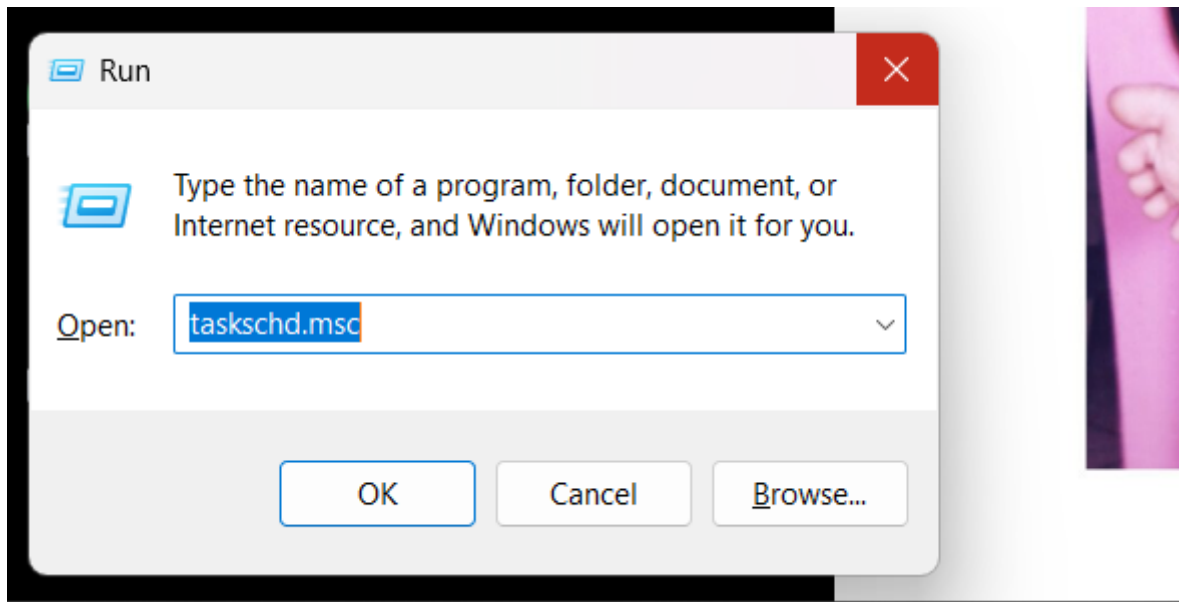
Step 3:

Press **Win** + **R** on your keyboard.
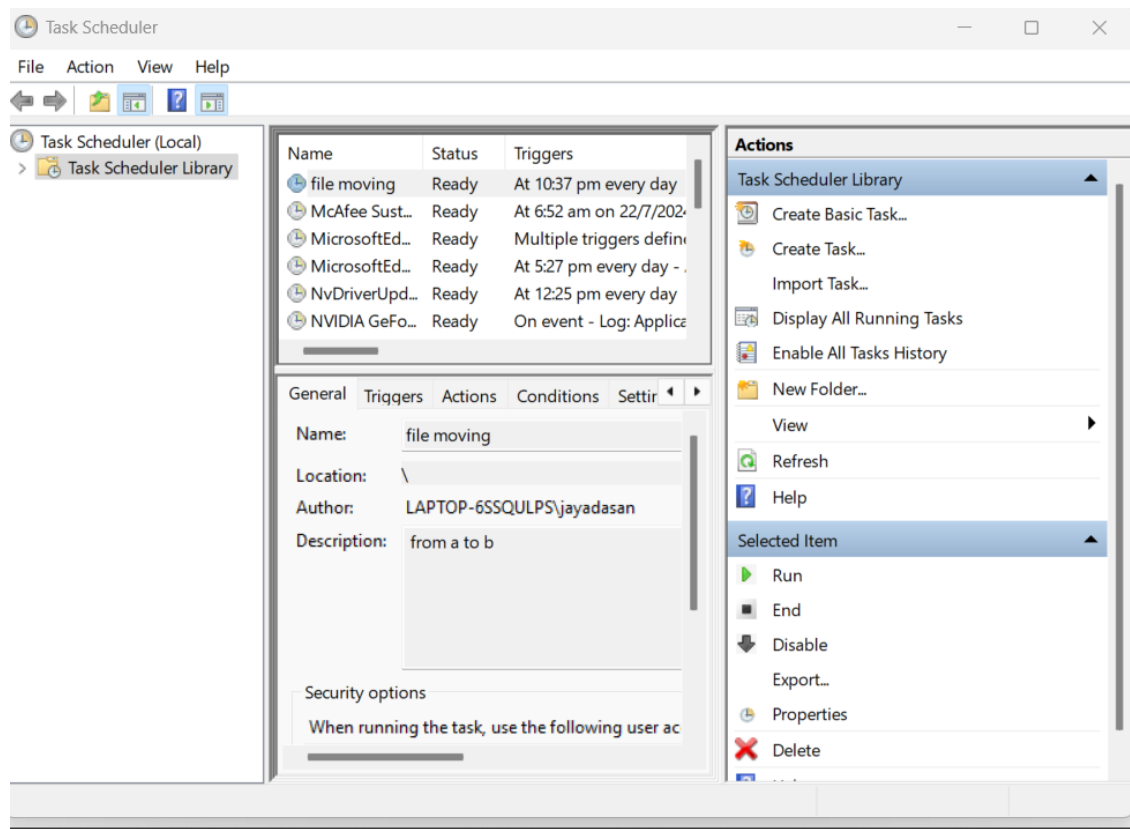
A small "Run" dialog box will pop up.

