St. JOSEPH'S
GROUP OF INSTITUTIONS
OMR, CHENNAI - 119

# PLACEMENT EMPOWERMENT PROGRAM

## CLOUD COMPUTING AND DEVOPS CENTRE

## TASK 4 - CREATE A SIMPLE BACKUP SCRIPT. That backs up your entire git repository to a local one.

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**DEPT - ADS**

## Overview

The goal of this task is to create a simple script that backs up a Git repository to a local directory. This script will automate the process of creating a backup of your Git repository by copying all its contents (including branches, commits, and configuration) to a specified backup location.

## Objectives

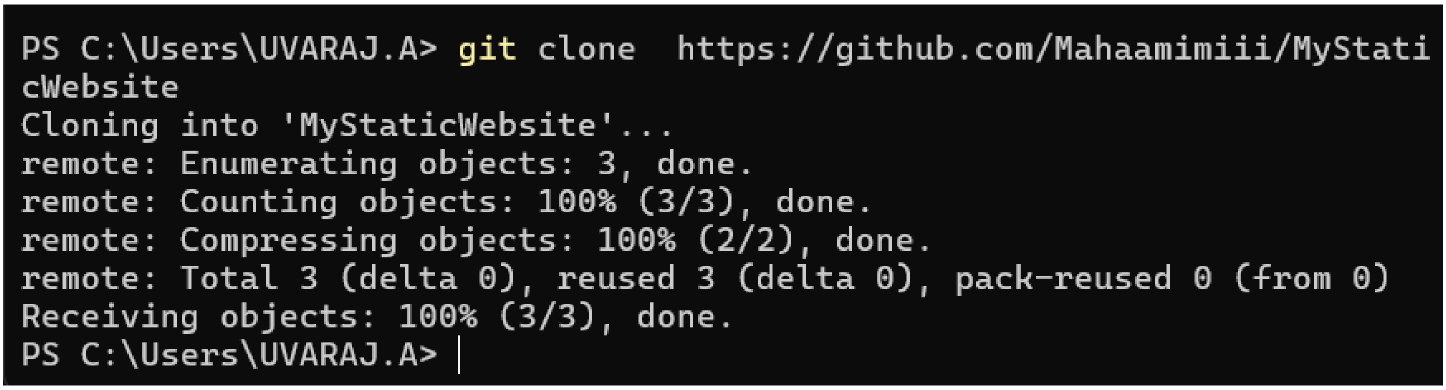
- Automate the backup process for a Git repository.
- Ensure that all repository data, including branches and commit history, are backed up.
- Store the backup in a local directory for easy restoration if needed.
- Use basic shell scripting to create an efficient and reusable solution.

