

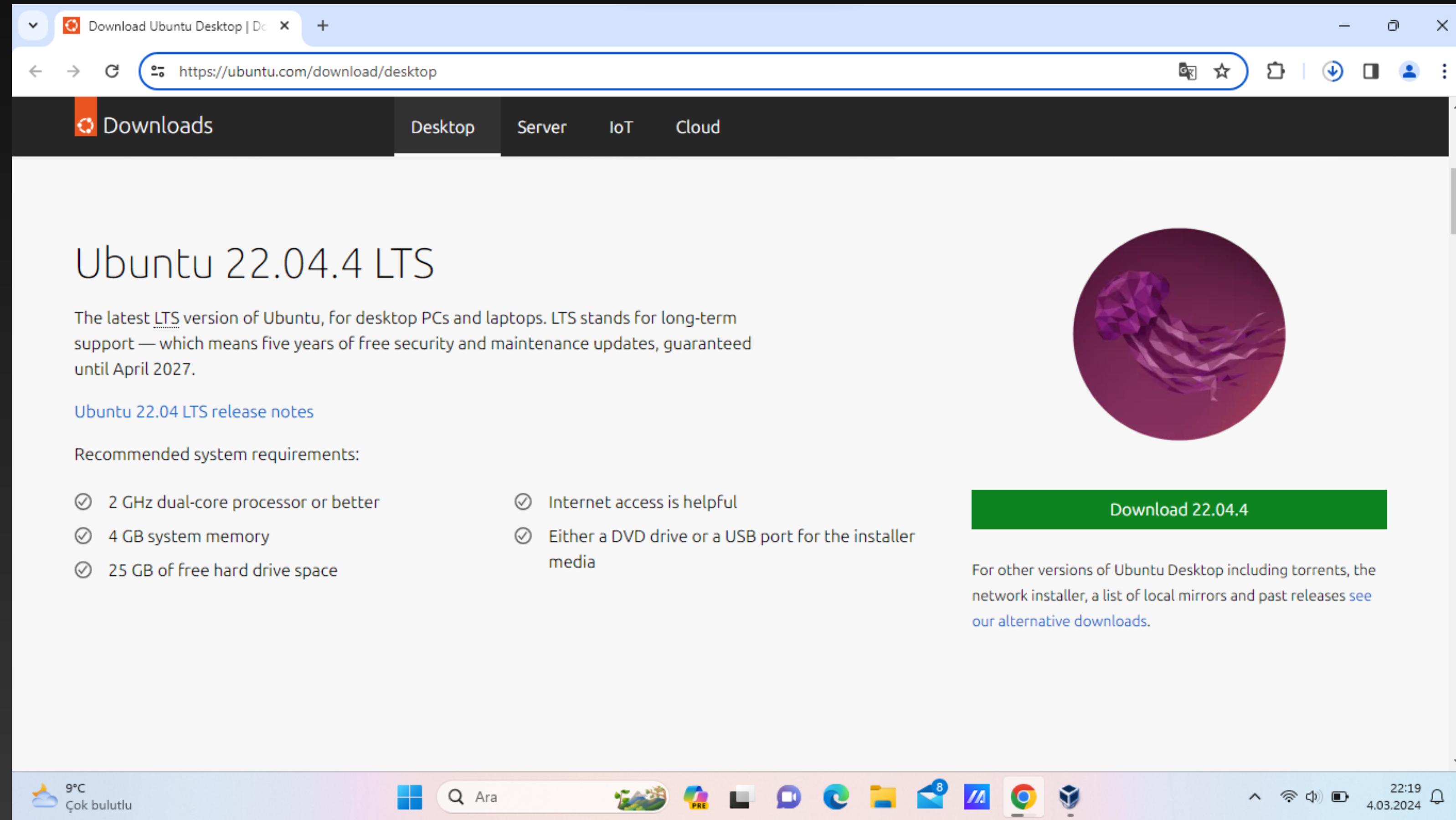
DevOps Bitirme Projesi

Yeter Karakuş

Ubuntu Kurulumu

