

# LECTURE 1

## TASK 1

Created a new GitHub repository with a README, providing a brief introduction and license information.

The screenshot shows a GitHub repository page for 'Software-Build-Automation-Tools'. The repository was created by 'kaanzapkinus' and has 1 branch and 0 tags. The README file contains the following content:

```
Software-Build-Automation-Tools
Materials from Software Build Automation Tools Classes
New Section
This is a new section added to README.
```

The repository has 3 commits, all made by 'kaanzapkinus' within the last hour. The commits are:

- Added a new section to README
- readme.md update (task1)
- Initial commit

The repository has 0 stars, 1 watching, and 0 forks. It also lists 'About', 'Releases', and 'Packages' sections.

### Task 1.1

Cloned the repository locally, making it ready for direct development on my machine.

```
kaan@Kaan-MacBook-Air Second Semester % git clone https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
Klonlama konumu: 'Software-Build-Automation-Tools'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Nesneler alınıyor: 100% (4/4), bitti.
kaan@Kaan-MacBook-Air Second Semester % cd Software-Build-Automation-Tools
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

### Task 1.2

Updated the README, committed the changes, and pushed them to GitHub to keep the repository synchronized.

```
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "readme.md update (task1)"
[main d16db98] readme.md update (task1)
 2 files changed, 1 insertion(+), 1 deletion(-)
   create mode 100644 .DS_Store
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git push
Nesneler ortaya dökülüyor: 6, bitti.
Nesneler sayılıyor: 100% (6/6), bitti.
Delta sıkıştırması 8 iş parçacığı kullanıyor
Nesneler sıkıştırılıyor: 100% (4/4), bitti.
Nesneler yazılıyor: 100% (4/4), 660 bayt | 660.00 KiB/sn, bitti.
Toplam 4 (delta 0), yeniden kullanılan 0 (delta 0), yeniden kullanılan paket 0 (0 konumundan)
To https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
  f6eb52f..d16db98 main -> main
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

