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Aim: Write code for a simple user registration form of an event

regform.html

```
<!DOCTYPE html>

<html lang="en">

    <head>

        <meta charset="UTF-8" />

        <meta

            http-equiv="X-UA-Compatible"

            content="IE=edge"

        />

        <meta

            name="viewport"

            content="width=device-width, initial-scale=1.0"

        />

        <link

            rel="stylesheet"

            href="styles.css"

        />

        <title>Registration form</title>

    </head>

    <body>

        <div class="form-container">

            <h1>Registration form!!</h1>
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```
<form action="submit.html">

    <input
        type="text"
        placeholder="Enter your name"
        pattern="\w*"

    />

    <input
        type="email"
        placeholder="Enter your email"

    />

    <input
        type="password"
        placeholder="Enter your password"

    />

    <input
        type="password"
        placeholder="Confirm password"

    />

    <div class="consent">
        <input type="checkbox" />
        I agree with the terms and conditions
    </div>

    <button type="submit">Register</button>
```

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```
</form>  
  
</div>  
  
</body>  
  
</html>
```

styles.css

```
* {  
    margin: 0;  
    box-sizing: border-box;  
}  
  
.form-container {  
    width: 60%;  
    margin: 0 auto;  
    margin-top: 2rem;  
    padding: 2rem;  
    border: 2px solid dodgerblue;  
    border-radius: 6px;  
}  
  
.form-container > h1 {  
    margin-bottom: 1rem;
```

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```
}
```

```
form {
```

```
    display: flex;
```

```
    flex-direction: column;
```

```
    gap: 1rem;
```

```
}
```



```
input[type="text"],
```

```
input[type="email"],
```

```
input[type="password"] {
```

```
    padding: 0.8rem 0.6rem;
```

```
    border-radius: 6px;
```

```
    border: 1px solid dodgerblue;
```

```
    box-shadow: 0 2px dodgerblue;
```

```
    outline: none;
```

```
}
```



```
input[type="text"]:focus {
```

```
    border: 1px solid dodgerblue;
```

```
    box-shadow: 0 2px dodgerblue;
```

```
}
```

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```
form > button {  
    padding: 0.8rem;  
    color: white;  
    background-color: rgb(30, 144, 255);  
    border: none;  
    border-radius: 4px;  
}  
  
form > button:hover {  
    background-color: rgba(30, 144, 255, 0.8);  
    cursor: pointer;  
}  
  
body > h1 {  
    position: fixed;  
    top: 50%;  
    left: 50%;  
    transform: translate(-50%, -50%);  
}
```

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Output:

Registration form!!

Enter your name

Enter your email

Enter your password

Confirm password

I agree with the terms and conditions

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Aim: Exploring Git and Github Commands

Checking git version

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops
$ git --version
git version 2.41.0.windows.1
```

Initializing the repository

This creates a .git file which tracks your code changes

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops
$ git init
Initialized empty Git repository in C:/Users/pranav/OneDrive/Desktop/Devops/.git/
```

Putting meta information

Meta information must only be entered once and will be used later for interacting with the github repository.

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git config --global user.name "Kpranav10"

pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git config --global user.email "kallamadipranav10@gmail.com"
```

Checking the status of files

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$
```

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Adding the files

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git status
On branch master

No commits yet

Changes to be committed:
(use "git rm --cached <file>..." to unstage)
  new file:  regform.html
  new file:  styles.css
```

Committing the files with a message

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git commit -m "Initial commit"
[master (root-commit) abae30d] Initial commit
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 regform.html
 create mode 100644 styles.css
```

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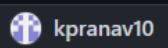
Create the repository on github

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 *



kpranav10

Repository name *

/ regsform

regsform is available.

Great repository names are short and memorable. Need inspiration? How about [bookish-fiesta](#) ?

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.](#)

Choose a license

License: None

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

You are creating a public repository in your personal account.

Create repository

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Push the repository to github

First the remote is added using the URL of the repository

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git remote add origin https://github.com/kpranav10/regsform.git

pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (master)
$ git branch -M main

pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (main)
$ git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 6 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 232 bytes | 232.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/kpranav10/regsform.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

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Output:

The screenshot shows a GitHub repository page for a project named 'regsform'. The repository is public and has one branch ('main') and one commit ('1 commit'). The commit was made by 'kpranav10' 18 minutes ago. It includes two files: 'regform.html' and 'styles.css', both of which were committed initially. There is a call-to-action button 'Add a README' at the bottom left of the main content area. On the right side, there is an 'About' section with a note: 'No description, website, or topics provided.' Below it are metrics: 0 stars, 1 watching, and 0 forks.

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Aim: Practice Source code management on GitHub. Experiment with the source code written in exercise 1.

Create a new branch for editing

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (main)
$ git branch change_title
```

Switch to that branch which is: change_title

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (main)
$ git switch change_title
Switched to branch 'change_title'
```

Make changes to the html file

Before:

```
18
19     <body>
20         <div class="form-container">
21             <h1>Registration form! !</h1> ↵
22             <form action="submit.html">
23                 <input
24                     type="text"
25                     placeholder="Enter your name"
```

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After

```
18
19      <body>
20          <div class="form-container">
21              <h1>Registration form!</h1> ←
22          <form action="submit.html">
23              <input
24                  type="text"
25                  placeholder="Enter your name"
```

We can see the changes using git diff

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops
$ git diff
diff --git a/regform.html b/regform.html
index e69de29..af2cee7 100644
--- a/regform.html
+++ b/regform.html
@@ -0,0 +1 @@
+sdkmgf1sm
\ No newline at end of file
```