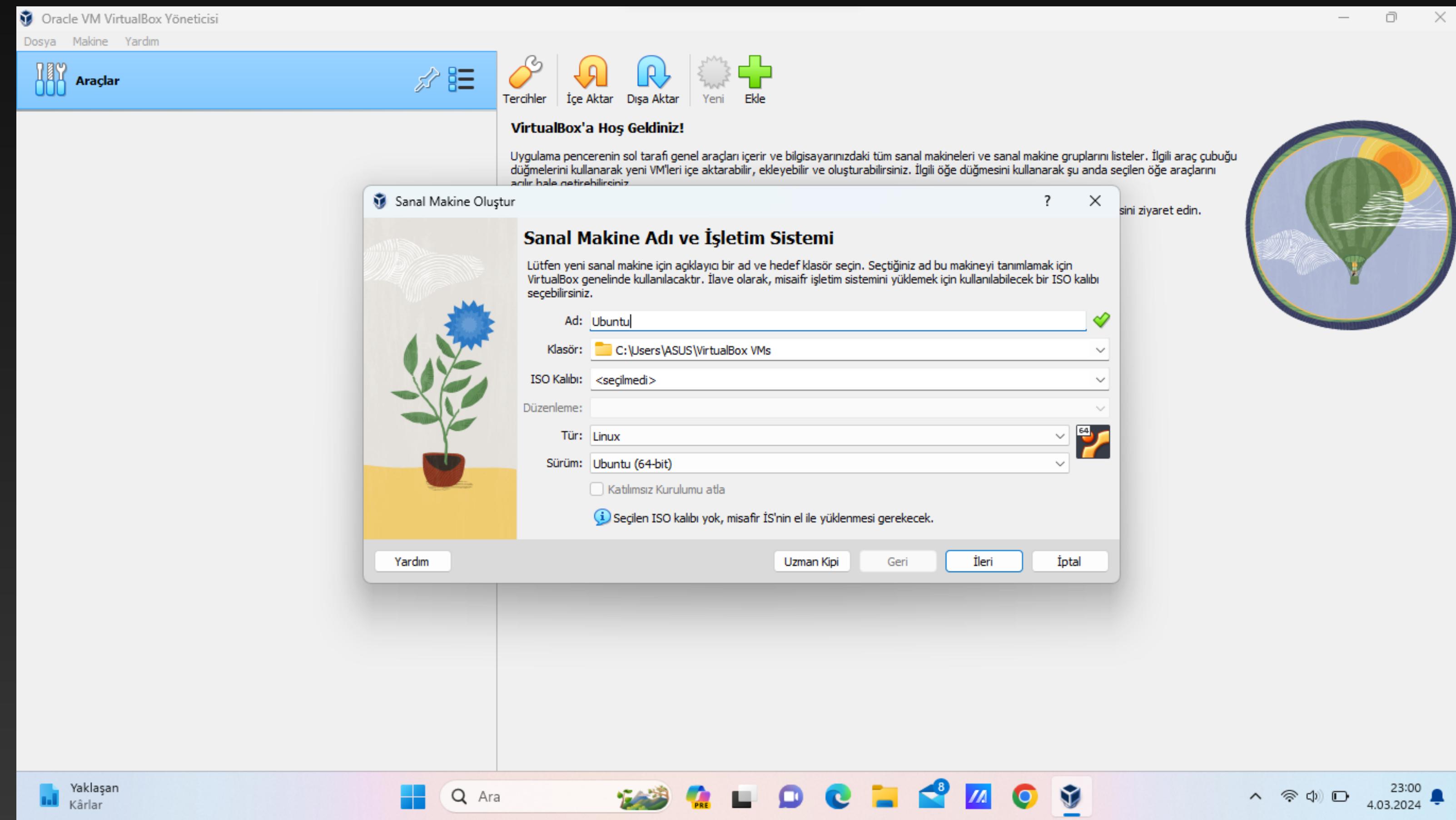
Ubuntu Kurulumu

- Ubuntu kurulumunu yapmak için öncelikle ISO dosyasını indirmemiz gereklidir.