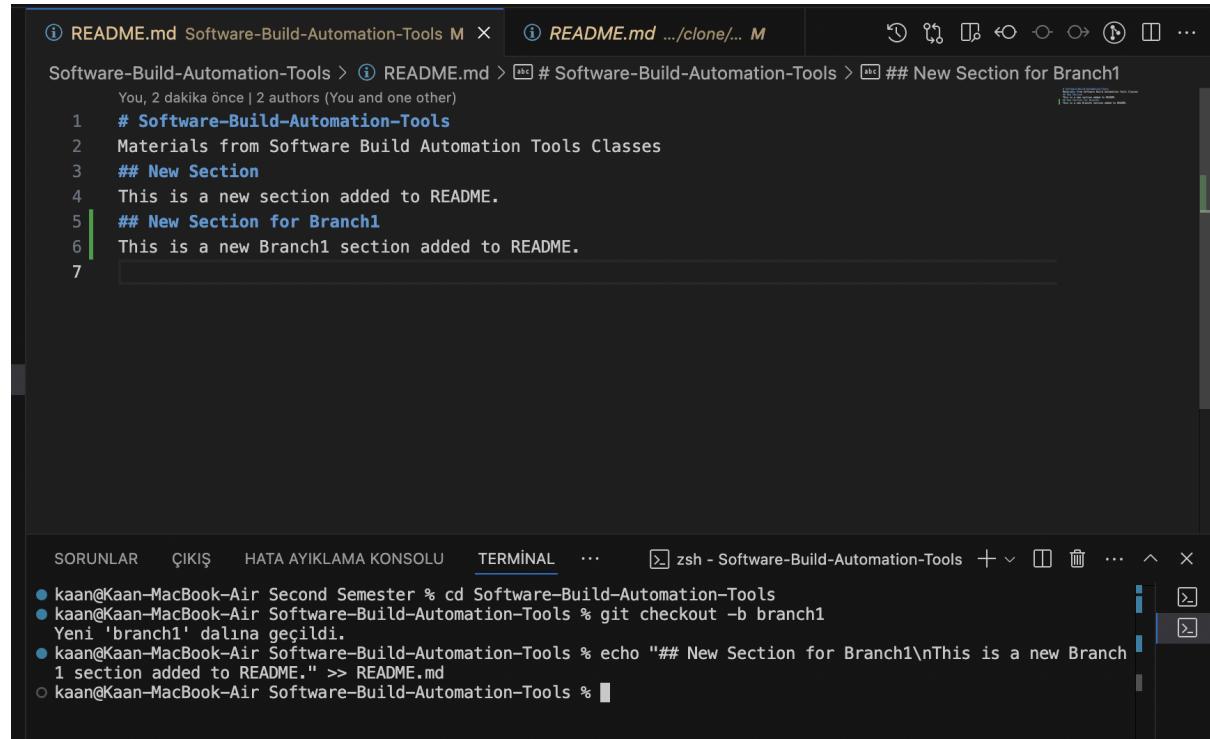
Created and switched to a new feature branch, added a new section to the README, merged the feature branch into main, and pushed the updated main branch to GitHub.

```
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout -b feature-branch
Yeni 'feature-branch' dalina geçildi.
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % echo "## New Section\nThis is a new section added to README."
>> README.md
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add README.md
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "Added a new section to README"
[feature-branch bffd6d71] Added a new section to README
 1 file changed, 2 insertions(+)
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout main
M      .DS_Store
'main' dalina geçildi.
Daliniz 'origin/main' ile güncel.
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git merge feature-branch
Güncelleniyor: d16db98..bfd6d71
Fast-forward
 README.md | 2 ++
 1 file changed, 2 insertions(+)
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git push origin main
Nesneler ortaya dökülüyor: 5, bitti.
Nesneler sayılıyor: 100% (5/5), bitti.
Delta sıkıştırması 8 iş parçası kullanıyor
Nesneler sıkıştırılıyor: 100% (3/3), bitti.
Nesneler yazılıyor: 100% (3/3), 379 bayt | 379.00 KiB/sn, bitti.
Toplam 3 (delta 1), yeniden kullanılan 0 (delta 0), yeniden kullanılan paket 0 (0 konumundan)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
  d16db98..bfd6d71 main -> main
◆ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## TASK3

### Branch 1.1:

Created branch1 and added a dedicated section to the README to reflect branch1's changes.



The screenshot shows a terminal window with two tabs. The active tab is titled 'README.md Software-Build-Automation-Tools M'. It contains the following content:

```
Software-Build-Automation-Tools > README.md .../clone/... M
You, 2 dakika önce | 2 authors (You and one other)
1 # Software-Build-Automation-Tools
2 Materials from Software Build Automation Tools Classes
3 ## New Section
4 This is a new section added to README.
5 ## New Section for Branch1
6 This is a new Branch1 section added to README.
7
```

The terminal below shows the command history:

```
● kaan@Kaan-MacBook-Air Second Semester % cd Software-Build-Automation-Tools
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout -b branch1
Yeni 'branch1' dalina geçildi.
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % echo "## New Section for Branch1\nThis is a new Branch1 section added to README." >> README.md
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## Branch 1.2:

Cloned the repository, checked out branch2, and introduced a new section in the README to simulate parallel development.