## Steps to Create the Backup Script

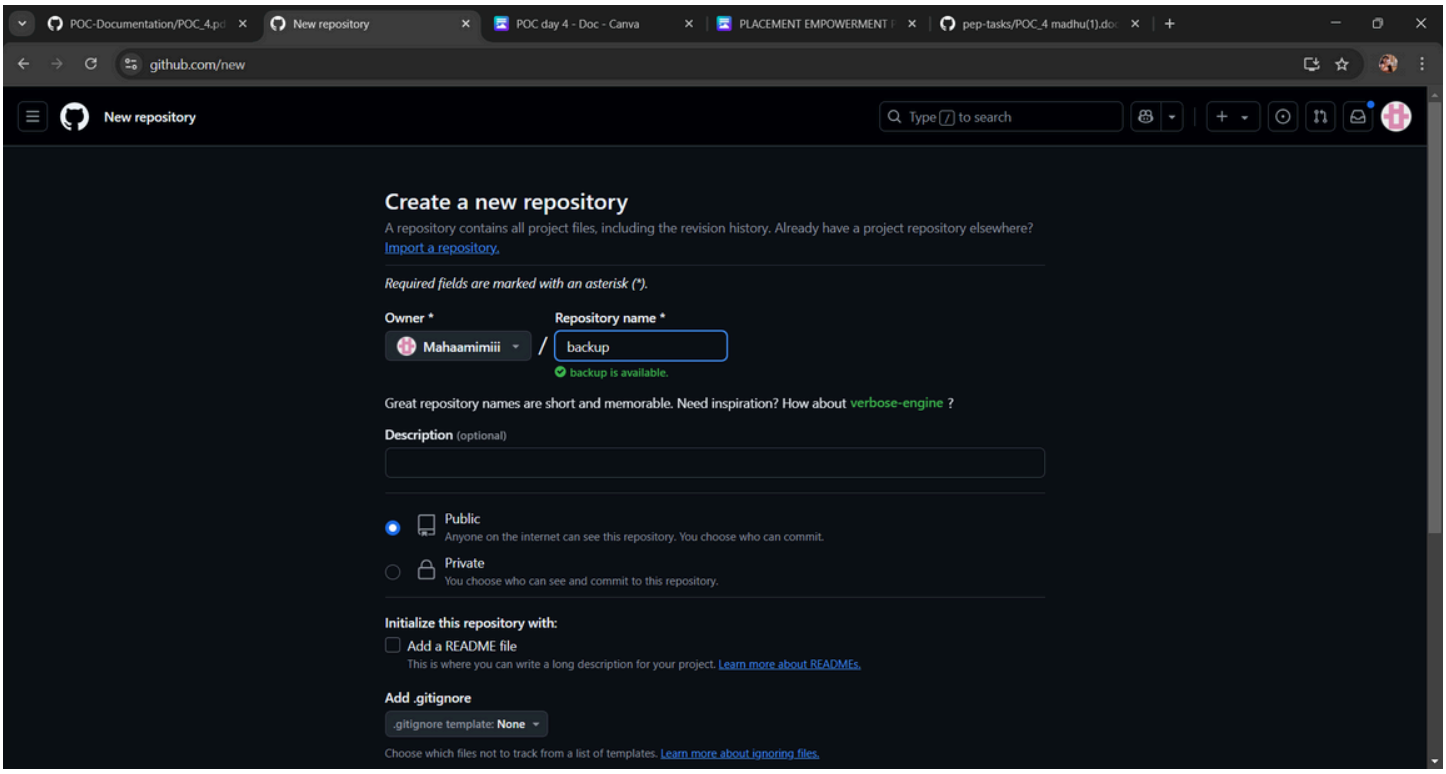
1. **Set Up Variables**
    - Define the source Git repository directory.
    - Define the backup destination directory.
2. **Check If the Backup Directory Exists**
    - If the directory does not exist, create it.
3. **Clone or Mirror the Repository**
    - Use git clone --mirror or rsync to copy all data.
4. **Automate the Process**
    - Set up a cron job (on Linux/macOS) or Task Scheduler (on Windows) to run the script at regular intervals.

STEPS

Step 1: Create a folder named GitHub Backup Folder to store your Backup file



```
PS C:\Users\UVARAJ.A> git clone  https://github.com/Mahaamimiii/MyStati
cWebsite
Cloning into 'MyStaticWebsite'...
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.
PS C:\Users\UVARAJ.A> |
```



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

*Required fields are marked with an asterisk (*).*

Owner * Mahaamimiii / Repository name * backup

backup is available.

Great repository names are short and memorable. Need inspiration? How about verbose-engine ?

Description (optional)

● Public
Anyone on the internet can see this repository. You choose who can commit.

○ Private
You choose who can see and commit to this repository.

Initialize this repository with:

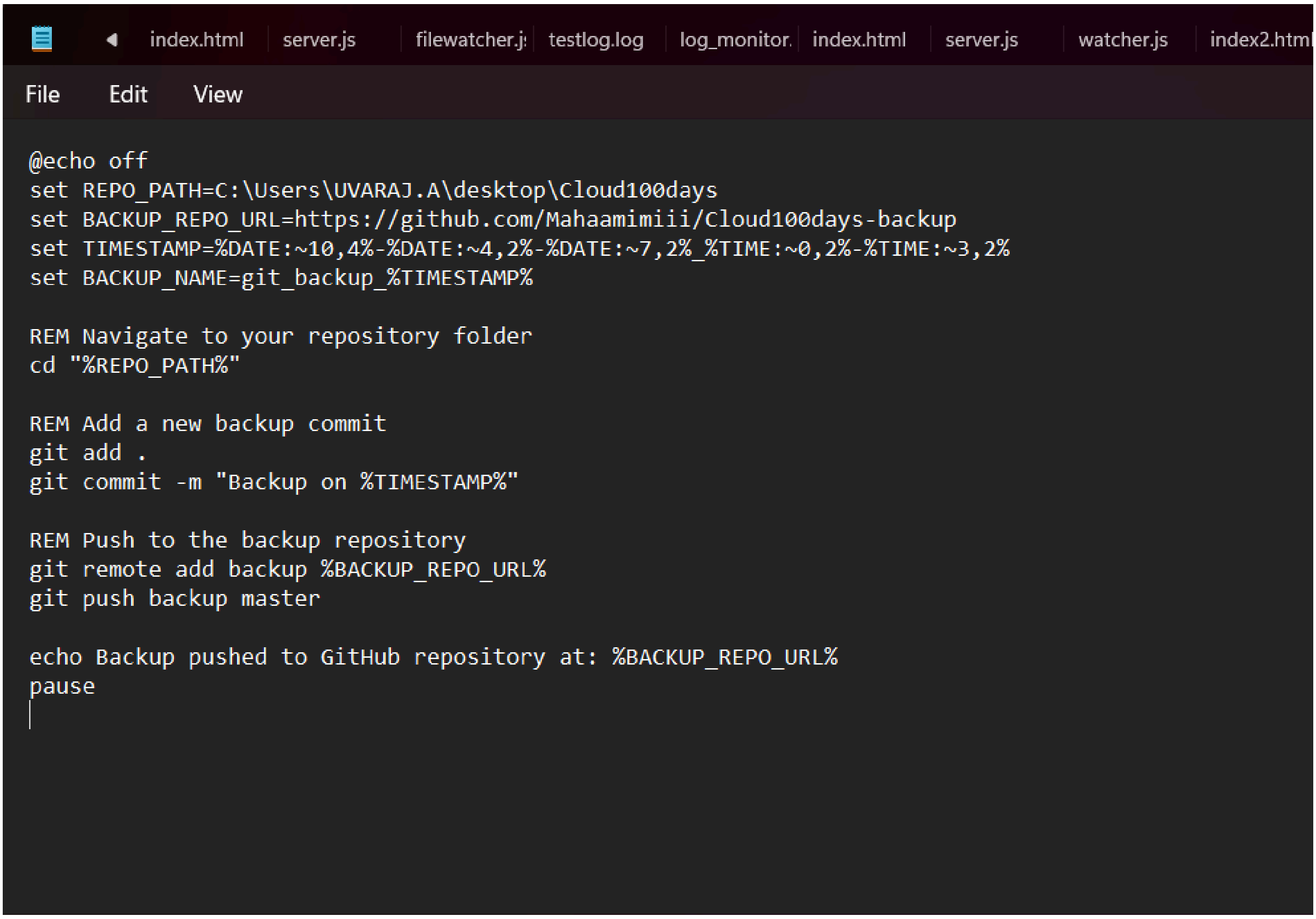
□ Add a README file
This is where you can write a long description for your project. Learn more about READMEs.

Add .gitignore

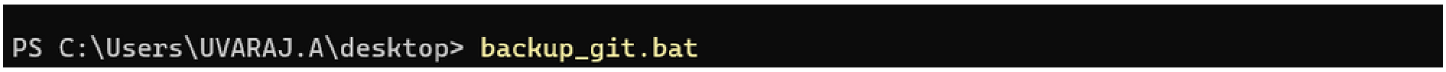
.gitignore template: None

Choose which files not to track from a list of templates. Learn more about ignoring 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) in Desktop

