Lab 1:

1. Generate SSH Key Pair

```
ssh-keygen-t rsa-b 4096
```

```
root@amitserver:/home/amit# ssh-keygen -t rsa -b 4096
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa):
/root/.ssh/id_rsa already exists.
Overwrite (y/n)? Y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /root/.ssh/id_rsa
Your public key has been saved in /root/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:Tz1NdMWRJqlLqHWsfiEEfKUkU7xDTaEf1qGRu3urxz4 root@amitserver
The key's randomart image is:
+---[RSA 4096]----+
|       .ooo+=o.oo*|
|        o++oo++.+.|
|         +o++o.+  |
|          *oB.o   |
|         S *.= .  |
|        . = + .   |
|         . o +    |
|          . o E   |
|           ..=oo  |
```

---

2. Add the SSH Key to the SSH Agent

Start the agent:

```
eval "$(ssh-agent-s)"
```

Add the private key:

```
ssh-add ~/.ssh/id_rsa
```

```
root@amitserver:/home/amit# eval "$(ssh-agent -s)"
Agent pid 267327
root@amitserver:/home/amit# ssh-add ~/.ssh/id_rsa
Identity added: /root/.ssh/id_rsa (root@amitserver)
```

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3. Copy the Public SSH Key

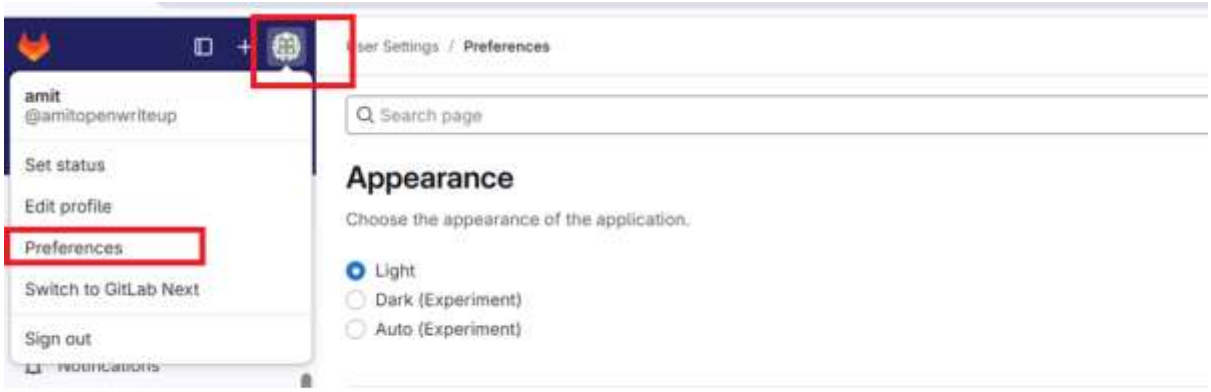
```
cat ~/.ssh/id_rsa.pub
```

- Copy the entire output that starts with ssh-rsa.

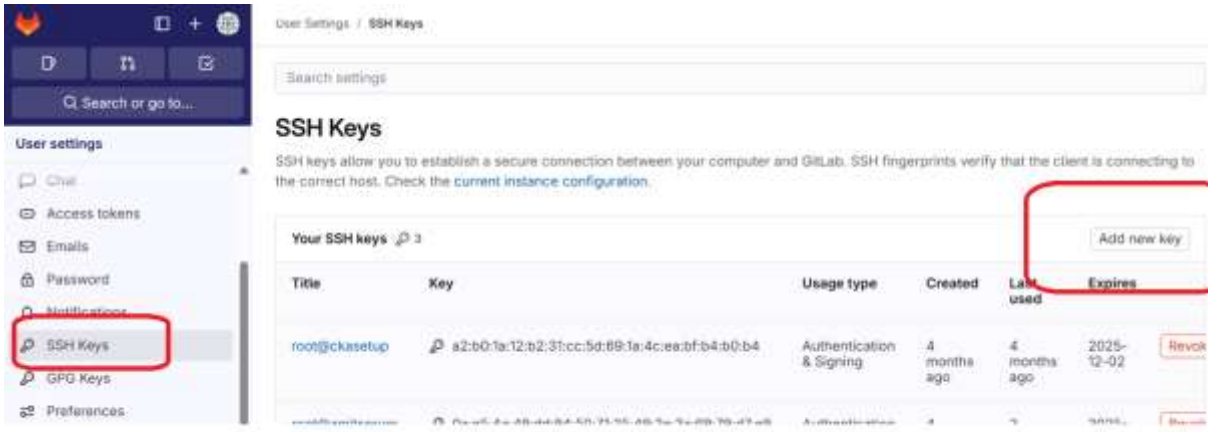
```
root@amitserver:/home/amit# cat ~/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAACAQCp78Hq641iEJM3tbvuLARh+BWNjXWPJ+Ugk3ps+D7IwEdsXLML96w81+zzH/ONOzOwFfN8ImN
XxRd1bMkAaSsNLuw0gkFbPAiIVvpMcY7DYS35lw0EilbMlqolAStdXLS3tc2qt1VPFJUPMRo14QOjokmZRGSq0kWFKeFogMVhJZon2T6SRNUK+v
9WfIweUfjz5gewKRYZRddm06mOdL8U01fjd+5NsroLOh+Zjpot+1n/MckL/K3Qnx51Rke0T3h2lqMHjfL6xf2hZEB0gKZgHnV5WhRUvw0311G/U
eLG+3OEA4Hi1G2u40qeJE6riqstgESSzrUif2iRLHeFqIpRv0OTALRJsjxck2aL4fhKkHBiFZcjHJDnN+jITL1FK5LAaT4qjMS/TW58a7VkiCPZ
L+aDPGSGY3/tV/reltopzWJOI4fbCb2Zsn7wyKWQMvdTznAS4lHsQ1UywWWA76GzCZZHTKKvKpMEtM5ewy1duOh5fIduQzd1OW9RMvi72H8Pj/7
yV6MW18Z/wxjTAWcBr6rQTpfFHH5UZXA2dBfWE2Q8X40a0V3HZJHgU/+0P9KwoIPvOrvuDn2BOVOQuShChv3gBXXvQtridg0F63DNQcXuo7PiIF
lkP1rXmaNcN7XYkI9xITz0vfwsxjLOLz09qKvzKo1F5LIrB3YLY6pSew== root@amitserver
```