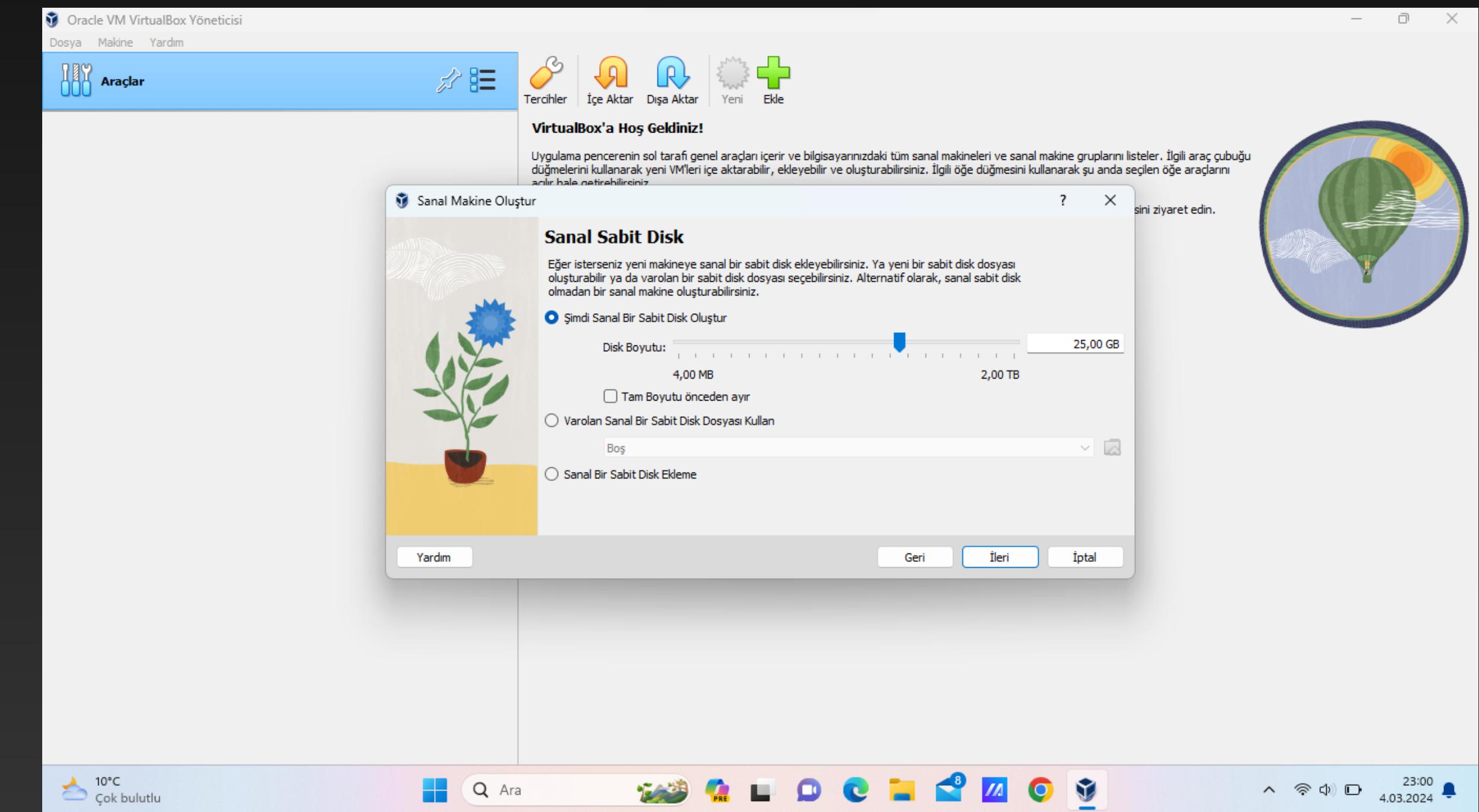
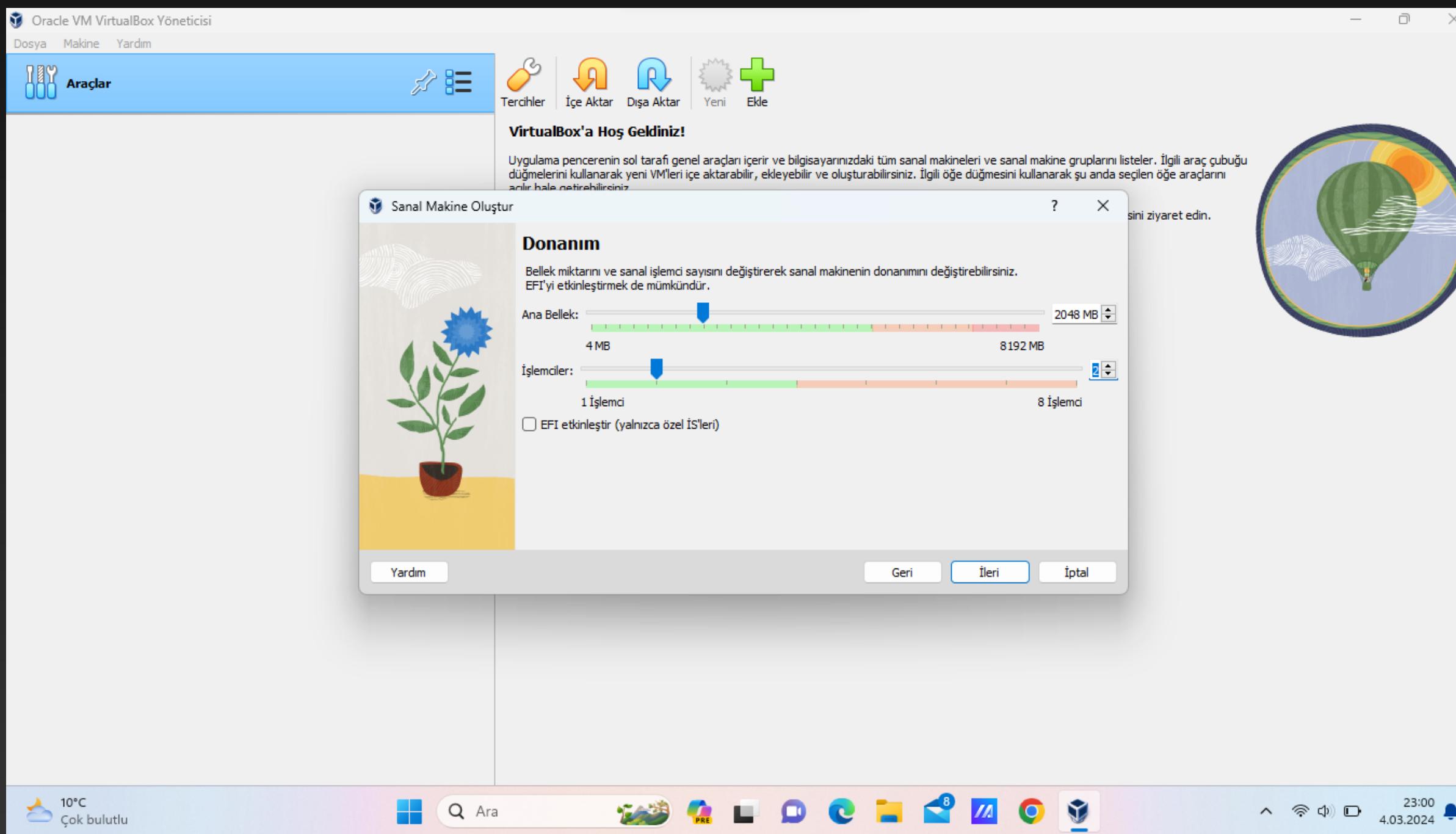
Ubuntu Kurulumu