Track and commit the changes

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (change_title)
$ git add .

pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (change_title)
$ git commit -m "changed the title"
[change_title 2ff535d] changed the title
 1 file changed, 1 insertion(+)
```

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Switch to main

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (change_title)
$ git switch main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

Merge the change_title branch with the main branch

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (main)
$ git merge change_title
Updating abae30d..2ff535d
Fast-forward
  regform.html | 1 +
  1 file changed, 1 insertion(+)
```

Push the repository to github

```
pranav@DESKTOP-RBRMVTP MINGW64 ~/OneDrive/Desktop/Devops (main)
$ git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 6 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 293 bytes | 293.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/kpranav10/regsform.git
  abae30d..2ff535d  main -> main
```

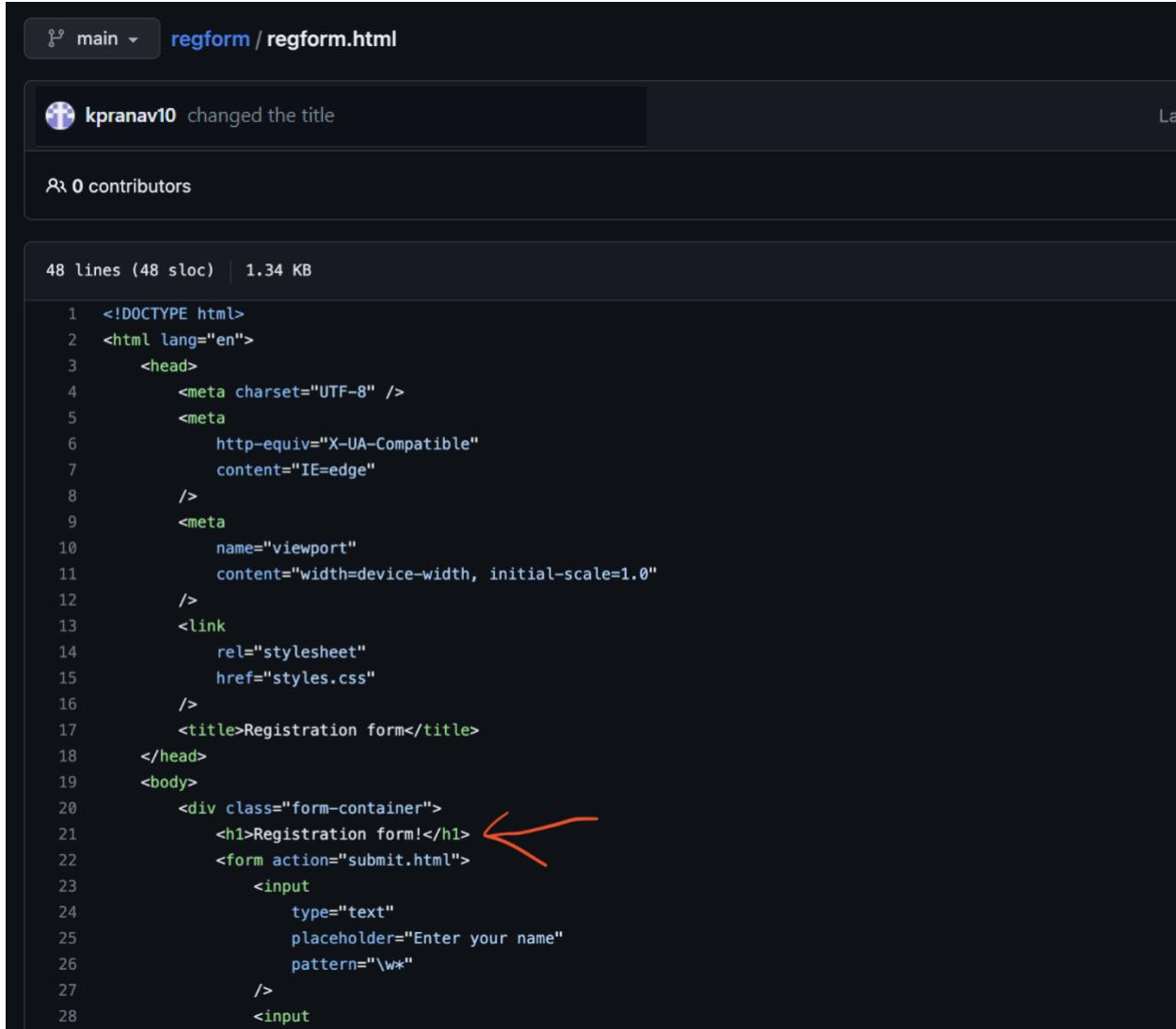
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Output:



main ▾ regform / regform.html

kpranav10 changed the title

0 contributors

48 lines (48 sloc) | 1.34 KB

```
1  <!DOCTYPE html>
2  <html lang="en">
3      <head>
4          <meta charset="UTF-8" />
5          <meta
6              http-equiv="X-UA-Compatible"
7              content="IE=edge"
8          />
9          <meta
10             name="viewport"
11             content="width=device-width, initial-scale=1.0"
12         />
13         <link
14             rel="stylesheet"
15             href="styles.css"
16         />
17         <title>Registration form</title>
18     </head>
19     <body>
20         <div class="form-container">
21             <h1>Registration form!</h1> ←
22             <form action="submit.html">
23                 <input
24                     type="text"
25                     placeholder="Enter your name"
26                     pattern="\w*"
27                 />
28                 <input
```

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Aim: Install Jenkins and set it up.