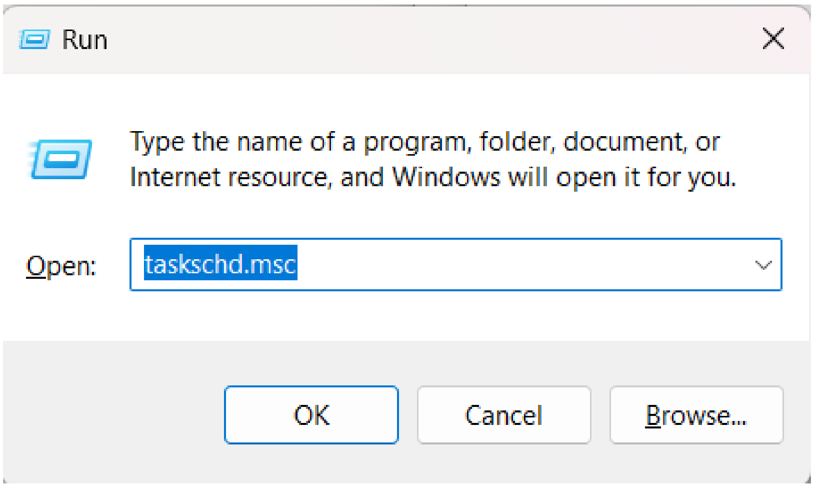


```
@echo off
set REPO_PATH=C:\Users\UVARAJ.A\desktop\Cloud100days
set BACKUP_REPO_URL=https://github.com/Mahaamimiii/Cloud100days-backup
set TIMESTAMP=%DATE:~10,4%-%DATE:~4,2%-%DATE:~7,2%_%TIME:~0,2%-%TIME:~3,2%
set BACKUP_NAME=git_backup_%TIMESTAMP%

REM Navigate to your repository folder
cd "%REPO_PATH%"

REM Add a new backup commit
git add .
git commit -m "Backup on %TIMESTAMP%"

REM Push to the backup repository
git remote add backup %BACKUP_REPO_URL%
git push backup master

echo Backup pushed to GitHub repository at: %BACKUP_REPO_URL%
pause
```



```
PS C:\Users\UVARAJ.A\desktop> backup_git.bat
```

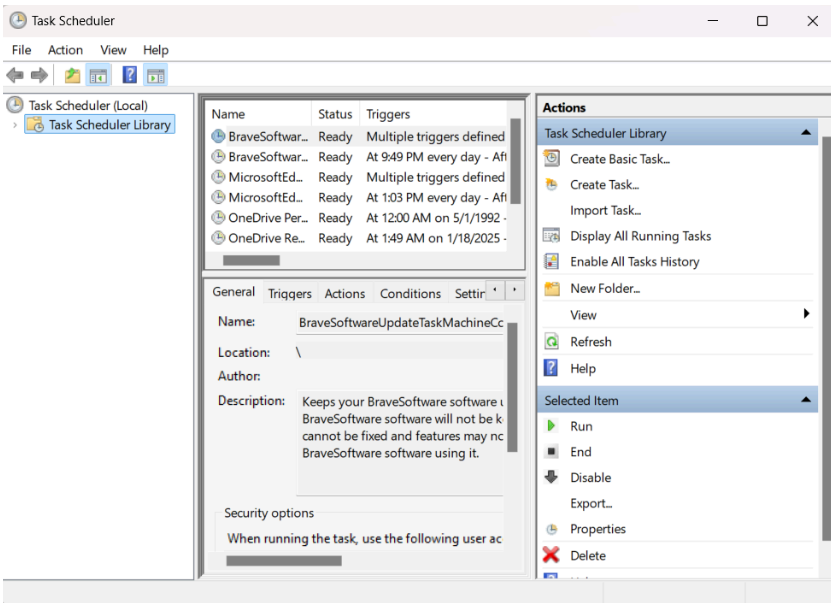
Step 3: Press Win + R on your keyboard. A small "Run" dialog box will pop up. Type taskschd.msc (without quotes) in the Run box. Press Enter or click OK.This will open the Task Scheduler window



Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.

