Placement Empowerment Program

Cloud Computing and DevOps Centre

Automate File Copying with a Script

Create a script to copy files from one folder to another automatically.

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INTRODUCTION:

Automating file copying with a script is an efficient way to manage and transfer data between directories, devices, or servers without manual intervention. This process helps save time, reduces the risk of human error, and ensures consistency, especially when handling large volumes of files or repetitive tasks.

OVERVIEW:

The script automates the process of copying files from a source folder to a destination folder. It ensures that all files in the source directory are transferred efficiently while maintaining their integrity. This automation can be customized based on specific needs, such as copying files based on file type, modification date, or size. The script can be written using programming languages like Python, Shell scripting, or PowerShell, depending on the operating environment.

OBJECTIVES:

Key Objectives of File Copy Automation Task

The primary goal of automating the file copying process is to enhance efficiency, reliability, and scalability in data management. Here are the key objectives

Efficiency and Time-Saving:

- Automate repetitive file copying tasks to save time.

- Reduce manual effort, especially when dealing with large datasets.

Consistency and Accuracy

- Ensure files are copied correctly without missing or duplicating data.
- Minimize human errors that can occur during manual operations.

Improved Data Management

- Organize files systematically by automating folder structures and naming conventions.
- Filter files based on criteria like file type, size, or modification date.

Scalability

- Handle large volumes of files or complex directory structures effortlessly.
- Adapt scripts to work across multiple devices, servers, or cloenvironments.

Reliability and Error Handling

- Implement error detection and recovery mechanisms to handle issues like missing files, permission errors, or interrupted transfers.
- Generate logs to track the success or failure of file operations.

Security

- Secure file transfers, especially when c

- opying sensitive data over networks.
- Set permissions and access controls where necessary.

Automation and Scheduling

- Schedule file copying tasks to run automatically at specified intervals using tools like **cron (Linux)** or **Task Scheduler (Windows)**.
- Integrate with other automation workflows for seamless data processing.

Cost Reduction

- Reduce the need for manual labor, lowering operational costs in the long run.

These objectives ensure that file copying processes are optimized for both small-scale personal tasks and large enterprise operations.

IMPORTANCE:

1. Time-Saving: Automating the process eliminates the need for manual intervention, saving hours of work.

2. Error Reduction: Reduces human errors, such as forgetting to copy specific files or overwriting important ones.

3. Improved Organization: Helps maintain a consistent structure for file storage and backups.

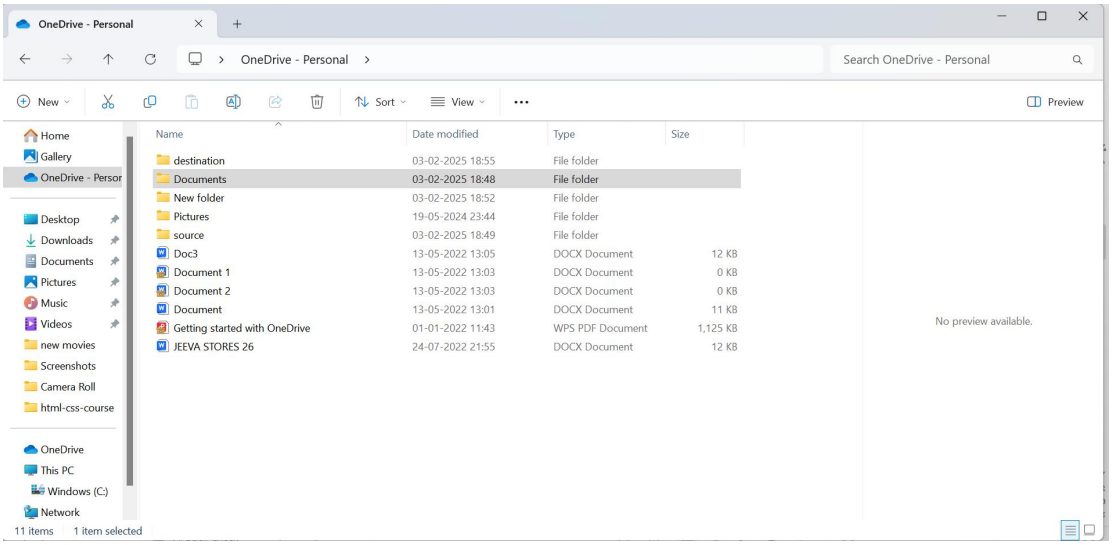
4. Useful in Various Scenarios: This approach is valuable for IT professionals, businesses, and individuals dealing with frequent file transfers or backups.

