

Node js Program Execution using git , github and Jenkins

Open Normal Command Prompt

```
C:\Users\P c>e:
```

```
E:\>mkdir nodeexample
```

```
E:\>cd nodeexample
```

```
E:\nodeexample>vim app.js
```

Copy the below program in app.js file

```
const express = require('express');
const app = express();
app.get('/',(req,res) => {
res.send("Hello World, I am from Nodejs");
});
app.listen(3020,() => {
console.log("Server is running on port 3020")
});
```

Execute the following command in cmd

`npm init -y`

```
E:\nodeexample>npm init -y
Wrote to E:\nodeexample\package.json:

{
  "name": "nodeexample",
  "version": "1.0.0",
  "main": "app.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC",
  "description": ""
}
```

Execute the following cmd

`npm i express`

```
E:\nodeexample>npm i express

added 65 packages, and audited 66 packages in 7s

13 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
```

Open git bash

```
P c@DESKTOP-TEKQI08 MINGW64 ~ (master)
$ cd e:

P c@DESKTOP-TEKQI08 MINGW64 /e
$ cd nodeexample

P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample
$ ls
app.js  node_modules/  package-lock.json  package.json

P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample
$ echo "node_modules/" >> .gitignore
```

```
P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample
$ git init
Initialized empty Git repository in E:/nodeexample/.git/

P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git config user.email "gujjuladeepak"

P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git config user.name "Deepak"

P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .gitignore
    app.js
    package-lock.json
    package.json
```

```
P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git add .
```

```
P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git commit -m "This is sample node js program"
[master (root-commit) 33380b8] This is sample node js program
4 files changed, 797 insertions(+)
create mode 100644 .gitignore
create mode 100644 app.js
create mode 100644 package-lock.json
create mode 100644 package.json
```

Open GitHub and log in. Next, create a new repository and name it nodejsexample.