Type **taskschd.msc** (without quotes) in the Run box.

Press Enter or click OK.This will open the Task Scheduler window.

Step 4:

In the Task Scheduler window, look to the right-hand side for a button called **"Create Basic Task"**. Click it. A wizard will open to guide you through the setup.
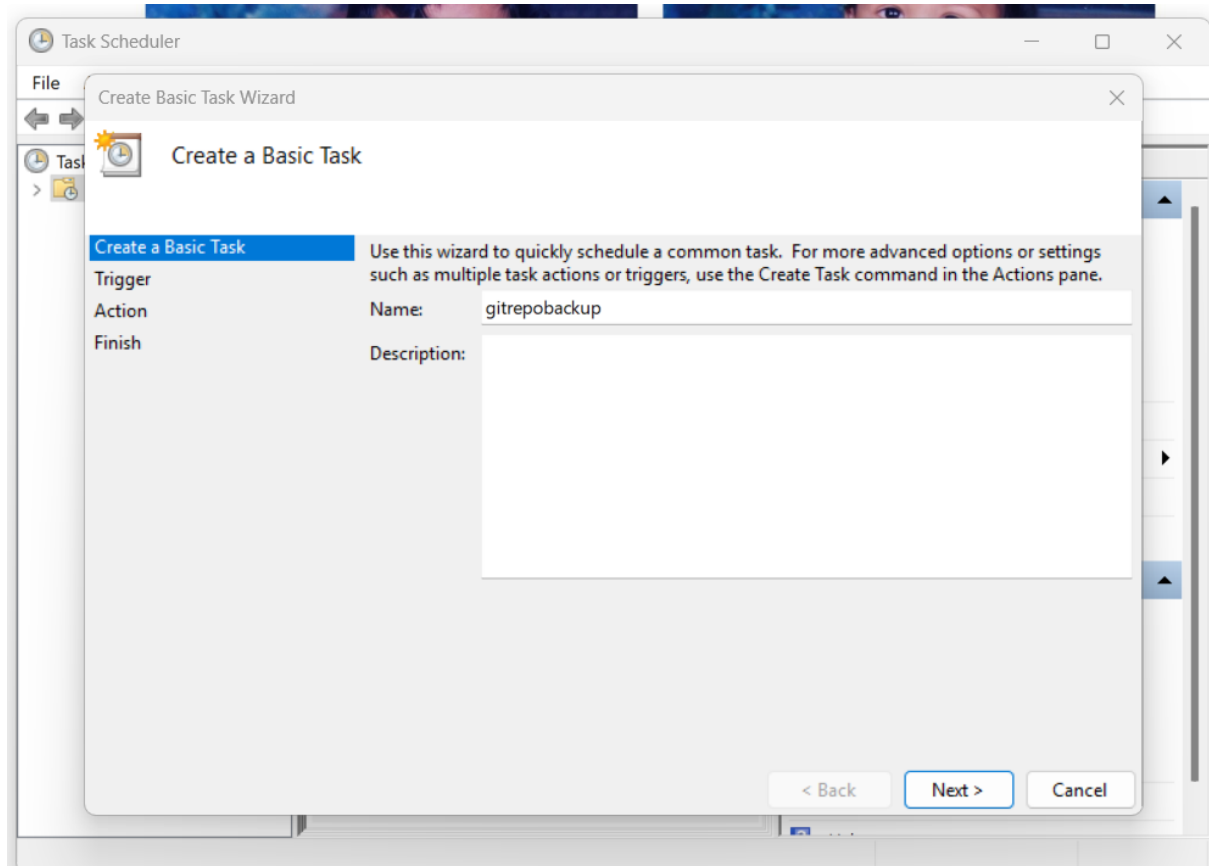
Step 5:

1.Enter a Name for the Task:

For example: "GitRepoBackup".(This can be anything that helps you remember what the task does.)

Optionally, you can add a description like "Backsup files daily".
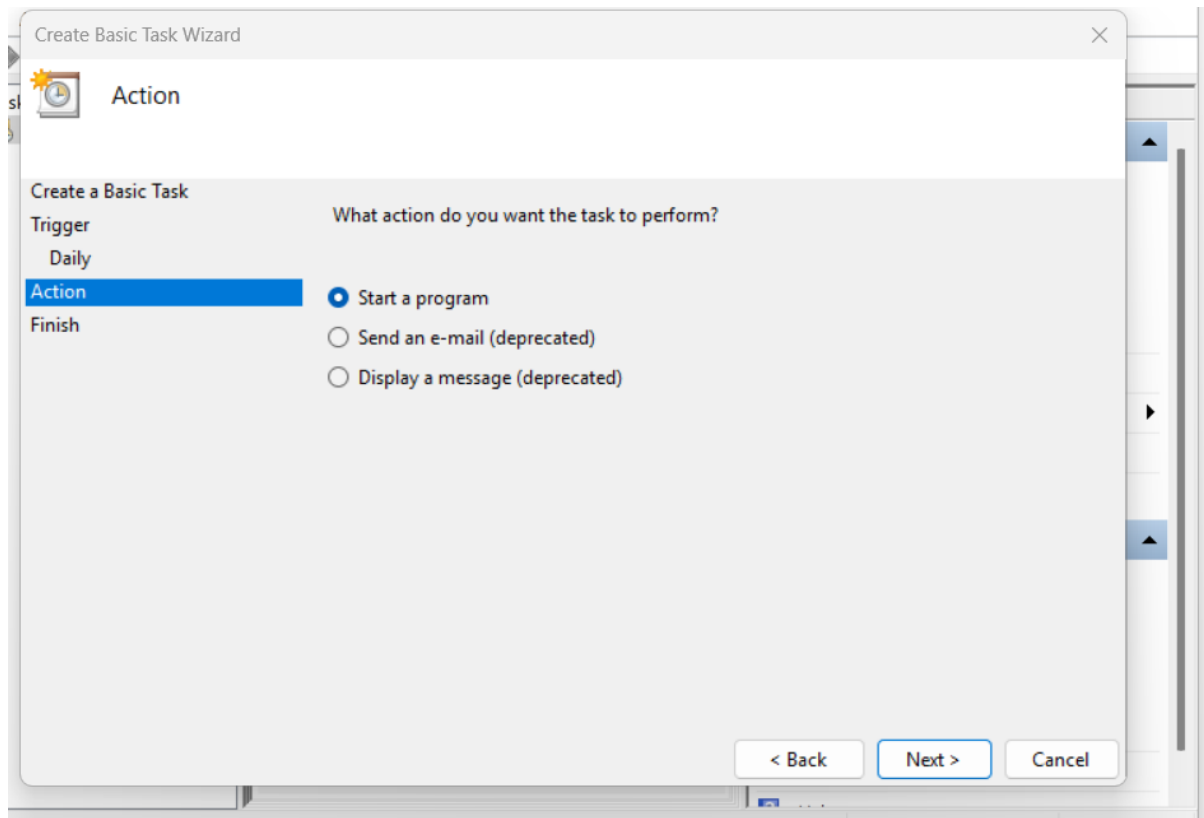
Click Next to continue.