First install JDK 11 on your machine. The command for install openjdk-11 is given below:

```
pranav@DESKTOP-MacBook-Air ~ % brew install openjdk@11
```

Switch to version 11 in case you have other JDks installed and check the current openjdk version.

```
pranav@DESKTOP-MacBook-Air ~ % export JAVA_HOME=`/usr/libexec/java_home -v 11.0`  
pranav@DESKTOP-MacBook-Air ~ % java -version  
openjdk version "11.0.19" 2023-04-18  
OpenJDK Runtime Environment Homebrew (build 11.0.19+0)  
OpenJDK 64-Bit Server VM Homebrew (build 11.0.19+0, mixed mode)  
pranav@DESKTOP-MacBook-Air ~ %
```

Install Jenkins using the following command:

```
pranav@DESKTOP-MacBook-Air ~ % brew install jenkins-lts
```

Start Jenkins server:

```
pranav@DESKTOP-MacBook-Air ~ % brew services start jenkins-lts  
==> Successfully started `jenkins-lts` (label: homebrew.mxcl.jenkins-lts)  
pranav@DESKTOP-MacBook-Air ~ %
```

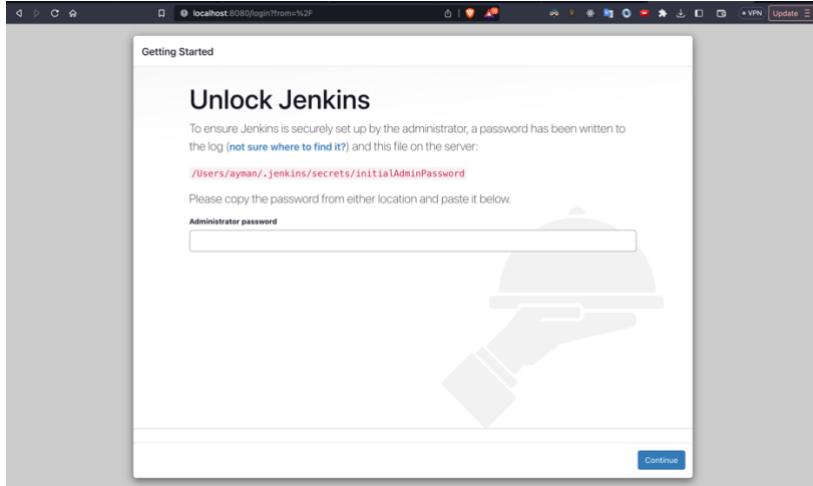
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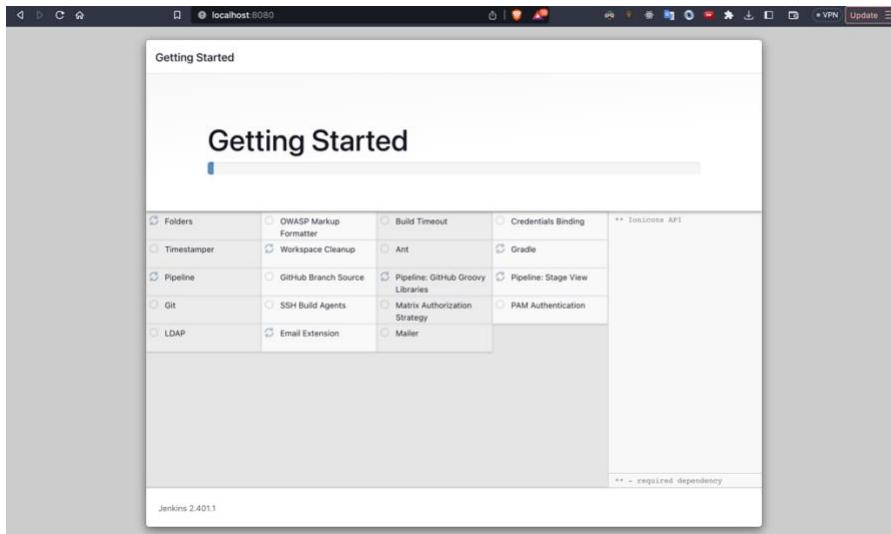
Go to port 8080, it should look like below.



Get the password from the location mentioned on the webpage and use it to unlock jenkins

```
pranav@DESKTOP-MacBook-Air ~ % cat /Users/pranav/.jenkins/secrets/initialAdminPassword
f26fc149e0754386b2799b04383677eb
```

Install all the suggested plugins



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After installing the plugins you will be redirected and will have to create an account

Create an account!

If you already have a Jenkins account, [please sign in.](#)

Username - "" is prohibited as a username for security reasons.

Full name - "" is prohibited as a full name for security reasons.

Email - Invalid e-mail address

Password - Password is required

Show

A strong password is a long password that's unique for every site. Try using a phrase with 5-6 words for the best security.

[Create account](#)

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Output:

The screenshot shows the Jenkins dashboard at localhost:8080. The left sidebar includes links for 'New Item', 'People', 'Build History', 'Manage Jenkins', and 'My Views'. It also displays the 'Build Queue' (empty) and 'Build Executor Status' (2 Idle). The main content area features a 'Welcome to Jenkins!' message, instructions for starting a project, and sections for creating a job, setting up a distributed build, and managing agents and clouds. At the bottom right, there are links for 'REST API' and 'Jenkins 2.401.1'.