5. Scalability and Reusability: Once created, the script can be reused and scaled up to handle more complex tasks.

Step-by-Step Overview

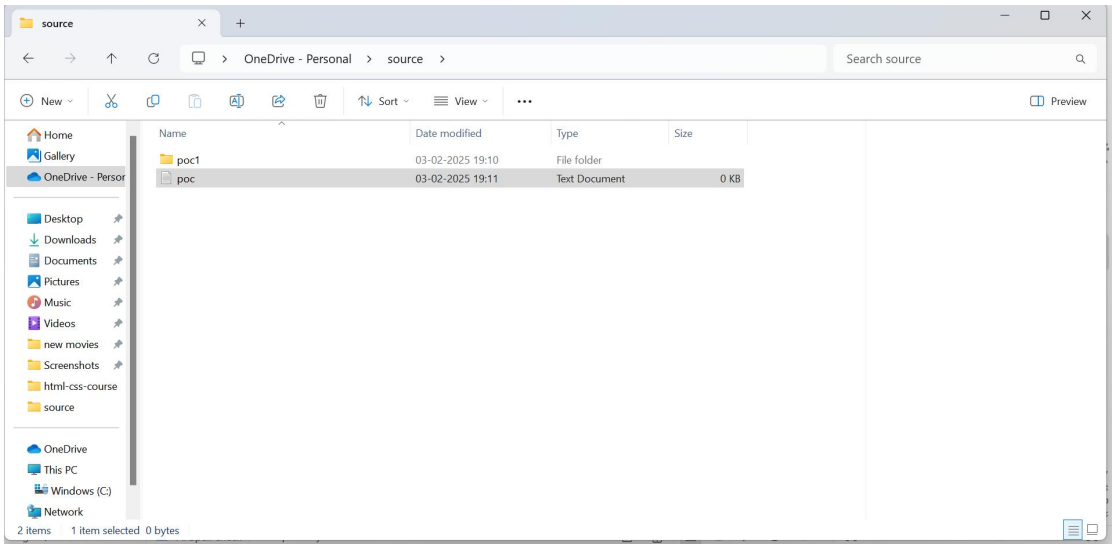
Step 1

Create two folders named Source and Destination



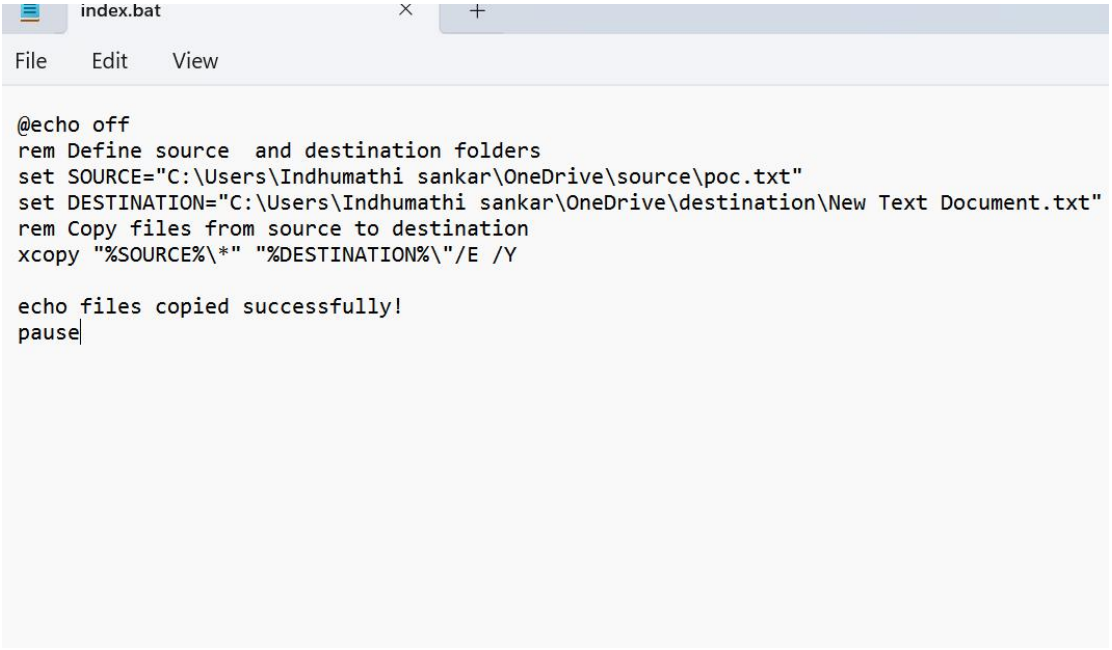
Step 2

Store some files inside it to automate it



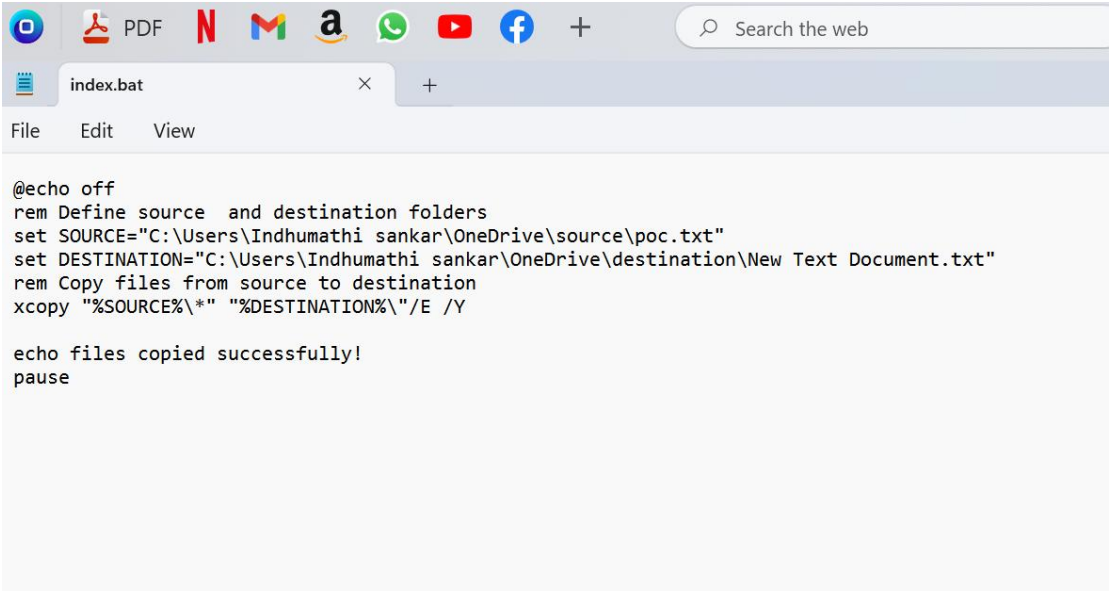
Step 3

Open the note pad and type the code and make sure that in set SOURCE give your Source folder address and in set DESTINATION give your Destination Folder address



Step 4

Then save the file in desktop with .bat extension (eg : index.bat) so the file looks like this



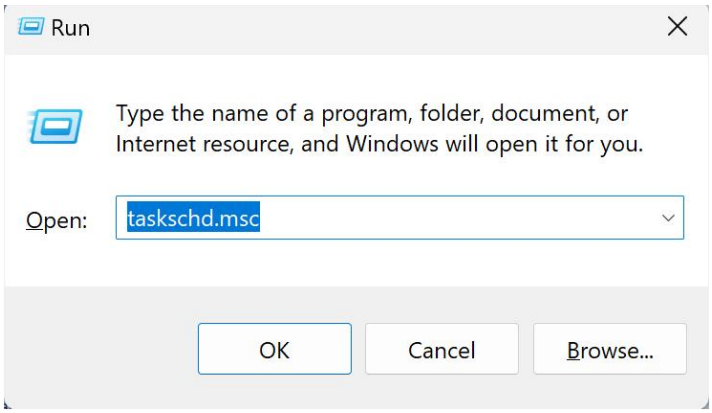
Step 5

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.