- Vm Box'ta yeni sekmesine tıklıyoruz ve açılan ekranın işletim sistemimizin adını ve türünü seçiyoruz



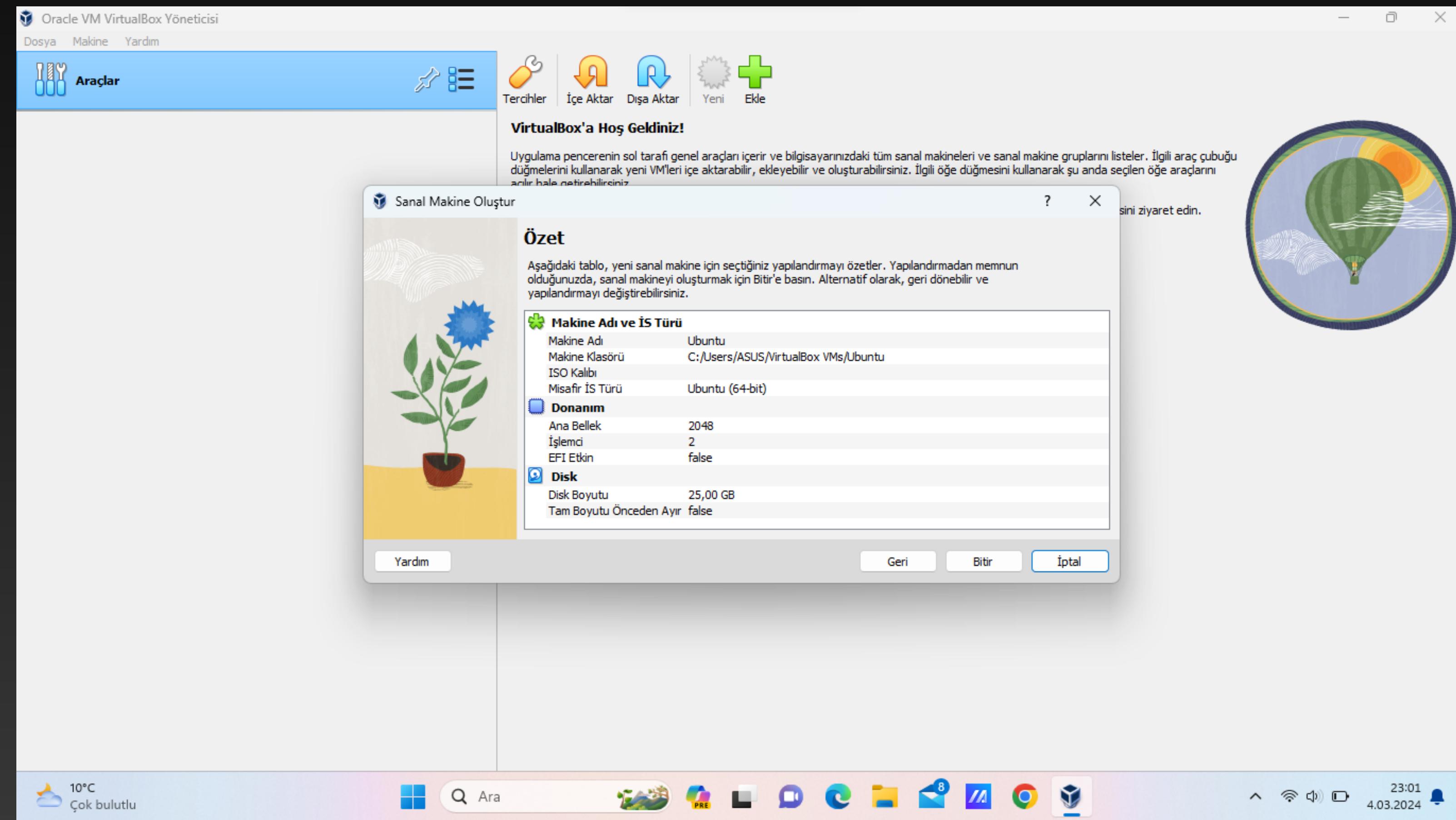
Ubuntu Kurulumu

- Açılan ekranada sanal makin donanımsal olarak kapasitesini belirliyoruz.
- Ubuntu için tavsiye edilen 4 GB Ram, 2 GHz Processor, 25 Gb Hard Disk



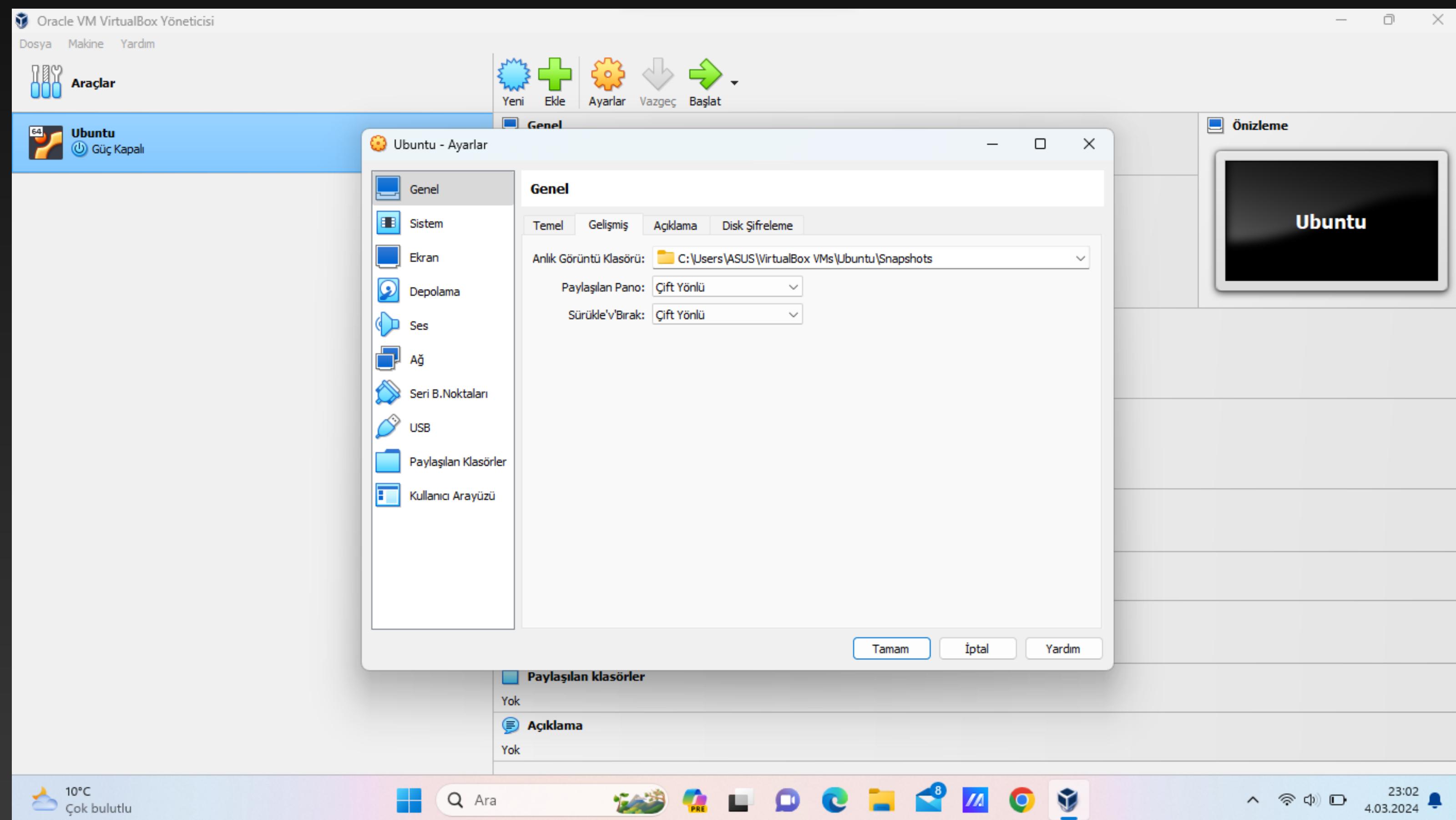
Ubuntu Kurulumu

- Açılan ekranda sanal makinenin özet bilgileri yer almaktadır.