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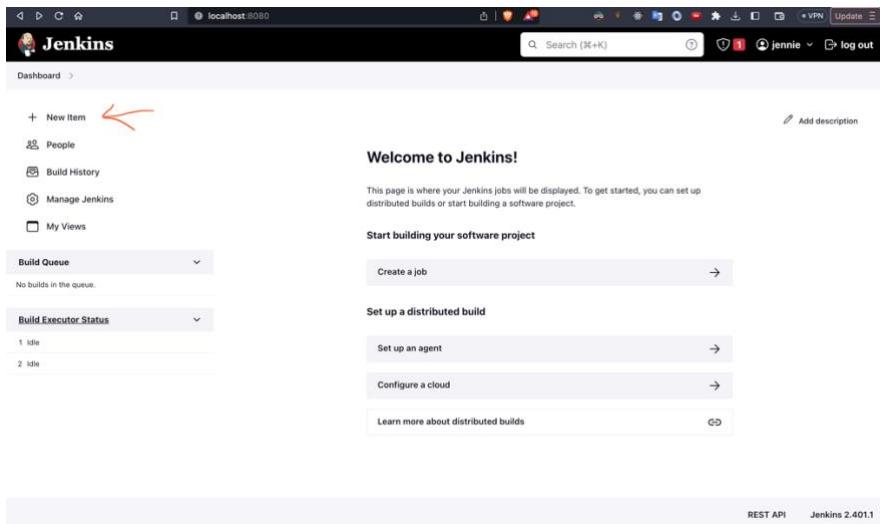
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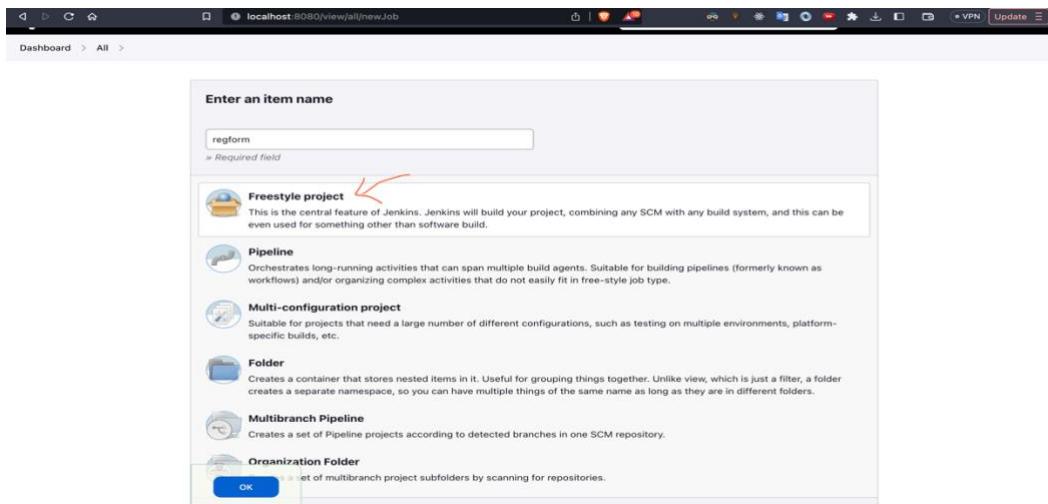
Aim: To demonstrate continuous integration and development using Jenkins

Create a new item as shown below:



The screenshot shows the Jenkins dashboard at localhost:8080. The left sidebar has a 'New Item' button with a red arrow pointing to it. The main area is titled 'Welcome to Jenkins!' with instructions to start building a software project. It includes sections for 'Create a job', 'Set up a distributed build', and 'Build Executor Status'.

Enter the item name, select freestyle project and click on “OK”.



The screenshot shows the 'New Job' creation dialog at localhost:8080/view/all/newJob. The 'Enter an item name' field contains 'regform'. Below it, the 'Freestyle project' option is selected and highlighted with a red arrow. Other options listed include Pipeline, Multi-configuration project, Folder, Multibranch Pipeline, and Organization Folder. A blue 'OK' button is visible at the bottom.

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Enter the description, select GitHub project and enter the project url

The screenshot shows the Jenkins 'Configure' screen for a job named 'regform'. Under the 'General' tab, the 'GitHub project' checkbox is checked, and the 'Project url' field contains 'https://github.com/kpranav10/regform'. The 'Enabled' switch is turned on. The left sidebar lists 'Source Code Management', 'Build Triggers', 'Build Environment', 'Build Steps', and 'Post-build Actions'.

Change the settings so that Jenkins polls every minute

Build Triggers

- Trigger builds remotely (e.g., from scripts) ?
- Build after other projects are built ?
- Build periodically ?

Schedule ?

* * * * *

⚠ Do you really mean "every minute" when you say "* * * * *"? Perhaps you meant "H * * * * " to poll once per hour

Would last have run at Wednesday, 21 June 2023 at 18:46:23 India Standard Time; would next run at Wednesday, 21 June 2023 at 18:46:23 India Standard Time.

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The result will look like this

The screenshot shows the Jenkins Project reformat dashboard. At the top, there's a navigation bar with the Jenkins logo, a search bar, and user information. Below the bar, the dashboard has a sidebar on the left with links like Status, Changes, Workspace, Build Now, Configure, Delete Project, GitHub, and Rename. The main content area is titled "Project reformat" and includes sections for "Sample form" and "Permalinks". A "Build History" section shows no builds, with links for Atom feed for all and Atom feed for failures. At the bottom right, there are links for REST API and Jenkins 2.401.1.