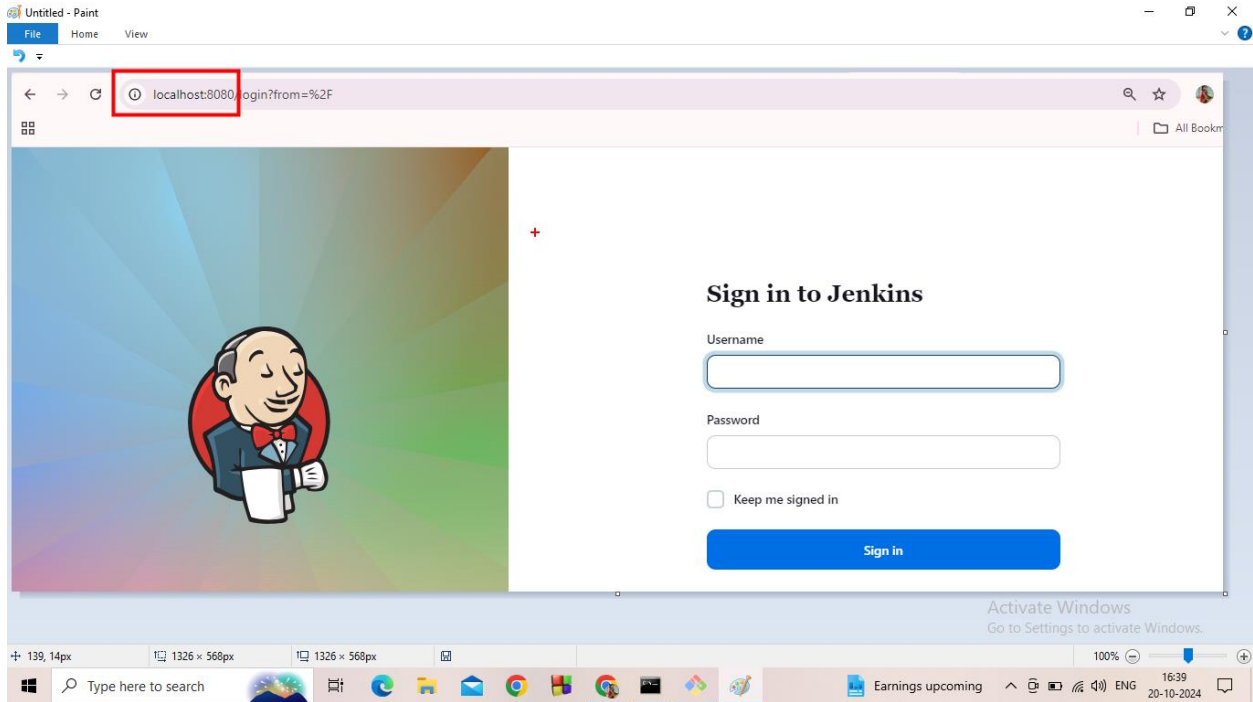
```
P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git remote add origin https://github.com/deepak574/nodejsexample.git

P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (master)
$ git branch -M main

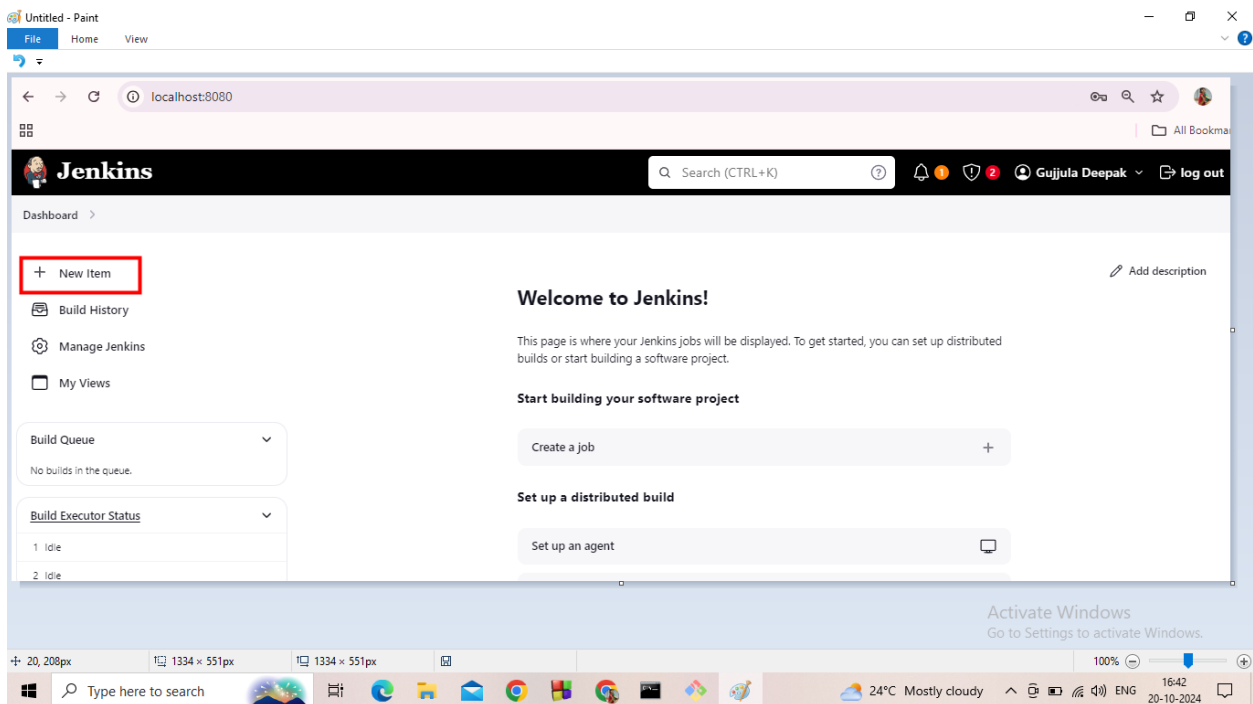
P c@DESKTOP-TEKQI08 MINGW64 /e/nodeexample (main)
$ git push -u origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 4 threads
Compressing objects: 100% (5/5), done.
writing objects: 100% (6/6), 7.85 KiB | 1.31 MiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/deepak574/nodejsexample.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

Open jenkins

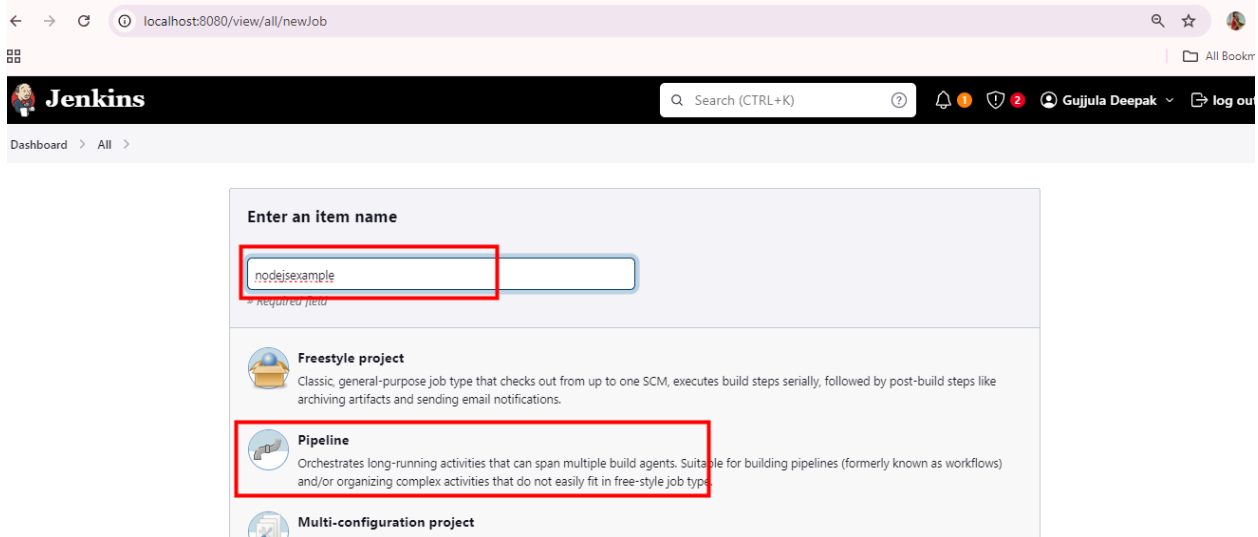
Open any browser and type *localhost:8080*



Select *New Item*

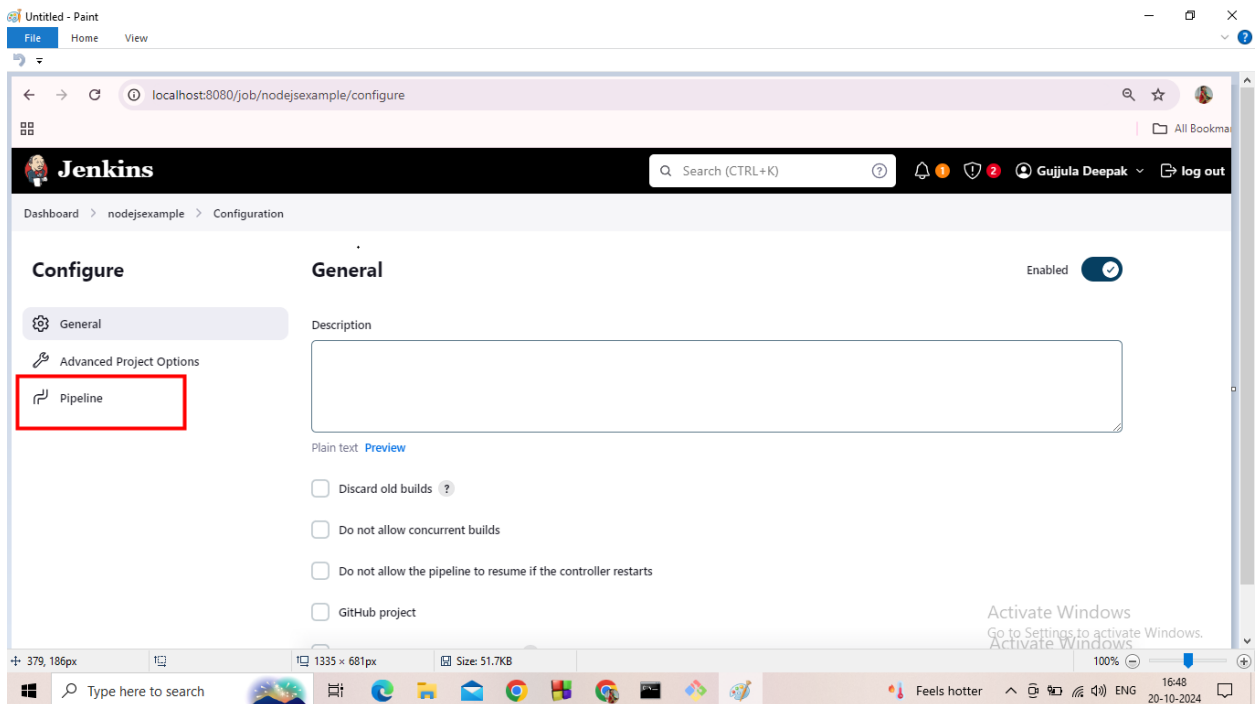


Give Item name as *nodejsexample*
Select *Pipeline* and click *ok*



The screenshot shows the Jenkins web interface at the URL `localhost:8080/view/all/newJob`. The page title is "Enter an item name". A text input field contains the text "nodejsexample" and is highlighted with a red rectangle. Below the input field, there are three radio button options: "Freestyle project", "Pipeline", and "Multi-configuration project". The "Pipeline" option is selected and highlighted with a red rectangle. The "Freestyle project" description is "Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications." The "Pipeline" description is "Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type." The "Multi-configuration project" option is also visible.

Select *Pipeline*



The screenshot shows the Jenkins web interface at the URL `localhost:8080/job/nodejsexample/configure`. The page title is "Configure". On the left, there is a sidebar with three options: "General", "Advanced Project Options", and "Pipeline". The "Pipeline" option is selected and highlighted with a red rectangle. The main content area is titled "General" and shows a "Description" field with a text area. Below the description field, there are four checkboxes: "Discard old builds", "Do not allow concurrent builds", "Do not allow the pipeline to resume if the controller restarts", and "GitHub project". The "Enabled" toggle switch is turned on. The page also shows a "Plain text" preview link and a "Preview" button. The bottom of the screen shows a Windows taskbar with the date "20-10-2024" and time "16:48".

Copy the below code in the pipeline area