The screenshot shows a terminal window with two tabs open. The top tab is titled 'README.md Software-Build-Automation-Tools M' and shows the initial commit message: '# Software-Build-Automation-Tools' by 'kaanzapkinus' 15 dakika önce. The bottom tab is titled 'zsh - Software-Build-Automation-Tools' and shows the command history for cloning the repository and adding a new section to the README.

```
Software-Build-Automation-Tools > clone > Software-Build-Automation-Tools > README.md > # Software-Build-Automation-Tools
You, 6 saniye önce | 2 authors (You and one other)
1 # Software-Build-Automation-Tools kaanzapkinus, 15 dakika önce • Initial commit
2 Materials from Software Build Automation Tools Classes
3 ## New Section
4 This is a new section added to README.
5 ## New Section for Branch2
6 This is a new Branch1 section added to README.
7

SORUNLAR ÇIKIŞ HATA AYIKLAMA KONSOLU TERMINAL ...
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git init clone
/Users/kaan/Desktop/Second Semester/Software-Build-Automation-Tools/clone/.git/ içinde boş Git deposu ilklandı
rildi
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % cd clone
● kaan@Kaan-MacBook-Air clone % git clone https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
Klonlama konumu: 'Software-Build-Automation-Tools'...
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 11 (delta 2), reused 6 (delta 1), pack-reused 0 (from 0)
Nesneler alınıyor: 100% (11/11), bitti.
Deltalar çözülüyor: 100% (2/2), bitti.
● kaan@Kaan-MacBook-Air clone % git checkout -b branch2
Yeni 'branch2' dalına geçildi.
● kaan@Kaan-MacBook-Air clone % echo "## New Section for Branch2\nThis is a new Branch1 section added to README.
" >> README.md
● kaan@Kaan-MacBook-Air clone % cd Software-Build-Automation-Tools
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % echo "## New Section for Branch2\nThis is a new Branch
1 section added to README." >> README.md
○ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## Branch 2.1

Created branch1, added a new section in the README, and merged branch1 into main to keep the repository updated.

The screenshot shows a terminal window with two tabs: 'README.md Software-Build-Automation-Tools' and 'README.md .../clone/...'. The main pane displays the contents of the README.md file, which includes a new section for 'Branch1'. The bottom pane shows the terminal history with commands related to creating a branch, adding files, committing changes, and performing a merge.

```
You, 7 dakika önce | 2 authors (You and one other)
1 # Software-Build-Automation-Tools
2 Materials from Software Build Automation Tools Classes
3 ## New Section
4 This is a new section added to README.
5 ## New Section for Branch1
6 This is a new Branch1 section added to README.
7

SORUNLAR   ÇIKIŞ   HATA AYIKLAMA KONSOLU   TERMINAL   ...
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git branch
* branch1
  feature-branch
  main
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % ls
LICENSE      README.md    clone
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add README.md
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "Added a branch1 section to README"
[branch1 1fd8b49] Added a branch1 section to README
  1 file changed, 2 insertions(+)
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout main
M       .DS_Store
'main' dalına geçildi.
Daliniz 'origin/main' ile güncell.
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git merge branch1
Güncelleniyor: bfd6d71..1fd8b49
Fast-forward
 README.md | 2 ++
 1 file changed, 2 insertions(+)
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git branch
branch1
  feature-branch
* main
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git push
Nesneler ortaya dökülüyor: 5, bitti.
Nesneler sayılıyor: 100% (5/5), bitti.
Delta sıkıştırması 8 iş parçacığı kullanıyor
Nesneler sıkıştırılıyor: 100% (3/3), bitti.
Nesneler yazılıyor: 100% (3/3), 361 bayt | 361.00 KiB/sn, bitti.
Toplam 3 (delta 2), yeniden kullanılan 0 (delta 0), yeniden kullanılan paket 0 (0 konumundan)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
  bfd6d71..1fd8b49  main > main
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## Branch 2.2

Encountered a push error caused by outdated remote changes, then manually resolved the conflict (pulled and merged) to finalize the branch integration.

The screenshot shows a terminal window with three tabs at the top:

- README.md Software-Build-Automation-Tools
- README.md .../clone/...
- README.md > # Software-Build-Automation-

The content of the first tab (main branch) is:

```
1 # Software-Build-Automation-Tools
2 Materials from Software Build Automation Tools Classes
3 ## New Section
4 This is a new section added to README.
5 ## New Section for Branch2
6 This is a new Branch2 section added to README.
7
```