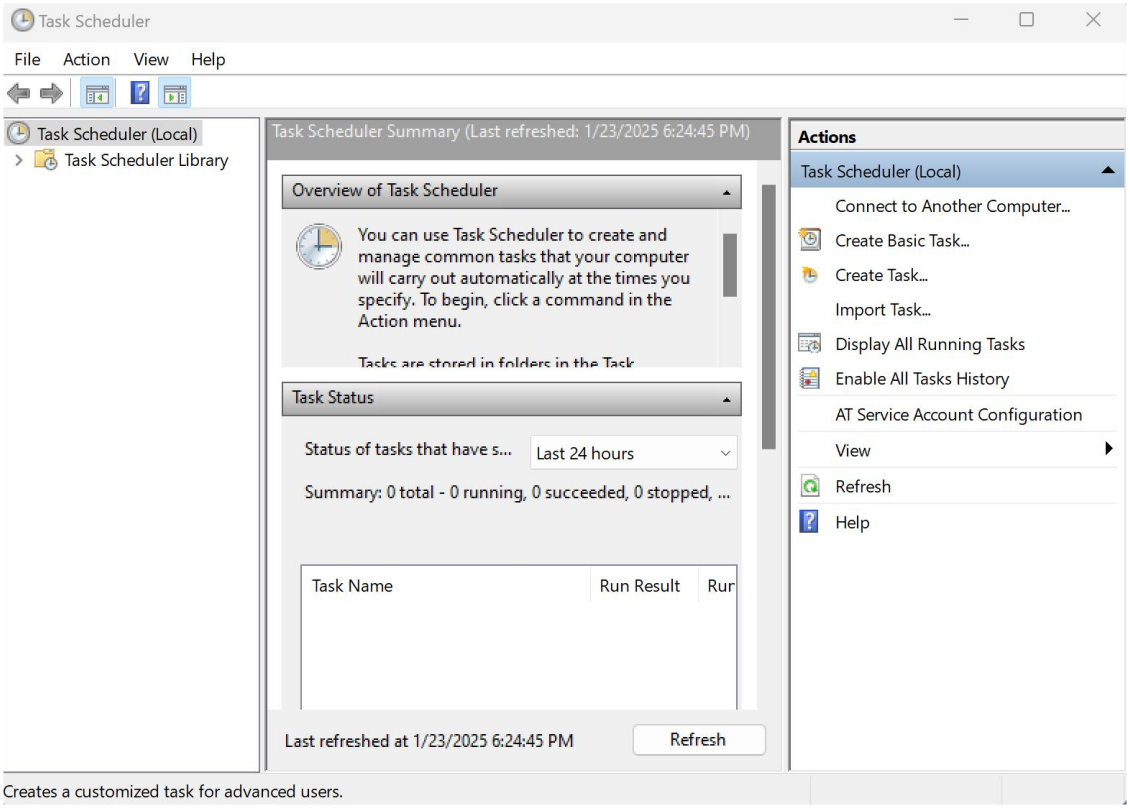


Step 6

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.



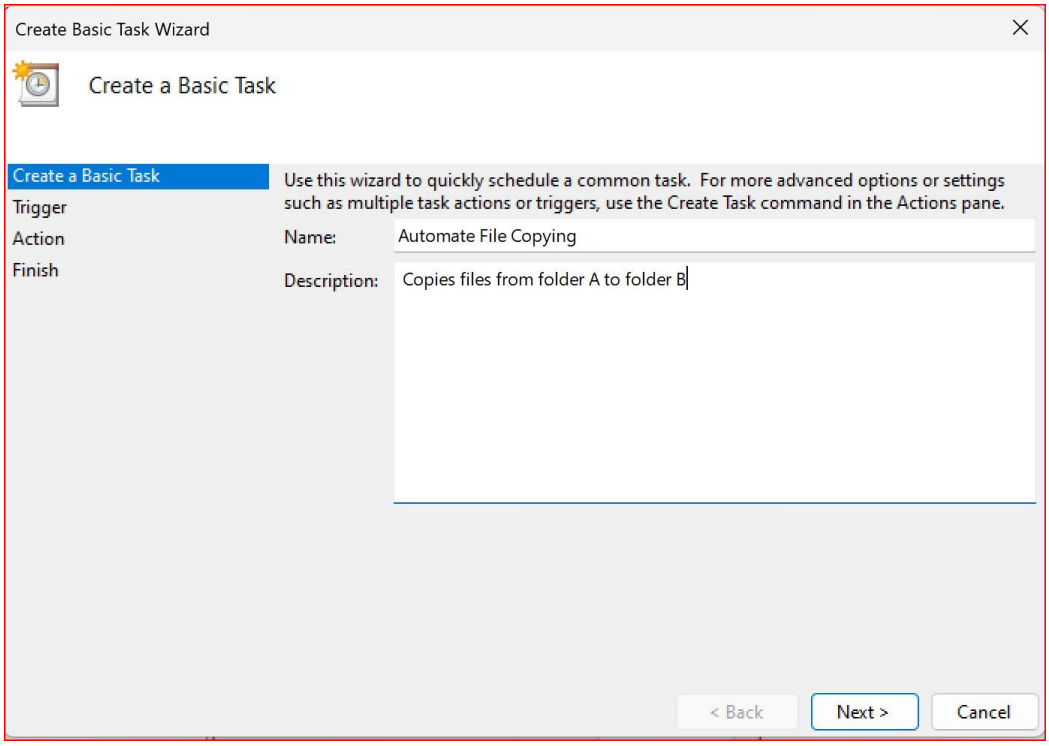
Step 7

1. Enter a Name for the Task:

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

Optionally, you can add a description like "Copies files from folder A to folder B".