```
pipeline {
  agent any
  stages {
    stage('Clone Repository') {
      steps {
        git branch: 'main', url: 'https://github.com/deepak574/nodejsexample.git'
      }
    }
    stage('Install Dependencies') {
      steps {
        bat 'npm install'
      }
    }
    stage('Run Application') {
      steps {
        bat 'node app.js'
      }
    }
  }
}
```

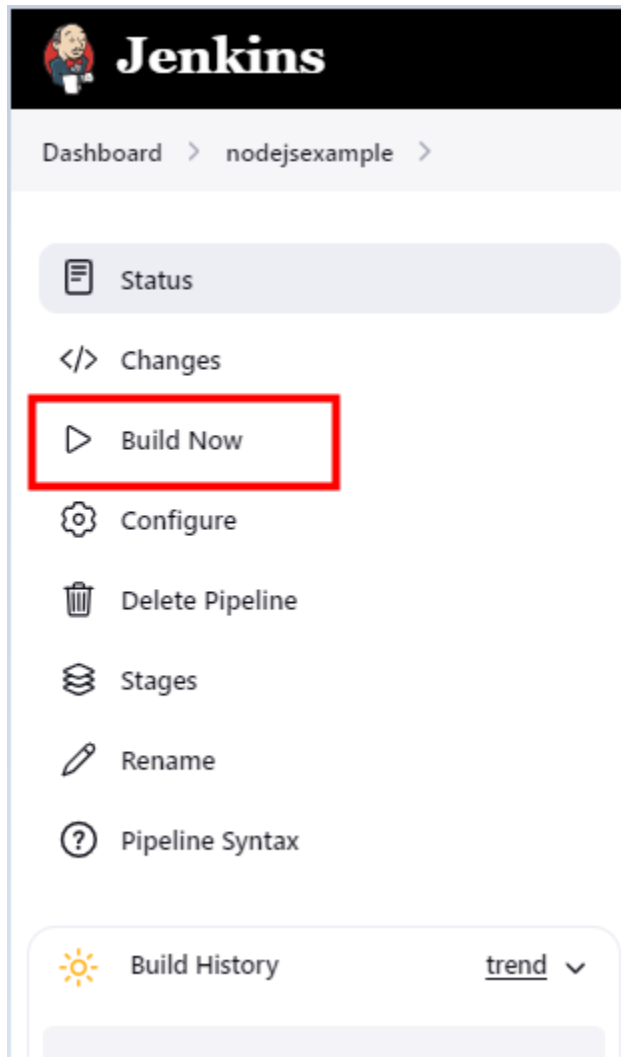
The screenshot shows the Jenkins 'Configure' page for a pipeline named 'nodejsexample'. The breadcrumb trail at the top is 'Dashboard > nodejsexample > Configuration'. On the left, the 'Configure' section has three tabs: 'General', 'Advanced Project Options', and 'Pipeline'. The 'Pipeline' tab is selected. The main area is titled 'Pipeline script' and contains a code editor with the following script:

```
6      }
7      }
8      }
9      stage('Install Dependencies') {
10         steps {
11             bat 'npm install'
12         }
13     }
14     stage('Run Application') {
15         steps {
16             bat 'node app.js'
17         }
18     }
19 }
20 }
21 }
22 }
```

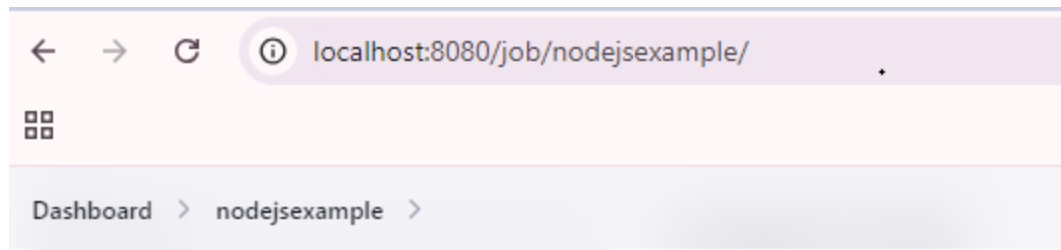
Below the code editor, there is a checkbox labeled 'Use Groovy Sandbox' which is checked. At the bottom of the configuration area, there are two buttons: 'Save' and 'Apply'. Both buttons are highlighted with red rectangular boxes. In the bottom right corner of the page, there is a watermark that says 'Activate Windows'.

Click apply and save

Click on Build Now



The image shows the Jenkins web interface. At the top is a black header with the Jenkins logo (a cartoon character) and the word "Jenkins" in white. Below the header is a breadcrumb trail: "Dashboard > nodejsexample >". A vertical sidebar on the left contains several menu items, each with an icon and a label: "Status" (document icon), "Changes" (code icon), "Build Now" (play button icon, highlighted with a red rectangular box), "Configure" (gear icon), "Delete Pipeline" (trash can icon), "Stages" (stack of papers icon), "Rename" (pencil icon), and "Pipeline Syntax" (question mark icon). At the bottom of the sidebar is a "Build History" section with a sun icon, the text "Build History", and a "trend" dropdown menu with a downward arrow. The main content area to the right of the sidebar is currently empty.



</> Changes

▶ Build Now

⚙️ Configure

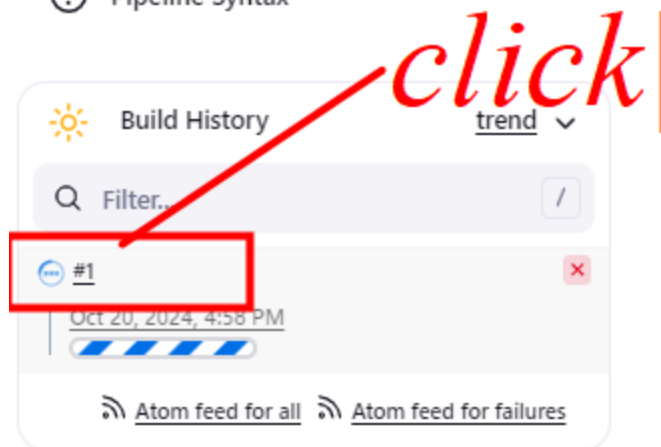
🗑️ Delete Pipeline


📁 Stages

✎️ Rename

❓ Pipeline Syntax

Permalinks



 **Jenkins**

Search

Dashboard > nodejsexample > #1

Status

</> Changes

Console Output

Edit Build Information

Timings

Git Build Data

Pipeline Overview

Pipeline Console

Thread Dump

Pause/resume

Replay

Pipeline Steps

Build #1 (Oct 20, 2024, 4:58:54 PM)

Started by user [Gujjula Deepak](#)

This run spent 57 ms waiting in the queue.

Revision: dd1d9e0e02c47c2c281f52afc2d54401a33bf658

Repository: <https://github.com/deepak574/nodejsexample.git>

• refs/remotes/origin/main

Click Console Output and scroll down

Dashboard > nodejsexample > #1

```
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Install Dependencies)
[Pipeline] bat

C:\Users\P c\.jenkins\workspace\nodejsexample>npm install

added 65 packages, and audited 66 packages in 4s

13 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Run Application)
[Pipeline] bat

C:\Users\P c\.jenkins\workspace\nodejsexample>node app.js
Server is running on port 3020
```

Open browser and type *localhost:3020*