Open: taskschd.msc

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



| Name | Status | Triggers |
|---|---|---|
| BraveSoftwar... | Ready | Multiple triggers defined |
| BraveSoftwar... | Ready | At 9:49 PM every day - Aft |
| MicrosoftEd... | Ready | Multiple triggers defined |
| MicrosoftEd... | Ready | At 1:03 PM every day - Aft |
| OneDrive Per... | Ready | At 12:00 AM on 5/1/1992 - |
| OneDrive Re... | Ready | At 1:49 AM on 1/18/2025 - |

Name: BraveSoftwareUpdateTaskMachineCc

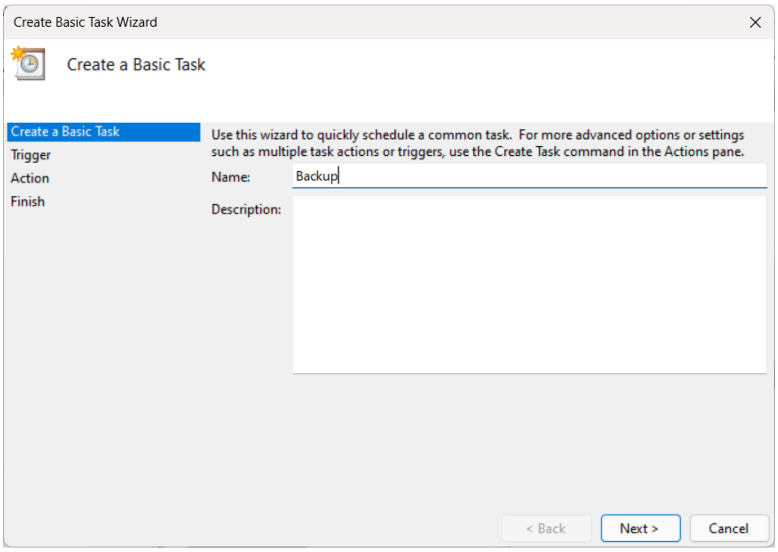
Location: \

Author:

Description: Keeps your BraveSoftware software u BraveSoftware software will not be k cannot be fixed and features may nc BraveSoftware software using it.

Security options

When running the task, use the following user ac

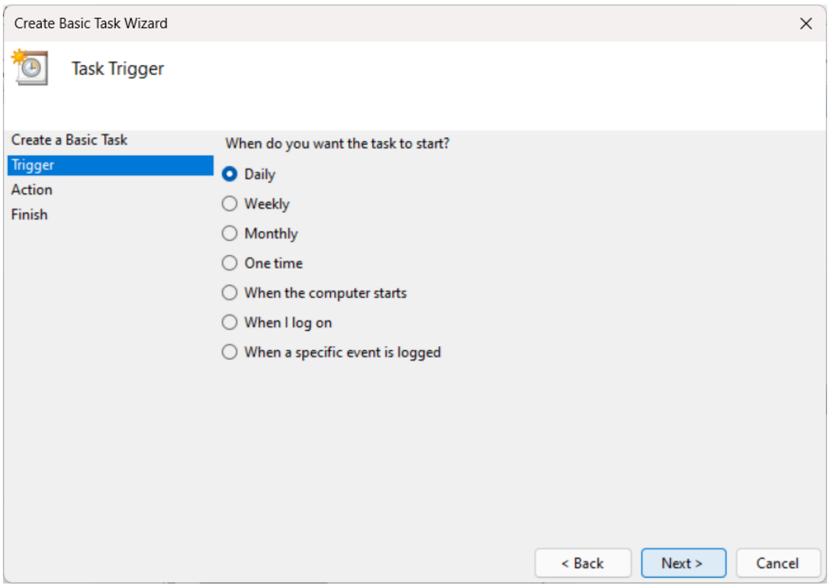


Use this wizard to quickly schedule a common task. For more advanced options or settings such as multiple task actions or triggers, use the Create Task command in the Actions pane.

Name: Backup

Description:

Step 6: Choose a Schedule: You will see options like: Daily (runs every day). Weekly (runs once a week). One time (runs only once at a specific time). Choose what works for you (e.g., Daily) and click Next.



When do you want the task to start?