2. Click Next to continue.



Step 8

Choose a Schedule:

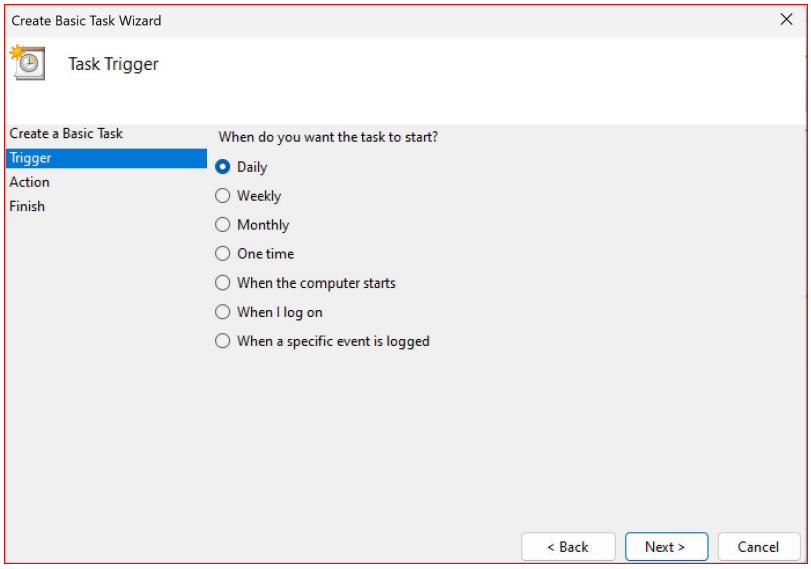
You will see options like:

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.



Step 9

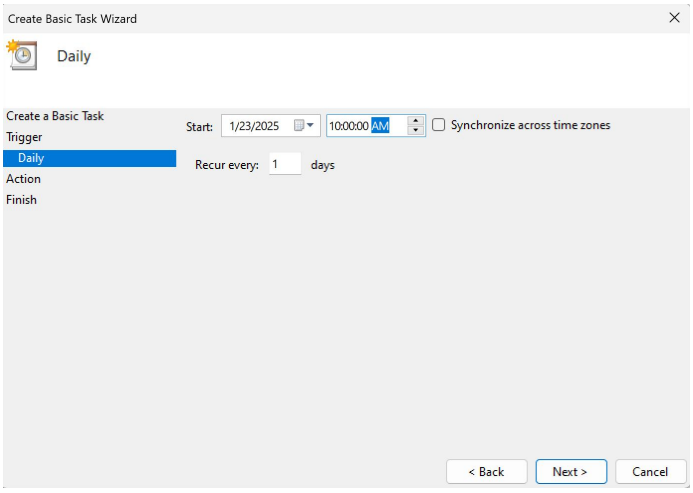
Set the Time and Frequency:

If you chose Daily, specify:

The start date (it defaults to today).

The time (e.g., 10:00 AM).

Click Next to move on.



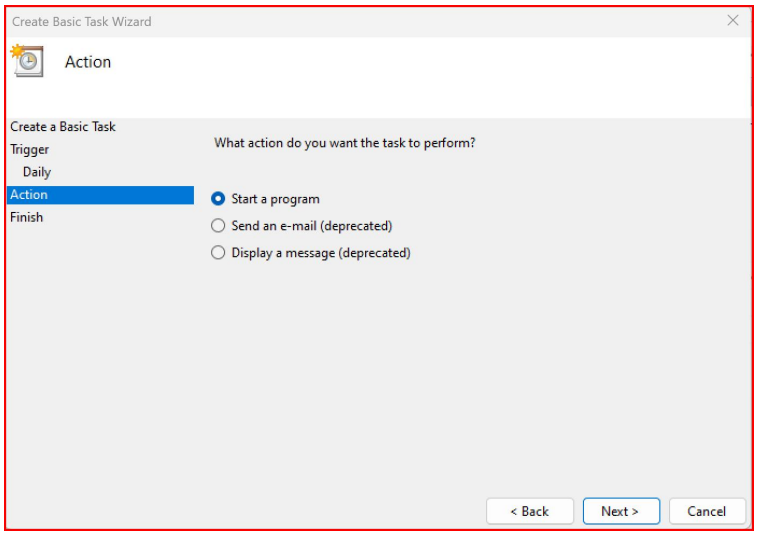
Step 10

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.