Step 6:

Set the Action

Now, we tell Task Scheduler what to do when it runs.

Select "Start a Program":

On the "Action" screen, select the option **"Start a Program"** and click Next.

Step 7:

Point to the Program or Script:

In the Program/script field, click **Browse** and navigate to the location of your .bat file.

Example: If your script is named backup.bat and saved on the desktop, navigate to that file and select it.
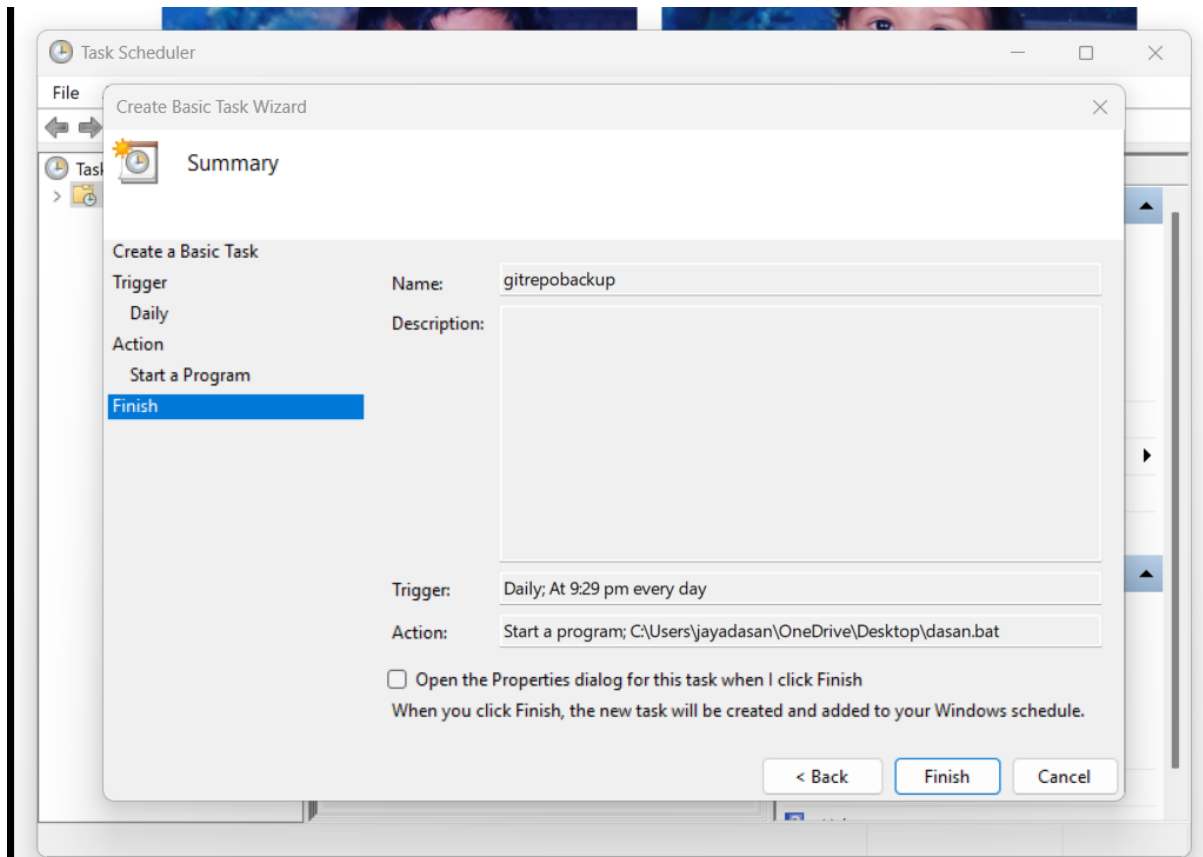
Click Next.