Build #1 (21 Jun 2023, 18:49:00)

Keep this build forever

Started 5.3 sec ago
Took 0.93 sec

Add description

</> No changes.

⌚ Started by timer

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In source code management, select git, add the repository url and change the branch to */main

Source Code Management

None

Git [?](#)

Repositories [?](#)

Repository URL [?](#)

Credentials [?](#)

Add [?](#)

Advanced [?](#)

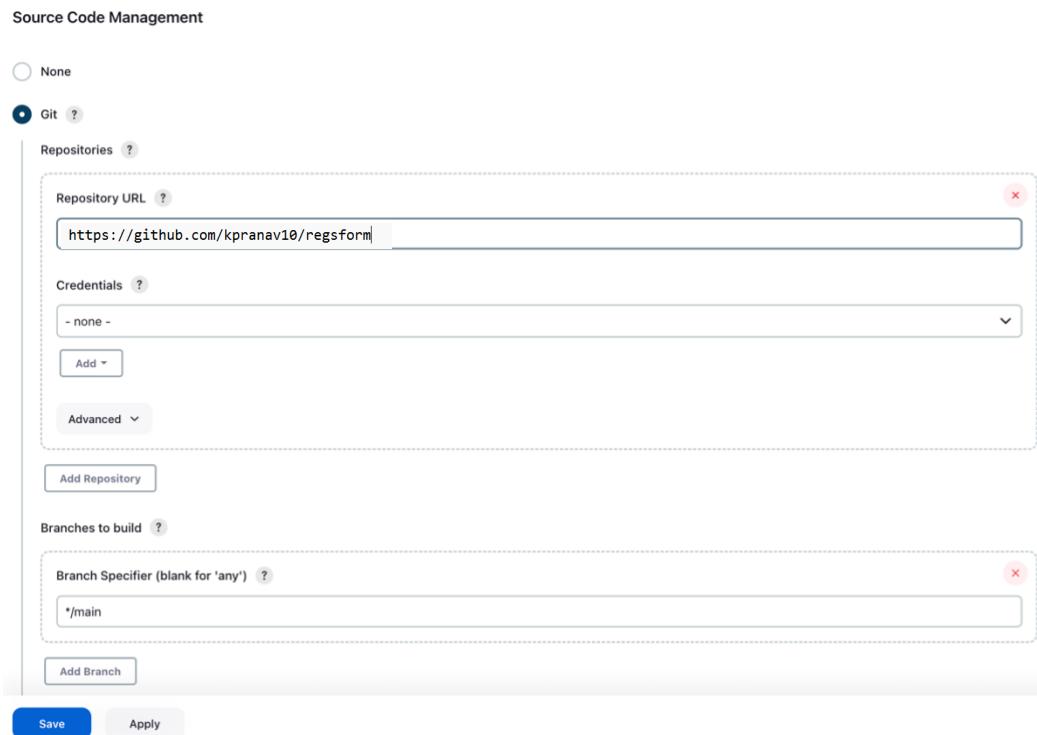
Add Repository

Branches to build [?](#)

Branch Specifier (blank for 'any') [?](#)

Add Branch

[Save](#) [Apply](#)



After building the result is as follows:

Dashboard > regfom > #7

Status Build #7 (21 Jun 2023, 18:55:01) Keep this build forever

</> Changes Started 5.8 sec ago

Console Output Add description Took 3 sec

Edit Build Information

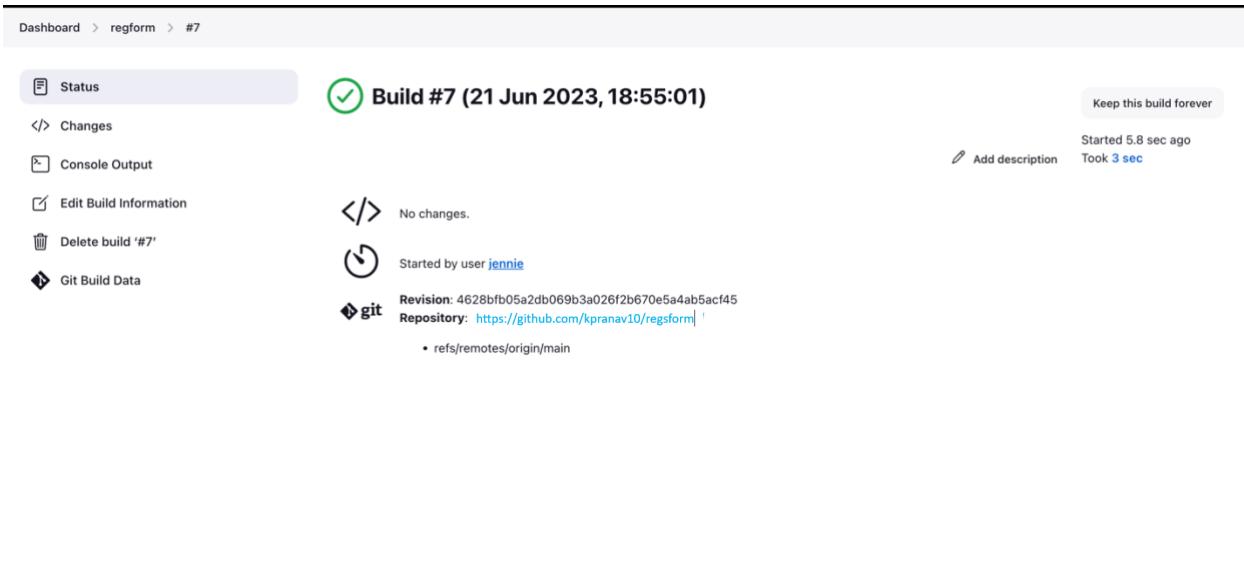
Delete build '#7'

Git Build Data

</> No changes.