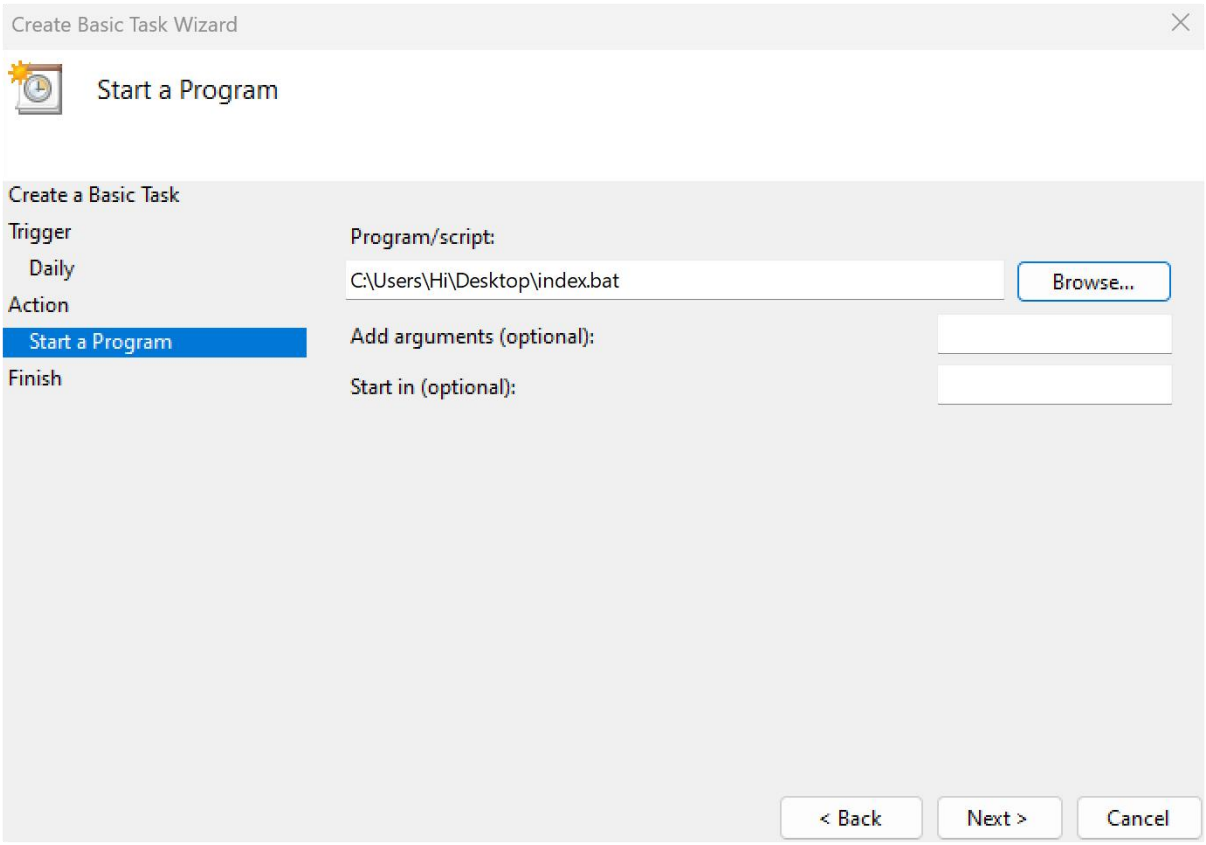
Step 11

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 index.bat and saved on the desktop, navigate to that file and select it.

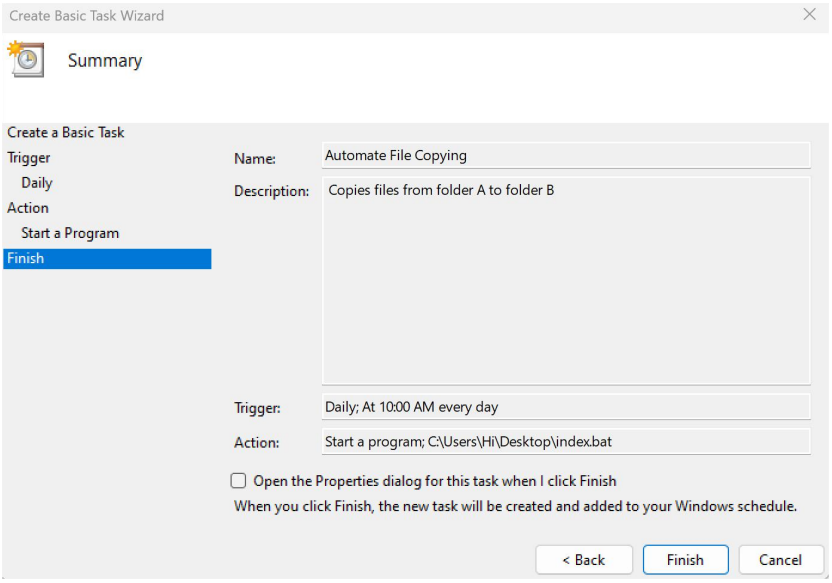
Click Next.