The content of the second tab (branch2) is:

```
SORUNLAR ÇIKIŞ HATA AYIKLAMA KONSOLU TERMINAL ...
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout -b branch2
Yeni 'branch2' dalına geçildi.
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add README.md
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "Added a branch2 section to README"
[branch2 4246443] Added a branch2 section to README
 1 file changed, 2 insertions(+)
⊗ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout main
hata: Çıkış ile aşağıdaki dosyalarındaki yerel değişikliklerin üzerine yazılacak:
  README.md
Lütfen dal değiştirmeden önce değişikliklerinizi işleyin veya zulalayın.
İptal ediliyor
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add README.md
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "Added a branch2 section to README"
[branch2 23490ad] Added a branch2 section to README
 1 file changed, 1 insertion(+), 1 deletion(-)
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git checkout main
'main' dalına geçildi.
Daliniz 'origin/main' ile güncel.
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git merge branch2
Güncelleniyor: bfd6d71..23490ad
Fast-forward
 README.md | 2 ++
 1 file changed, 2 insertions(+)
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git branch
 branch2
 * main
⊗ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git push
To https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
 ! [rejected]      main --> main (fetch first)
 hata: bazı başvurular 'https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git' konumuna itilemedi
 ipucu: Güncellemeler reddedildi; çünkü uzak konumda henüz yerelde sizde olmayan
 ipucu: değişiklikler var. Bu genelde başka bir deponun aynı başvuruya itmesinden
 ipucu: dolayı olur. Uzaktaki değişiklikleri tümleştirmek istiyorsanız yeniden
 ipucu: itmeden önce 'git pull' yapın..
 ipucu: Ayrıntılar için 'git push --help' içinde 'Notes about fast-forwards'a
 ipucu: bakın.
```

## Branch 3.0

The commits from branch1 and branch2 clashed on the same line in the README, causing a merge conflict. I had to manually resolve the conflict by selecting the appropriate changes from both branches and finalizing the merge.

The screenshot shows a terminal window with two tabs open: 'README.md Software-Build-Automation-Tools' and 'README.md .../clone/... !'. The main pane displays the README.md file content:

```
ls > clone > Software-Build-Automation-Tools > README.md > # Software-Build-Automation-Tools
You, 8 saniye önce | 2 authors (You and one other)
1 # Software-Build-Automation-Tools
2 Materials from Software Build Automation Tools Classes
3 ## New Section
4 This is a new section added to README.
Geçerli Değişikliği Kabul Et | Gelen Değişikliği Kabul Et | İki Değişikliği de Kabul Et | Değişiklikleri Karşılaştır
5 <<<<< HEAD (Geçerli Değişiklik)
6 ## New Section for Branch1
7 =====
8 ## New Section for Branch2
9 >>>> 4246443 (Added a branch2 section to README) (Gelen Değişiklik)
10 This is a new Branch1 section added to README.
11 |
```

A blue button labeled 'Birleştirme Düzenleyicisinde Çözümle' is visible above the terminal area. The terminal itself shows the history of commands used to resolve the conflict:

```
SORUNLAR ÇIKIS HATA AYIKLAMA KONSOLU TERMINAL ...
hata: Lütfen onları isleyin veya zulalayın.
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % echo ".DS_Store" >> .gitignore
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git rm --cached .DS_Store
rm 'DS_Store'
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git rm --cached .DS_Store
onulmaz: yol belirteci '.DS_Store', hiçbir dosya ile eşleşmedi
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git rm --cached .DS_Store
onulmaz: yol belirteci '.DS_Store', hiçbir dosya ile eşleşmedi
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "Removed .DS_Store from tracking"
[main 6f3dbf9] Removed .DS_Store from tracking
1 file changed, 0 insertions(+), 0 deletions(-)
  delete mode 100644 .DS_Store
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git stash

Kaydedilecek yerel değişiklik yok
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git stash

Kaydedilecek yerel değişiklik yok
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git pull --rebase
README.md kendiliğinden birleştiriliyor
ÇAKIŞMA (icerik): README.md içinde birleştirme çakışması
hata: 4246443 uygulanamadı... Added a branch2 section to README
ipucu: Resolve all conflicts manually, mark them as resolved with
ipucu: "git add/rm <conflicted_files>", then run "git rebase --continue".
ipucu: You can instead skip this commit: run "git rebase --skip".
ipucu: To abort and get back to the state before "git rebase", run "git rebase --abort".
ipucu: Disable this message with "git config advice.mergeConflict false"
4246443 uygulanamıyor... Added a branch2 section to README
kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## TASK 4

Implemented a pre-commit hook to prevent committing .log files, then tested it by attempting to add and commit an example log file.

The screenshot shows a terminal window with several tabs open. The active tab is 'example.log'. The terminal output shows the creation of a pre-commit hook, its chmodding to executable, and an attempt to commit a log file which is blocked by the hook.