Started by user jennie

git Revision: 4628bfb05a2db069b3a026f2b670e5a4ab5acf45
Repository: <https://github.com/kpranav10/regsfom> refs/remotes/origin/main



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The screenshot shows a Jenkins interface. The left sidebar has links: Status, Changes, Console Output (which is selected and highlighted in grey), View as plain text, Edit Build Information, Delete build '#7', and Git Build Data. The main area is titled 'Console Output' with a green checkmark icon. It displays the following log output:

```
Started by user jennie
Running as SYSTEM
Building in workspace /Users/ayman/.jenkins/workspace/regform
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /Users/ayman/.jenkins/workspace/regform/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/ayman1015/regform/ # timeout=10
Fetching upstream changes from https://github.com/ayman1015/regform/
> git --version # timeout=10
> git --version # 'git version 2.30.1 (Apple Git-130)'
> git fetch --tags --force --progress -- https://github.com/ayman1015/regform/ +refs/heads/*:refs/remotes/origin/*
timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 4628bfb05a2db069b3a026f2b670e5a4ab5acf45 (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 4628bfb05a2db069b3a026f2b670e5a4ab5acf45 # timeout=10
Commit message: "Changed the heading"
First time build. Skipping changelog.
Finished: SUCCESS
```

Go to the url mentioned above and check your build

Registration form!!

Enter your name

Enter your email

Enter your password

Confirm password

I agree with the terms and conditions

Register

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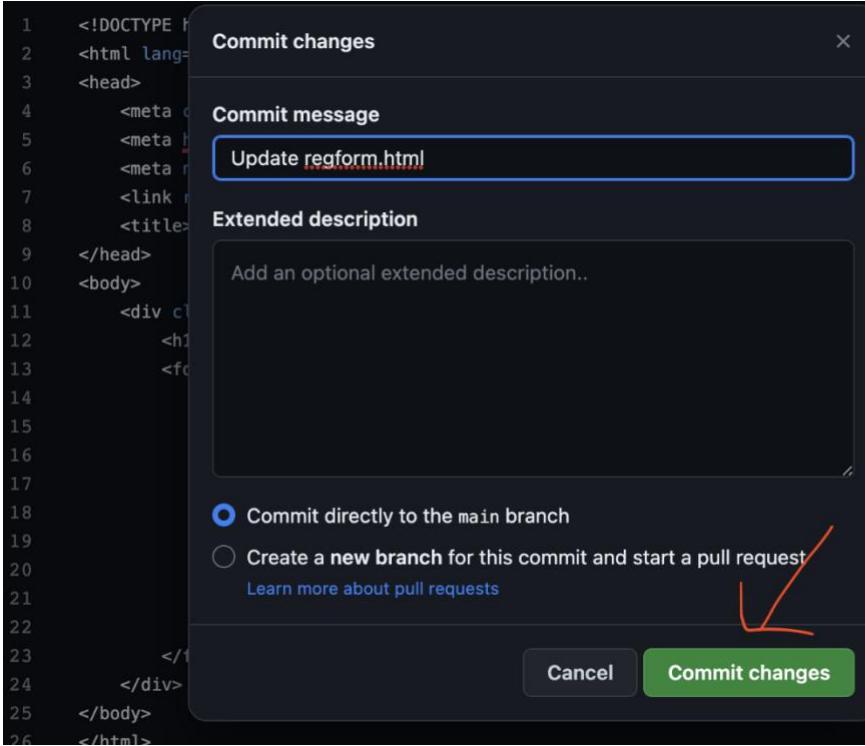
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Change the code in the github repository and commit it:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width, initial-scale=1.0">
7      <link rel="stylesheet" href="styles.css"/>
8      <title>Registration form</title>
9  </head>
10 <body>
11     <div class="form-container">
12         <h1>Edited Registration form!!!</h1>
13         <form action="submit.html">
14             <input type="text" placeholder="Enter your name" pattern="\w*"/>
```



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Build the project once more:

The screenshot shows a CI/CD pipeline interface with the following details:

- Project:** Sample form
- Permalinks:** Last build, Last success, Last stability, Last failure, Last commit.
- Build History:** Trend dropdown set to "trend".
 - Build #8: Started 24 sec ago, Took 3.4 sec. Status: Success (green checkmark). Details: Started by user jennie. Changes: 1. Update regform.html (commit: 4176ea0) (details / githubweb). Revision: 4176ea0150082d0a2f4f9c8578763c66793b376. Repository: <https://github.com/kpranav10/regsform>. refs/remotes/origin/main.
 - Build #7: Started 24 sec ago, Took 3.4 sec. Status: Success (green checkmark).
- Actions:** Keep this build forever, Add description.

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Console Output

```
Started by user jennie
Running as SYSTEM
Building in workspace /Users/ayman/.jenkins/workspace/regform
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /Users/ayman/.jenkins/workspace/regform/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/ayman1015/regform/ # timeout=10
Fetching upstream changes from https://github.com/ayman1015/regform/
> git --version # timeout=10
> git --version # 'git version 2.30.1 (Apple Git-130)'
> git fetch --tags --force --progress -- https://github.com/ayman1015/regform/ +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10
Checking out Revision 4176ea0150082d0a2f4f9c8578763c66793b376b (refs/remotes/origin/main)
> git config core.sparsecheckout # timeout=10
> git checkout -f 4176ea0150082d0a2f4f9c8578763c66793b376b # timeout=10
Commit message: "Update regform.html"
> git rev-list --no-walk 4628bfb05a2db069b3a026f2b670e5a4ab5acf45 # timeout=10
Finished: SUCCESS
```

Output:

Edited Registration form!!

Enter your name

Enter your email

Enter your password

Confirm password

I agree with the terms and conditions

Register

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Aim: To explore docker commands for content management

Pull an image from docker hub.