Step 12

Review and Finish

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



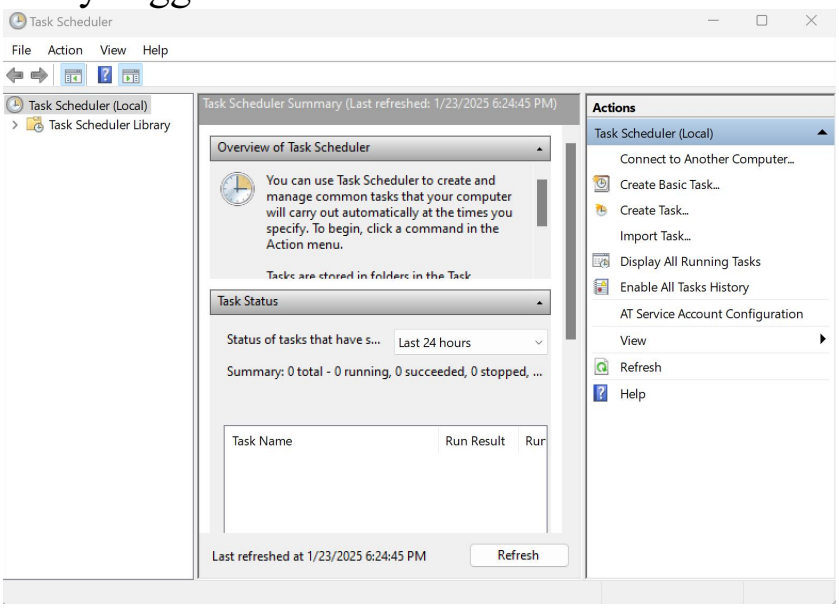
Step 13

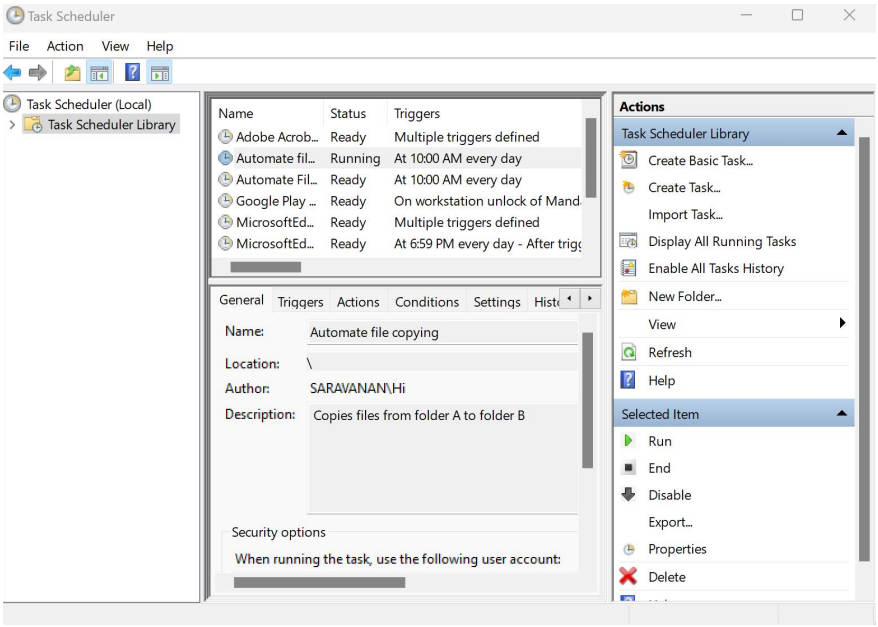
In Task Scheduler, go to the **Task Scheduler Library** (on the left-hand side).