● Daily

○ Weekly

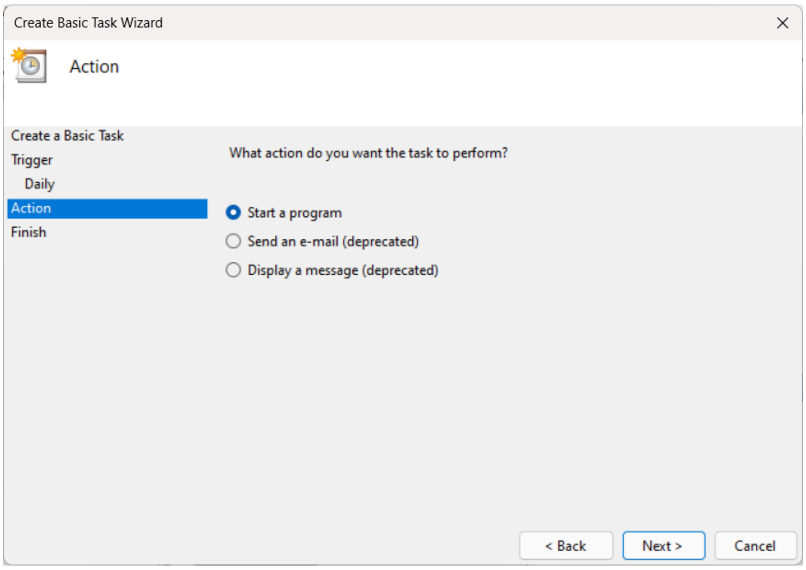
○ Monthly

○ One time

○ When the computer starts

○ When I log on

○ When a specific event is logged



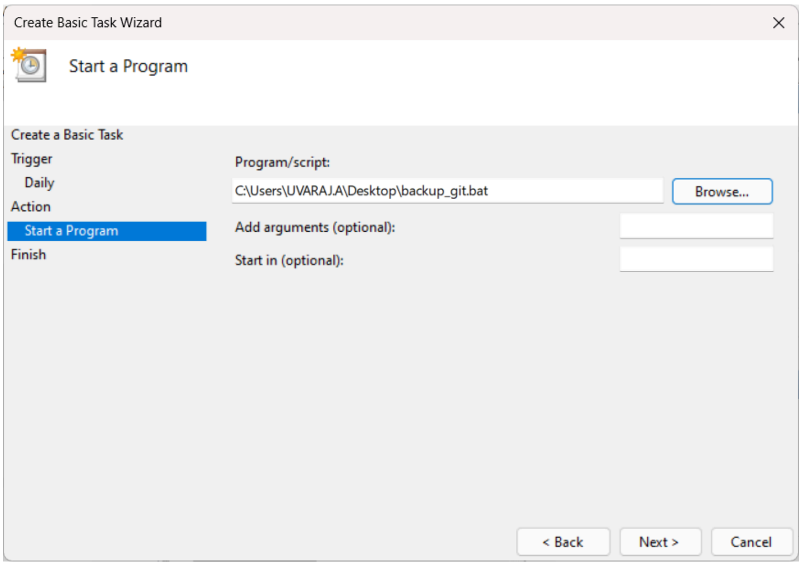
Create Basic Task Wizard

Action

What action do you want the task to perform?

● Start a program
○ Send an e-mail (deprecated)
○ Display a message (deprecated)

Step 9: 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.



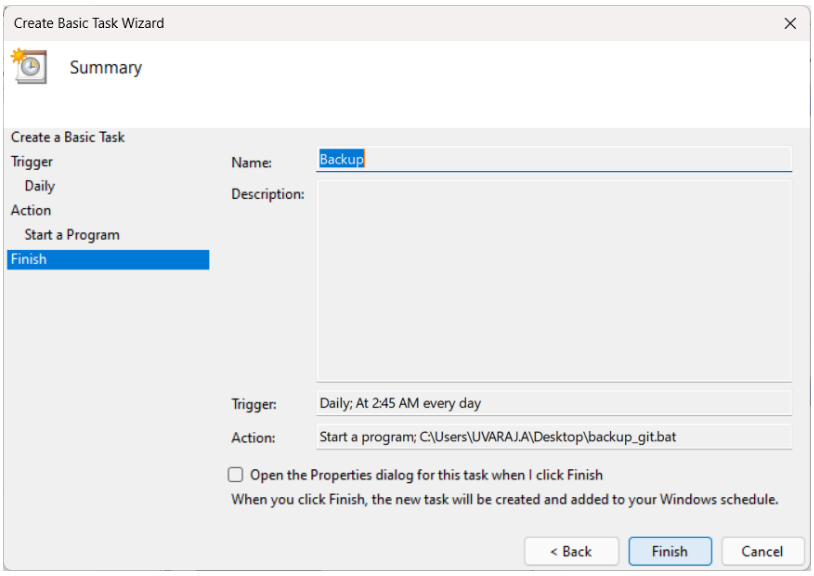
Create Basic Task Wizard

Start a Program

Program/script: C:\Users\UVARAJA\Desktop\backup_git.bat

Add arguments (optional):