Step 8:

Review and Finish

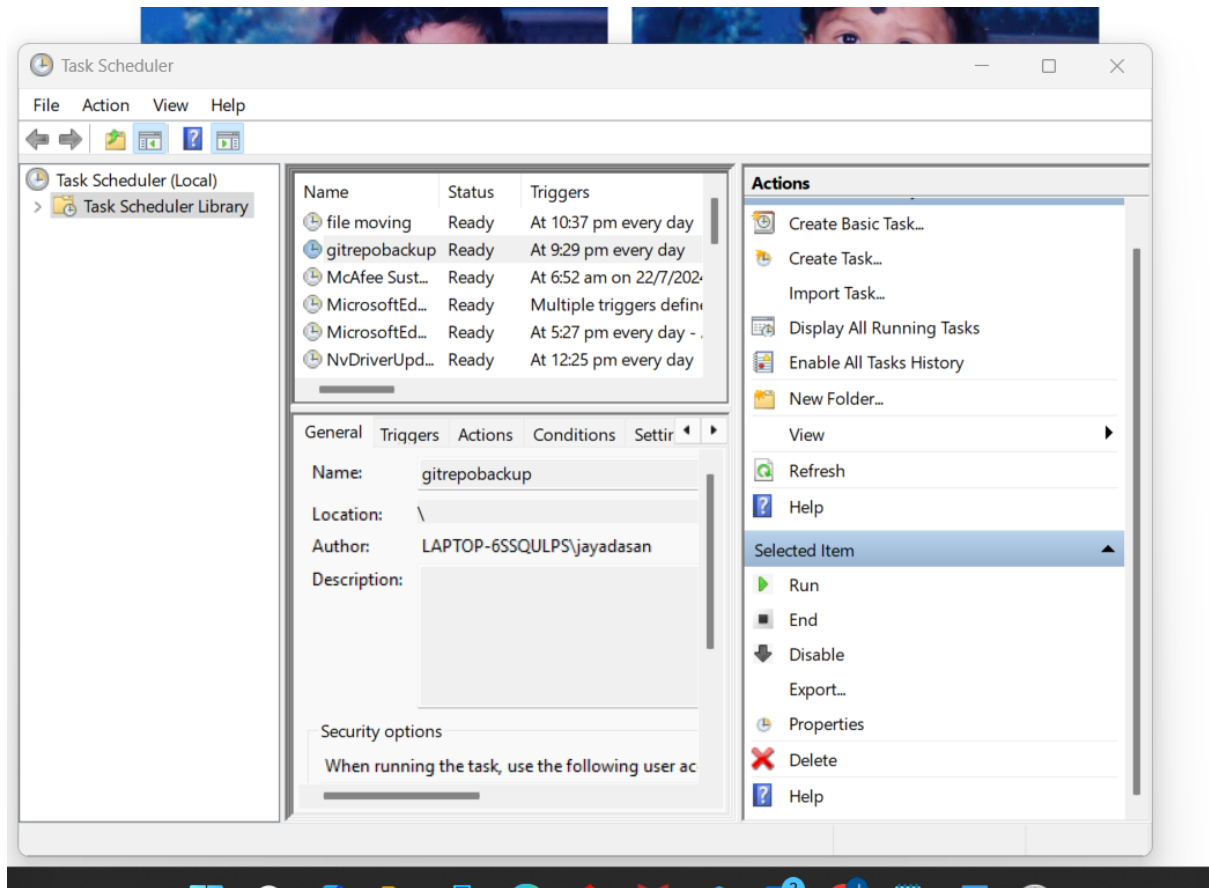Click **Finish** to save and schedule the task.

Step 9:

In Task Scheduler, go to the **Task Scheduler Library** (on the left- hand side).

~~Find your task (it should have the name you gave it, e.g.~~

```
Cloning repository for the first time...
Cloning into 'repo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
Creating a compressed backup: repo-backup-2025-01-24.zip
Backup complete: repo-backup-2025-01-24.zip

[process exited with code 0 (0x00000000)]
You can now close this terminal with Ctrl+D, or press Enter to restart.
```

Step 10:

Now u can see the folder which you created (GitHub Backup Folder) in the first step will now contains the files which is in your repository.