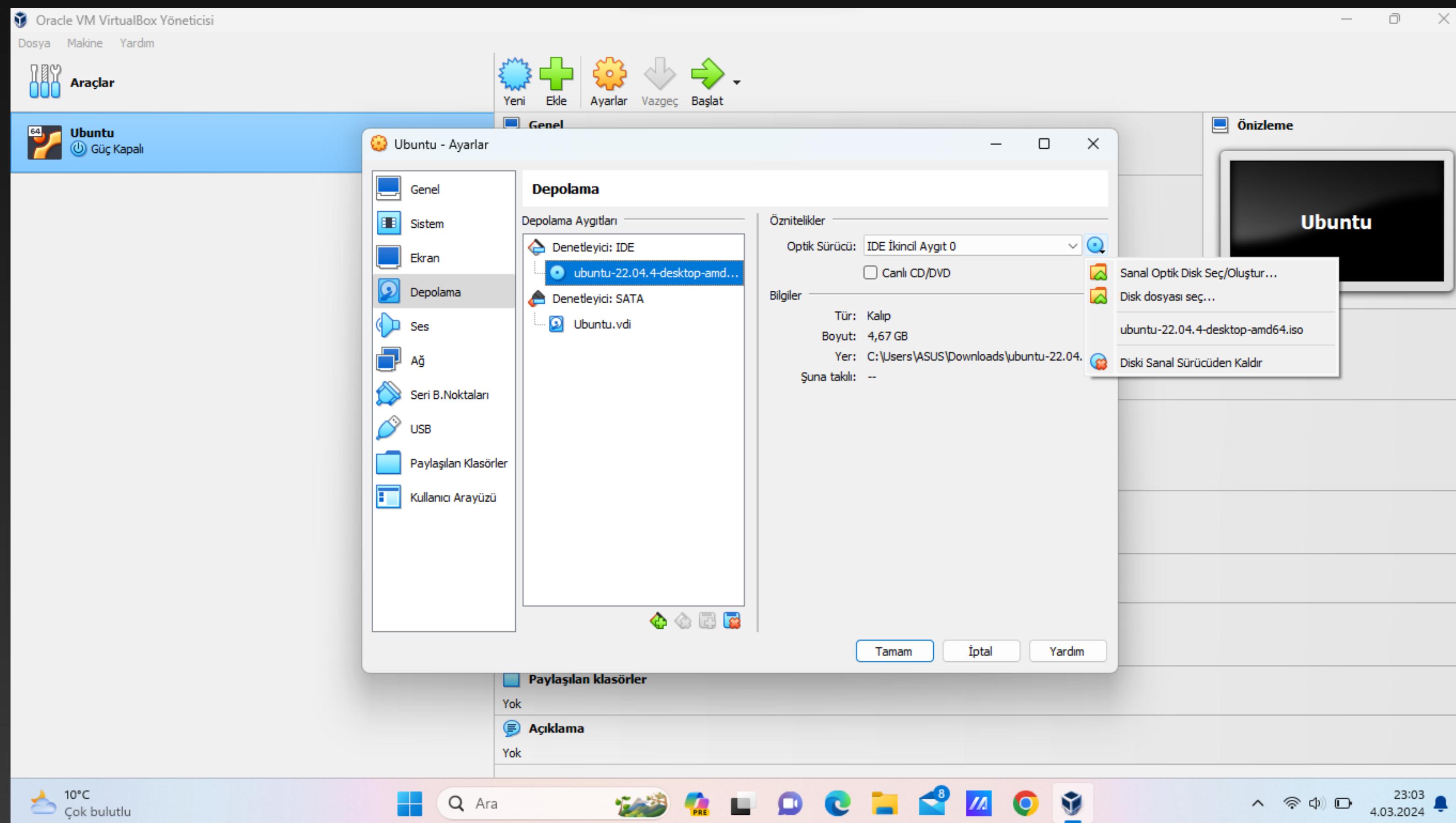
Ubuntu Kurulumu

- Genel sekmesinde local bilgisayar ve sanal makina arasında kopyala yapıştır , sürükle bırak gibi işlemleri yapabilmek için çift yönlü olarak seçiyoruz.