4. Add SSH Key to GitLab

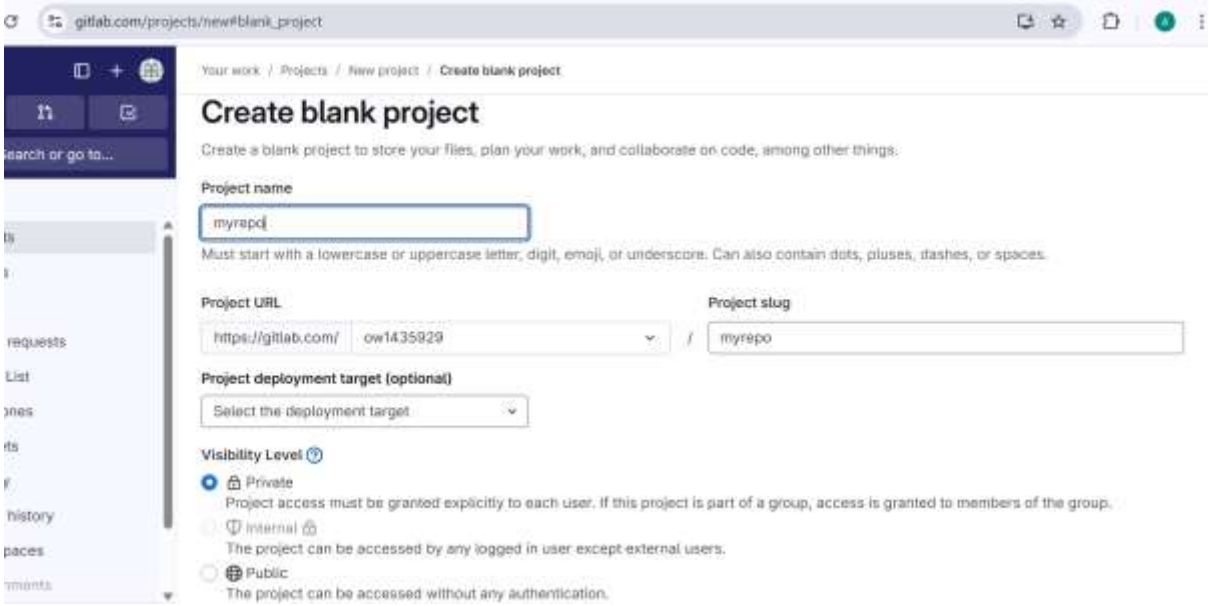
1. Log in to GitLab.



2. Go to **User Settings** > **SSH Keys**.
3. Paste your copied key into the **Key** field.
4. Click **Add key**.



5. **Create project→blank project**



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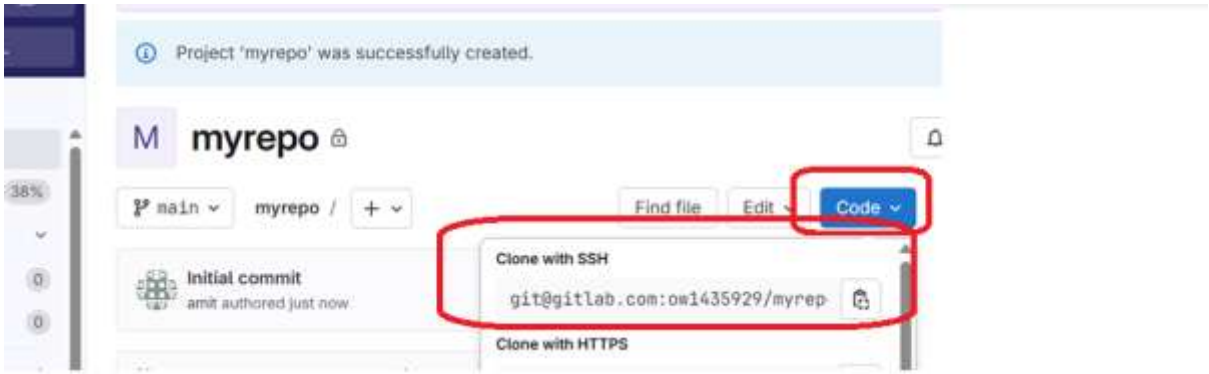
6. Clone a GitLab Repository Using SSH



git clone git@gitlab.com:your-username/your-repo.git

```
root@amitserver:/home/amit# git clone git@gitlab.com:ow1435929/myrepo.git
Cloning into 'myrepo'...
The authenticity of host 'gitlab.com (172.65.251.78)' can't be established.
ED25519 key fingerprint is SHA256:eUXGGm1YGsMAS7vkcx6JOJdOGHPem5gQp4taiCfCLB8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'gitlab.com' (ED25519) to the list of known hosts.
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 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
```