```
Software-Build-Automation-Tools > example.log
1 this is a log file.
2

SORUNLAR    ÇIKIŞ    HATA AYIKLAMA KONSOLU    TERMINAL    ...
zsh - Software-Build-Automation-Tools + ▾  ■  ...

● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % touch .git/hooks/pre-commit
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % nano .git/hooks/pre-commit
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % chmod +x .git/hooks/pre-commit
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % echo "this is a log file." > example.log
✖ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add test.log
onulmaz: yol belirteci 'test.log', hiçbir dosya ile eşleşmedi
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add example.log
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "test commit"
[main 279e55a] test commit
 1 file changed, 1 insertion(+)
   create mode 100644 example.log
✖ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## **TASK 5.1**

Implemented a pre-commit hook to prevent committing .log files, then tested it by attempting to add and commit an example log file.

Software-Build-Automation-Tools > .github > workflows > ! main.yml

```
You, 1 saniye önce | 1 author (You)
1 name: CI
2 on: [push]
3 jobs:
4   build:
5     runs-on: macos-latest
6     steps:
7       - name: Checkout code
8         uses: actions/checkout@v2
9
10      - name: Set up Node.js
11        uses: actions/setup-node@v2
12        with:
13          node-version: '14'
14
15      - name: Install dependencies
16        run: npm install
17
18      - name: Run tests
19        run: npm test
```

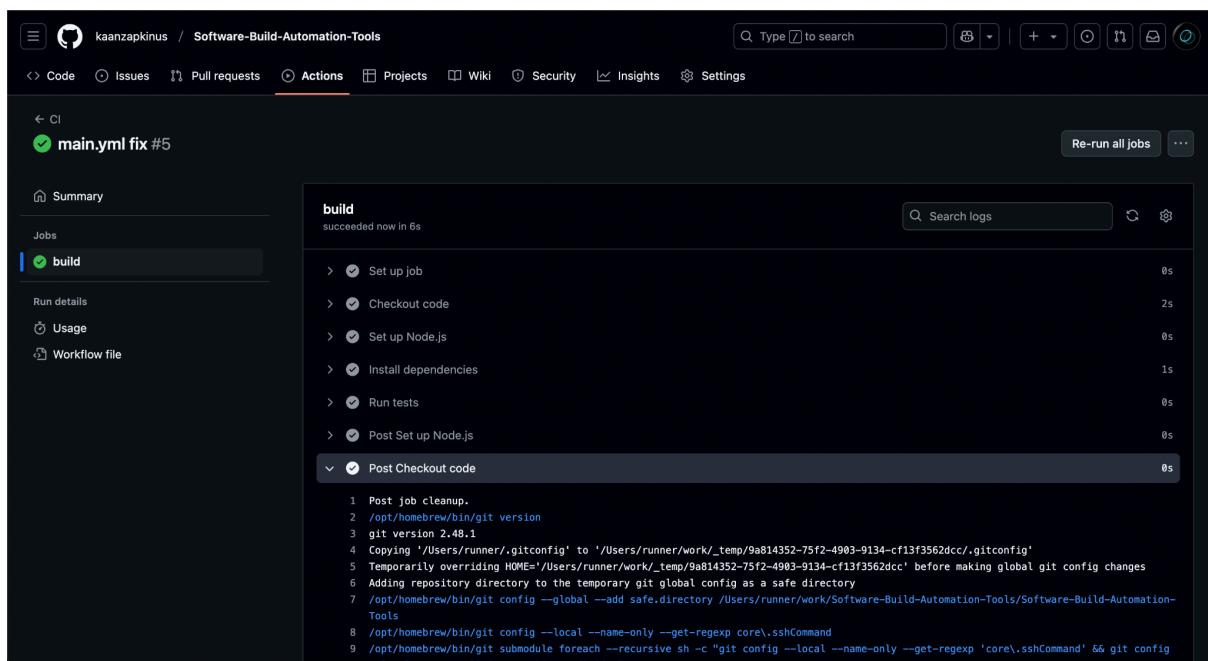
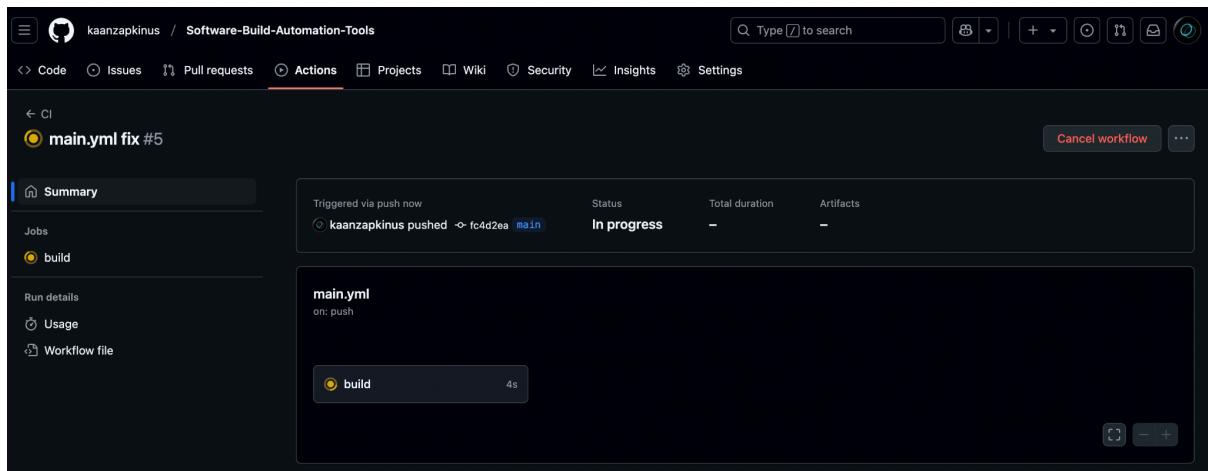
Yönetici: You, 1 saniye önce • Uncommitted changes