Start in (optional):



Name: Backup

Description:

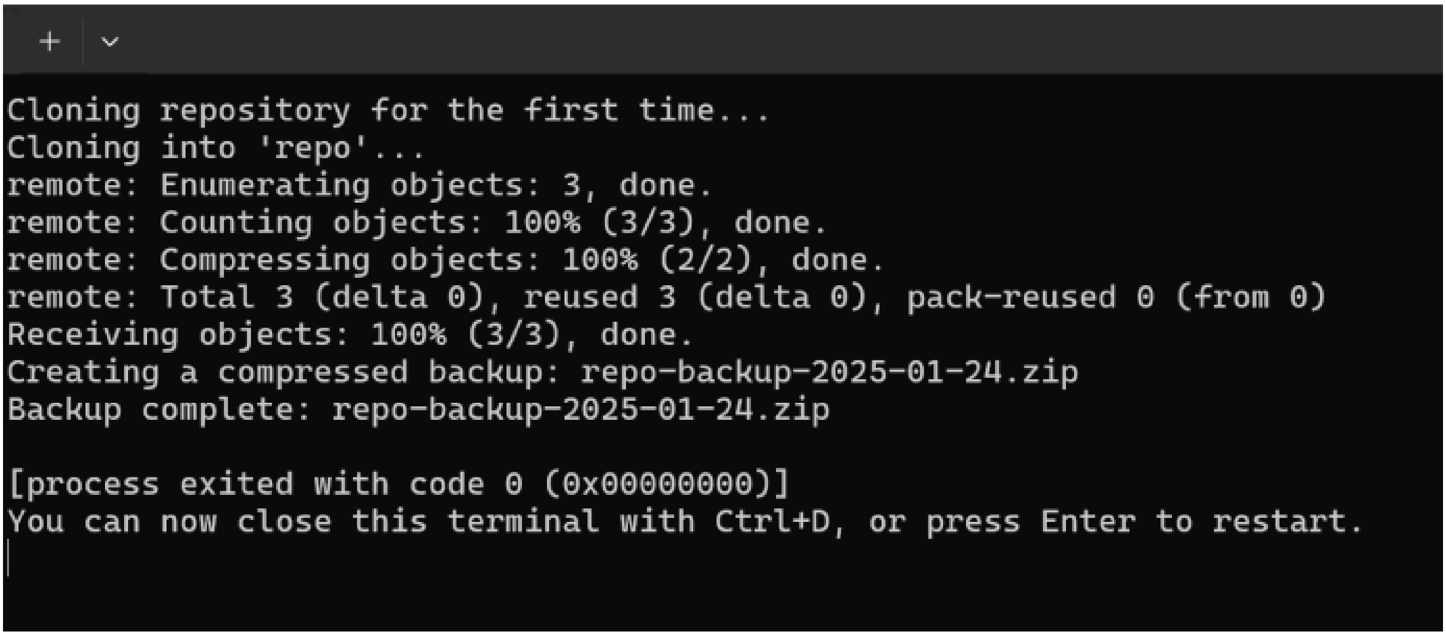
Trigger: Daily; At 2:45 AM every day

Action: Start a program; C:\Users\UVARAJA\Desktop\backup_git.bat

☐ Open the Properties dialog for this task when I click Finish

When you click Finish, the new task will be created and added to your Windows schedule.

Step 11: In Task Scheduler, go to the Task Scheduler Library (on the lefthand side). Find your task (it should have the name you gave it, e.g., "GitRepoBackup"). Right-click the task and select Run. This will manually trigger the task immediately



```
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.
```

## Expected Outcomes

- A local backup of the entire Git repository, including all branches and commit history.
- An automated process that reduces manual intervention.
- Quick restoration capability in case of data loss or corruption.