```
pranav@DESKTOP-MacBook-Air ~ % docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
70f5ac315c5a: Pull complete
Digest: sha256:c2e23624975516c7e27b1b25be3682a8c6c4c0cea011b791ce98aa423b5040a0
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
pranav@DESKTOP-MacBook-Air ~ %
```

See all images downloaded with docker using the below command

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
hello-world	latest	b038788ddb22	6 weeks ago	9.14kB

Removing a docker image:

```
pranav@DESKTOP-MacBook-Air ~ % docker rmi b0
Untagged: hello-world:latest
Untagged: hello-world@sha256:c2e23624975516c7e27b1b25be3682a8c6c4c0cea011b791ce98aa423b5040a0
Deleted: sha256:b038788ddb222cb7d6025b411759e4f5abe9910486c8f98534ead97befd77dd7
Deleted: sha256:a7866053acacfefb68912a8916b67d6847c12b51949c6b8a5580c6609c08ae45
pranav@DESKTOP-MacBook-Air ~ %
```

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Running a docker image / creating a docker container:

```
pranav@DESKTOP-MacBook-Air ~ % docker run hello-world
Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (arm64v8)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/
```

Display all running containers:

```
pranav@DESKTOP-MacBook-Air ~ % docker ps
CONTAINER ID   IMAGE      COMMAND           CREATED          STATUS        PORTS     NAMES
eaaa920f9d65   nginx      "/docker-entrypoint..."   4 seconds ago   Up 4 seconds   80/tcp    nervous_meitner
```

Stop a running container:

```
pranav@DESKTOP-MacBook-Air ~ % docker stop ea
ea
pranav@DESKTOP-MacBook-Air ~ % docker ps
CONTAINER ID   IMAGE      COMMAND           CREATED          STATUS        PORTS     NAMES
```

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Removing a stopped container:

```
CONTAINER ID  IMAGE      COMMAND      CREATED     STATUS          PORTS     NAMES
eaaa920f9d65  nginx      "/docker-entrypoint..."  About a minute ago  Exited (0)  About a minute ago
bc592c9b05a4  hello-world  "/hello"    5 minutes ago   Exited (0)  5 minutes ago
ayman@Aymans-MacBook-Air ~ % docker rm ea
ea
ayman@Aymans-MacBook-Air ~ % docker ps -f "status=exited"

CONTAINER ID  IMAGE      COMMAND      CREATED     STATUS          PORTS     NAMES
bc592c9b05a4  hello-world  "/hello"    6 minutes ago  Exited (0)  6 minutes ago
clever_grothendieck
```

Executing a command within a running container:

```
ayman@Aymans-MacBook-Air ~ % docker ps
CONTAINER ID  IMAGE      COMMAND      CREATED     STATUS          PORTS     NAMES
86e49b817d35  nginx      "/docker-entrypoint..."  24 seconds ago  Up 24 seconds  80/tcp    stupefied_solomon
ayman@Aymans-MacBook-Air ~ % docker exec -it stupefied_solomon sh
[# echo "inside the container"
inside the container
[# exit
ayman@Aymans-MacBook-Air ~ %
```

Copy a file from within a docker container to local machine:

```
[ayman@Aymans-MacBook-Air ~ % docker exec -it stupefied_solomon sh
[# touch cat.txt
[# exit
[ayman@Aymans-MacBook-Air ~ % docker cp stupefied_solomon:/cat.txt .
Successfully copied 1.54kB to /Users/ayman/.
ayman@Aymans-MacBook-Air ~ %
```

Create a new image from a modified container:

```
ayman@Aymans-MacBook-Air ~ % docker commit stupefied_solomon new-nginx:latest
sha256:ad83b17956f18f023d26c13cc6514ef7a06f5ddef8a5f459ce1e7f829572b521
ayman@Aymans-MacBook-Air ~ % docker ps
CONTAINER ID  IMAGE      COMMAND      CREATED     STATUS          PORTS     NAMES
86e49b817d35  nginx      "/docker-entrypoint..."  6 minutes ago  Up 6 minutes  80/tcp    stupefied_solomon
ayman@Aymans-MacBook-Air ~ % docker images
REPOSITORY      TAG      IMAGE ID      CREATED      SIZE
new-nginx        latest   ad83b17956f1  6 seconds ago  192MB
nginx           latest   2d21d843073b  7 days ago   192MB
hello-world      latest   b038788ddb22  6 weeks ago  9.14kB
```

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Save an image to a tar file and load it from a tar file:

```
[ayman@Aymans-MacBook-Air devops % docker save new-nginx -o new_nginx.tar  
[ayman@Aymans-MacBook-Air devops % docker load -i new_nginx.tar  
Loaded image: new-nginx:latest
```

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Aim: Develop a simple containerized application using docker

Create a Dockerfile

pranav@DESKTOP-MacBook-Air project % touch Dockerfile

Edit the Dockerfile to look as follows:

```
1 FROM nginx:alpine
2
3 COPY index.html /usr/share/nginx/html/
4 COPY styles.css /usr/share/nginx/html/
5 COPY submit.html /usr/shared/nginx/html
6
7 EXPOSE 80
8
9 CMD ["nginx", "-g", "daemon off;"]
```

Build the docker image

```
[ayman@Aymans-MacBook-Air regform % docker build -t regform:latest .
[+] Building 11.4s (10/10) FINISHED
--> [internal] load .dockerignore
--> [internal] load build context: 2B
--> [internal] load build definition from Dockerfile
--> [internal] transferring dockerfile: 224B
--> [internal] load metadata for docker.io/library/nginx:alpine
--> [auth] library/nginx:pull token for registry-1.docker.io
--> [1/4] FROM docker.io/library/nginx:alpine@sha256:2d194184b067db3598771b4cf326cf6ad5051937ba1132b8b7d4b0184e0d0a6
--> => resolve docker.io/library/nginx:alpine@sha256:2d194184b067db3598771b4cf326cf6ad5051937ba1132b8b7d4b0184e0d0a6
--> => sha256:2d194184b067db3598771b4cf326cf6ad5051937ba1132b8b7d4b0184e0d0a6 1.65kB / 1.65kB
--> => sha256:e7bf9f85644962bd4c8326f5d46e56ad16d6c116e06e04826054b73fc452788b 1.92MB / 1.92MB
--> => sha256:e6a8c53094dd08627568f42ddaa81e5cf863e3fd52d1f5507d7a080010f1 626B / 626B
--> => sha256:40199b09f65752fed2a540913a037a7a2c3120bd94dcf20e7d85caaf066381d8 1.99kB / 1.99kB
--> => sha256:66bf2c914bf4d0aac4b62f09f9f74ad35898d613024a0f2ec94dca9e79fac6ea 16.71kB / 16.71kB
--> => sha256:ed6bbdbacee93be93e0306943eze92c8594676a342a70e221361fd1914d 3.26MB / 3.26MB
--> => sha256:a31273f49e643a2139695da7981a83d9538d2ca4240233e927fc7346e9561bd4 957B / 957B
--> => sha256:4fbf2e3beac832ec0beb01f066dc3e00462c009affcc2b4a8fdee1cec88d780af 3658B / 3658B
--> => sha256:467b5f1f7174c9d74015627b2051d84b4f46bc6d20a6f836c0fd1f4542daf7d 1.21kB / 1.21kB
--> => sha256:3a6c132398b370728f1a817cb557dd829e9b8a44a780df604b6705ba70ee26bc 1.40kB / 1.40kB
--> => extracting sha256:edb6bdbacee93be93e0306943e2e92c8594676a0342a70e221361fd1914d
--> => sha256:fca8748d6c5b612c44f7befb8aed1f463545281aec58d153e2006d9b0dac0ec 11.15MB / 11.15MB
--> => extracting sha256:e7bf9f85644962bd4c0326f5d46e56ad16d6c116e06e04826054b73fc452788b
--> => extracting sha256:e6a8c53094dd08627568f42ddaa81e5cf863e3fd52d1f5507d7a080010f1
--> => extracting sha256:a31273f49e643a2139695da7981a83d9538d2ca4240233e927fc7346e9561bd4
--> => extracting sha256:4fbf2e3beac832ec0beb01f066dc3e00462c009affcc2b4a8fdee1cec88d780af
--> => extracting sha256:467b5f1f7174c9d74015627b2051d84b4f46bc6d20a6f836c0fd1f4542daf7d
--> => extracting sha256:3a6c132398b370728f1a817cb557dd829e9b8a44a780df604b6705ba70ee26bc
--> => extracting sha256:fca8748d6c5b612c44f7befb8aed1f463545281aec58d153e2006d9b0dac0ec
--> [internal] load build context
--> => transferring context: 2.35kB
--> [2/4] COPY regform.html /usr/share/nginx/html/
--> [3/4] COPY styles.css /usr/share/nginx/html/
--> [4/4] COPY submit.html /usr/share/nginx/html
--> exporting to image
--> => exporting layers
--> => writing image sha256:965fd7cdfd71dd8b591340bf13f8b9189be245789a9d39244079ab06e4ce490
--> => naming to docker.io/library/regform:latest
```

Roll No. 20261A66

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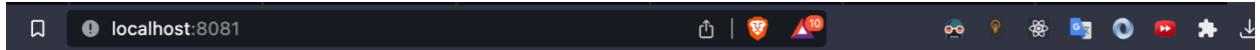
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Run the docker image

```
pranav@DESKTOP-MacBook-Air regform % docker run -p 8081:80 regform
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/06/21 14:18:31 [notice] 1#1: using the "epoll" event method
2023/06/21 14:18:31 [notice] 1#1: nginx/1.25.1
2023/06/21 14:18:31 [notice] 1#1: built by gcc 12.2.1 20220924 (Alpine 12.2.1_git20220924-r4)
2023/06/21 14:18:31 [notice] 1#1: OS: Linux 5.15.49-linuxkit-pr
2023/06/21 14:18:31 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/06/21 14:18:31 [notice] 1#1: start worker processes
2023/06/21 14:18:31 [notice] 1#1: start worker process 30
2023/06/21 14:18:31 [notice] 1#1: start worker process 31
2023/06/21 14:18:31 [notice] 1#1: start worker process 32
2023/06/21 14:18:31 [notice] 1#1: start worker process 33
```

Output:



Edited Registration form!!

Enter your name

Enter your email

Enter your password

Confirm password

I agree with the terms and conditions

Register

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