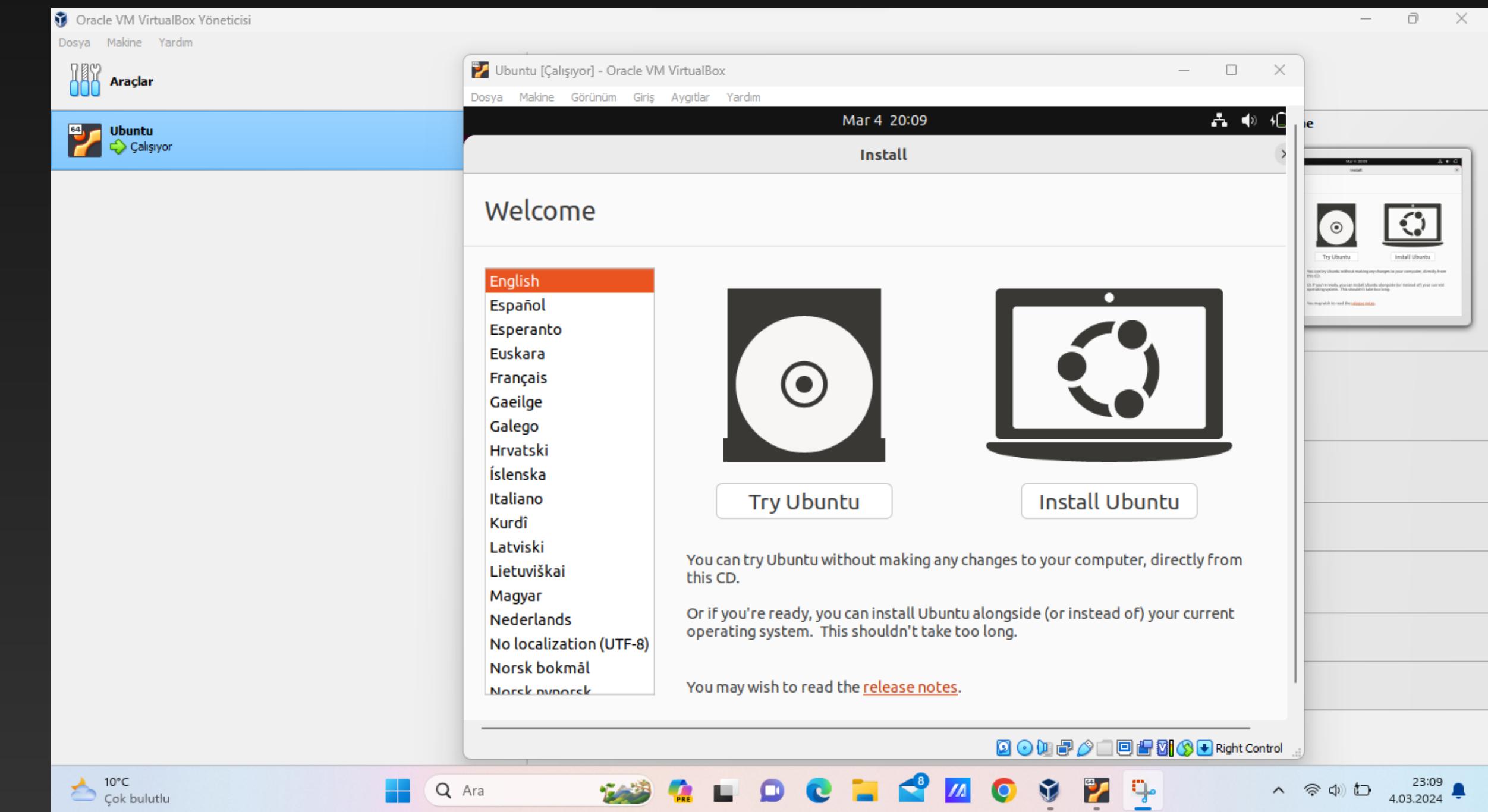
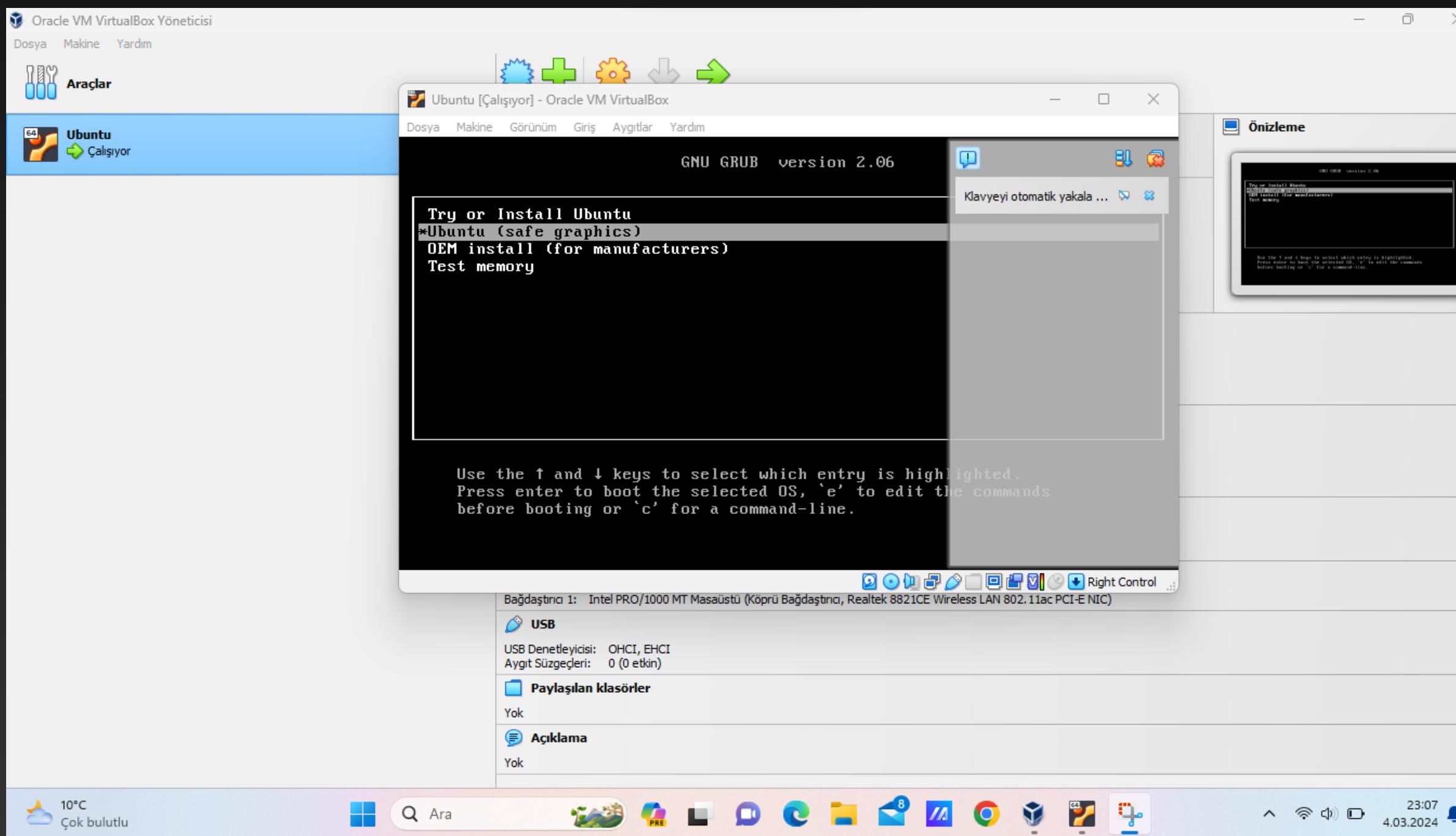
Ubuntu Kurulumu

- Depolama bölümünde indirmiş olduğumuz iso dosyasını ekliyoruz.
- Tamam' a tıkladıktan sonra Ubuntu'yu başlatıyoruz.