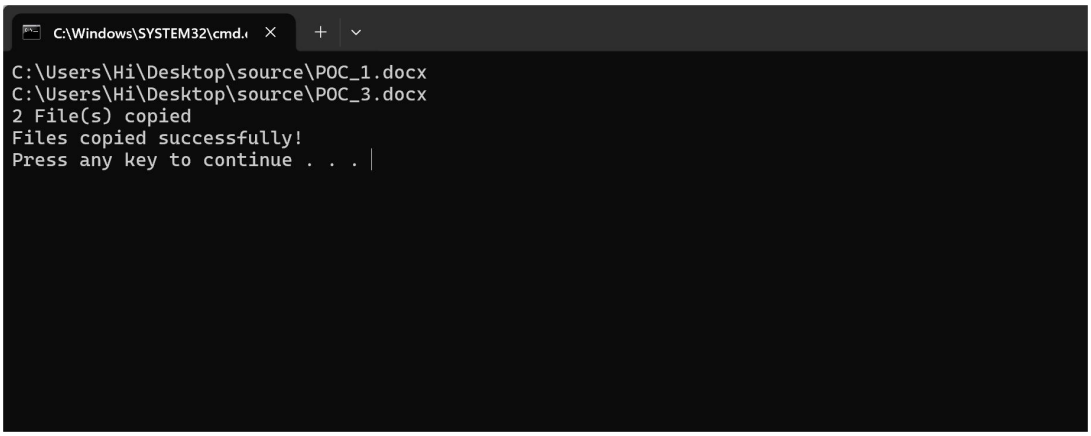
Find your task (it should have the name you gave it, e.g., "Automate File Copying").

Right-click the task and select **Run**.

This will manually trigger the task immediately.

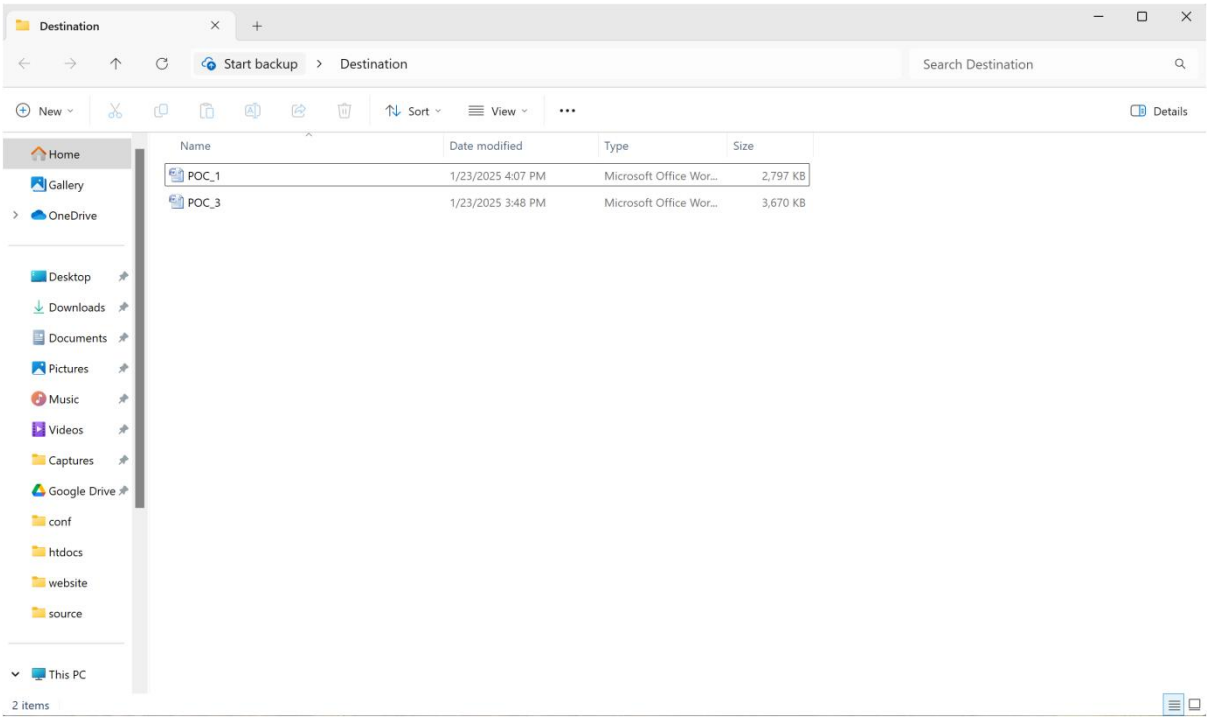






Step 14

If your task was set up to copy files, go to the destination folder and confirm that the files have been copied.



Outcome

By completing this Proof of Concept (PoC) of automating a task using Task Scheduler, you will:

1. Successfully set up an automated task that triggers on a schedule or when manually run.

2. Execute a batch script to copy files from a source folder to a destination folder automatically.

3. Understand how to use Task Scheduler to automate repetitive tasks in Windows.

4. Gain familiarity with task triggers, actions, and conditions in Task Scheduler.

5. Save time and ensure consistent execution of file operations without manual intervention.

6. Optionally test the task to verify that it runs as expected and achieves the desired outcome.

7. Enhance your workflow automation skills with practical hands-on experience.