SORUNLAR ÇIKIŞ HATA AYIKLAMA KONSOLU TERMINAL ... zsh - Software-Build-Automation-Tools + × ┌ └ └ └ └

```
Toplam 12 (delta 3), yeniden kullanılan 0 (delta 0), yeniden kullanılan paket 0 (0 konumundan)
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
  a0bf3b2..2ea75be main -> main
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git add .
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git commit -m "main.yml fix"
[main 5ac680c] main.yml fix
 2 files changed, 16 insertions(+), 13 deletions(-)
● kaan@Kaan-MacBook-Air Software-Build-Automation-Tools % git push
Nesneler ortaya dökülüyor: 11, bitti.
Nesneler sayılıyor: 100% (11/11), bitti.
Delta sıkıştırması 8 iş parçacığı kullanıyor
Nesneler sıkıştırılıyor: 100% (4/4), bitti.
Nesneler yazılıyor: 100% (6/6), 839 bayt | 839.00 KiB/sn, bitti.
Toplam 6 (delta 1), yeniden kullanılan 0 (delta 0), yeniden kullanılan paket 0 (0 konumundan)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/kaanzapkinus/Software-Build-Automation-Tools.git
  2ea75be..5ac680c main -> main
△ kaan@Kaan-MacBook-Air Software-Build-Automation-Tools %
```

## TASK 5.2

The pipeline now runs successfully after fixing the YAML syntax, choosing a valid Node version, and adjusting the test script. The build job completes with no errors.



## **FINAL VERSION OF FILE**

▼	📁 Software-Bu...ation-Tools	Bugün 13:30	--	Klasör	
	📄 example.log	Bugün 13:20	20 bayt	Günlük Dosyası	
▼	📁 lecture1 files	Bugün 13:27	--	Klasör	
	📄 lecture1.pdf	Bugün 13:27	103 KB	PDF Belgesi	
	📄 LICENSE	Bugün 12:15	1 KB	Düz Metin	
	📄 README.md	Bugün 13:16	292 bayt	Markdo...ument	

**KAAN YAZICIOĞLU SD4**