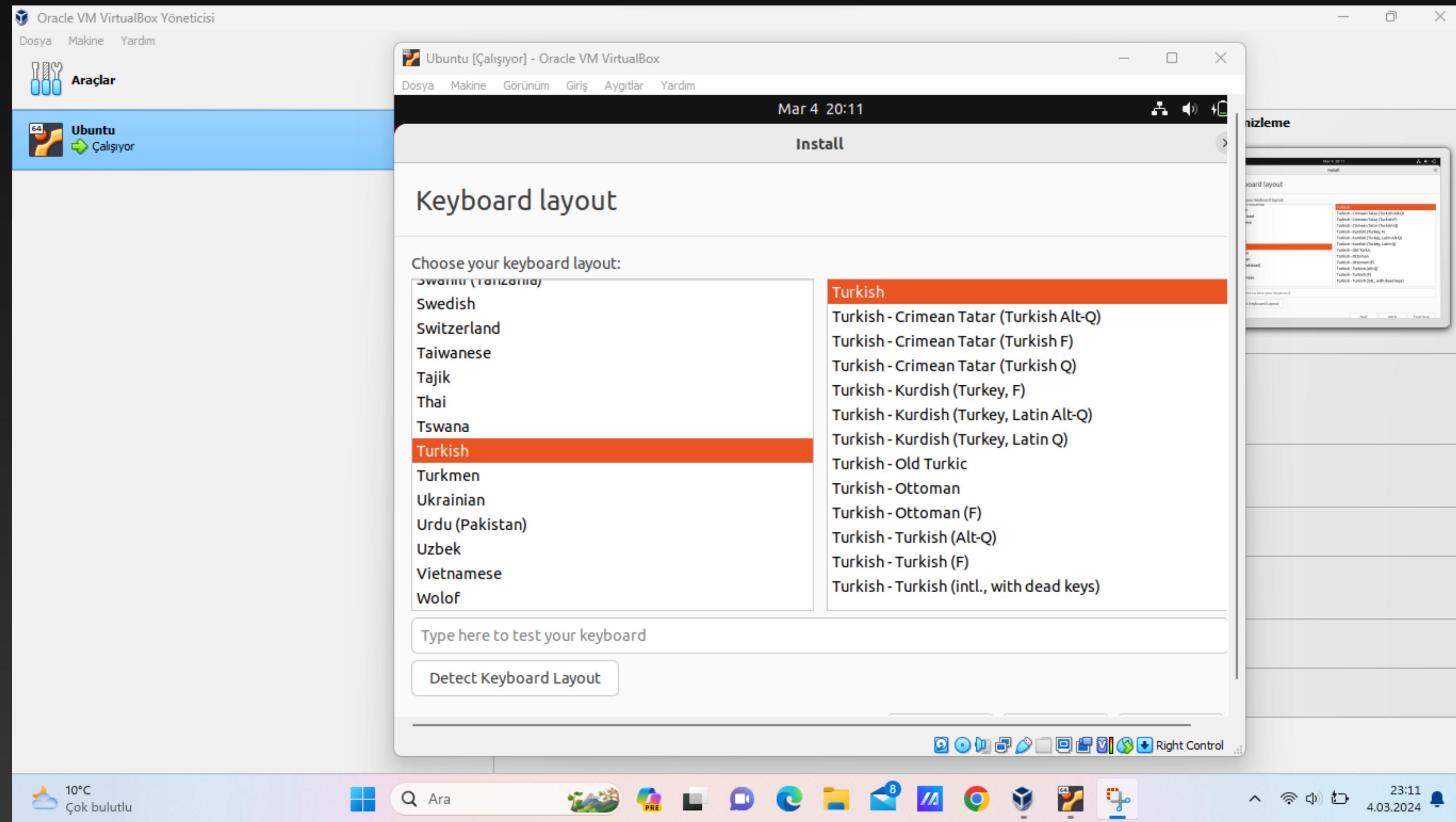
Ubuntu Kurulumu

- Açılan ekranın Ubuntu (safe graphics) seçili olduğunu doğruluyoruz.
- Açılan ekranın dili seçip Install Ubuntu butonuna tıklıyoruz.



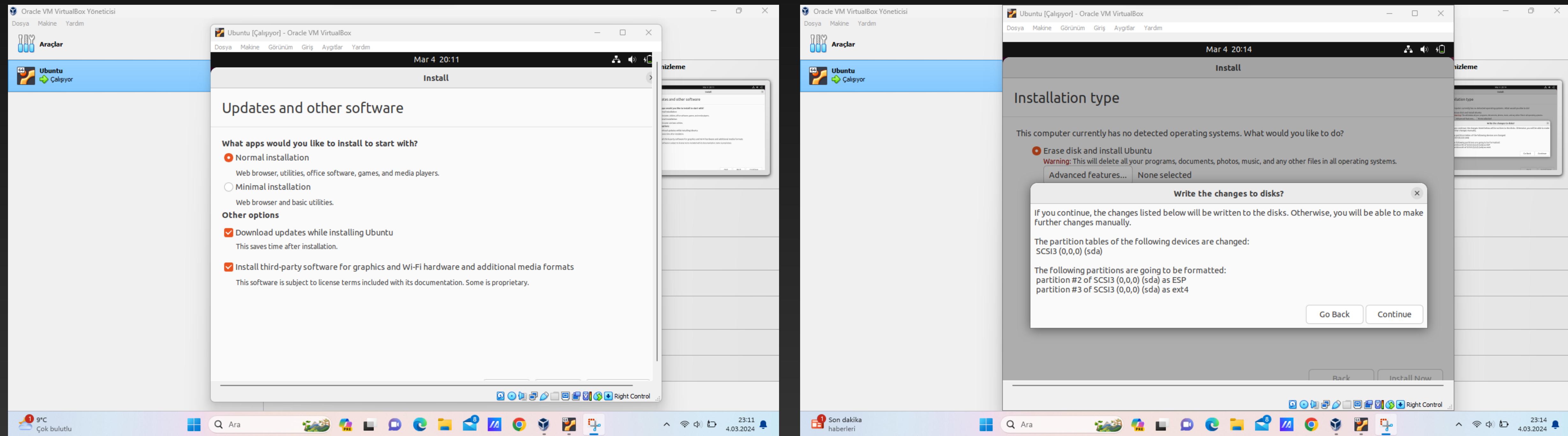
Ubuntu Kurulumu

- Klavye seçiminizi yapıyoruz.



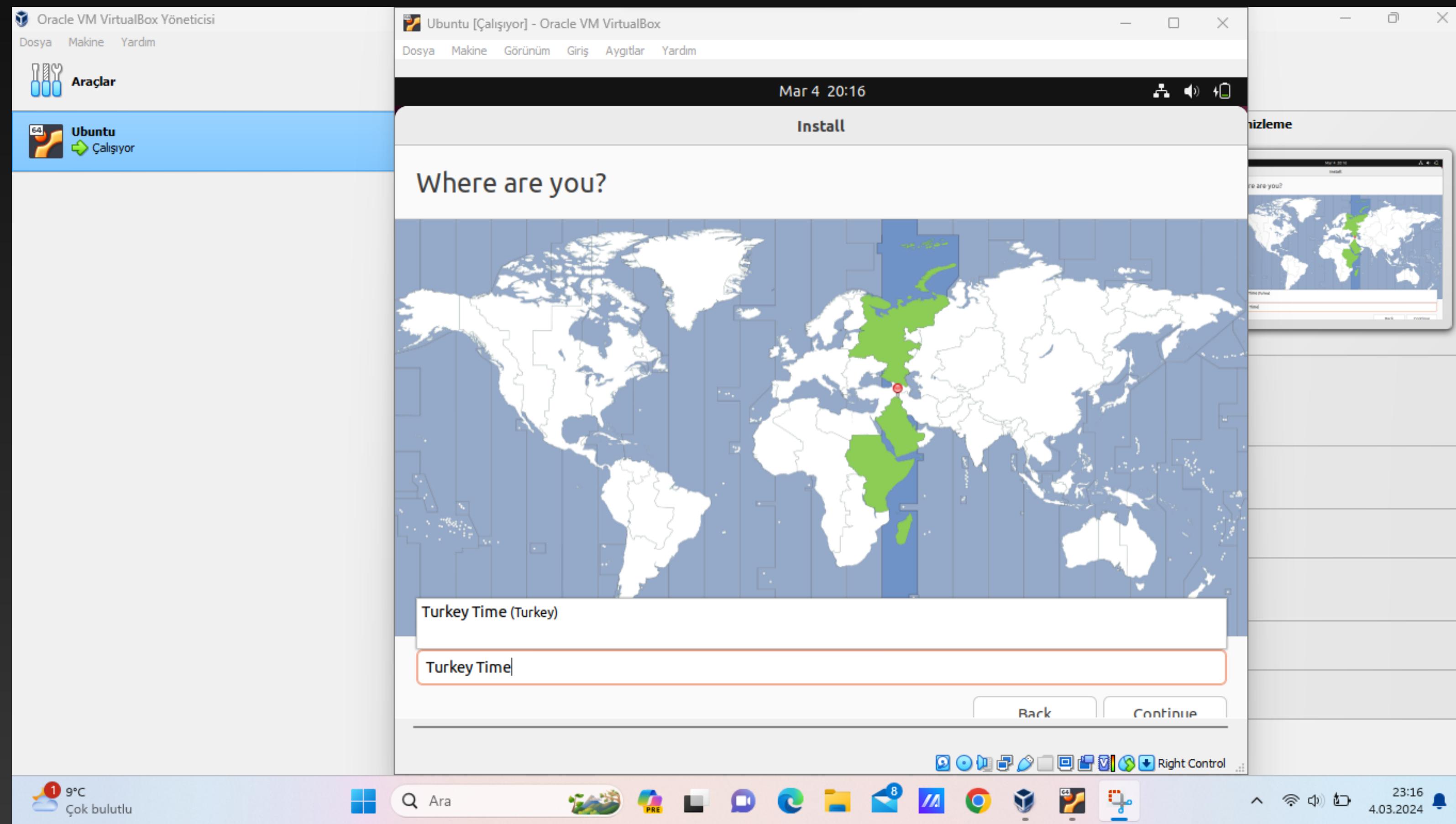
Ubuntu Kurulumu

- Açılan ekranın kurulum türünü normal installation seçiyoruz ve continue butonuna tıklıyoruz.
- Kurulumla ilgili işlemleri yapıp install now butonuna tıklıyoruz. Açılan pencerede continue butonuna tıklıyoruz.



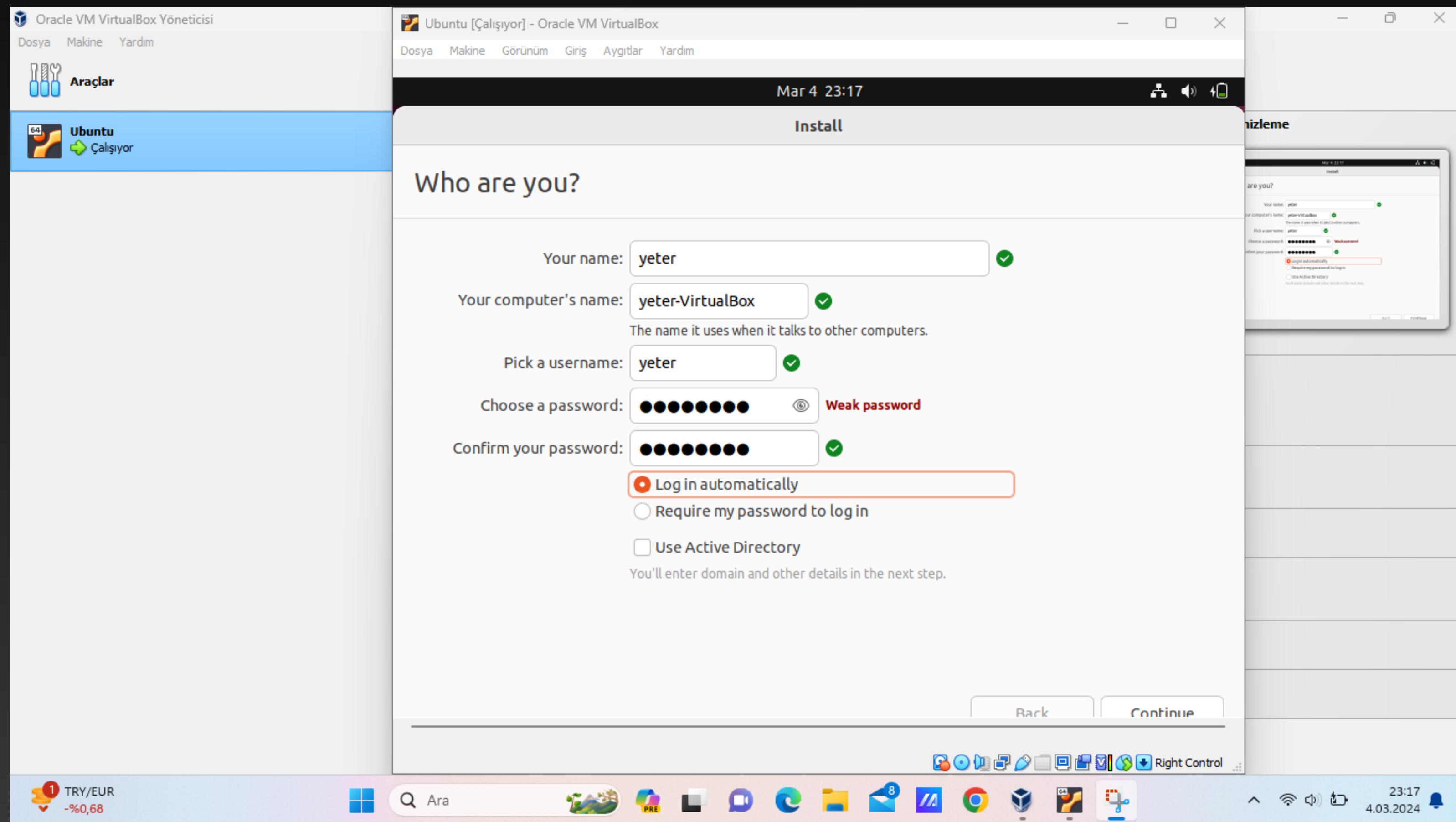
Ubuntu Kurulumu

- Nerede olduğumuzu seçiyoruz



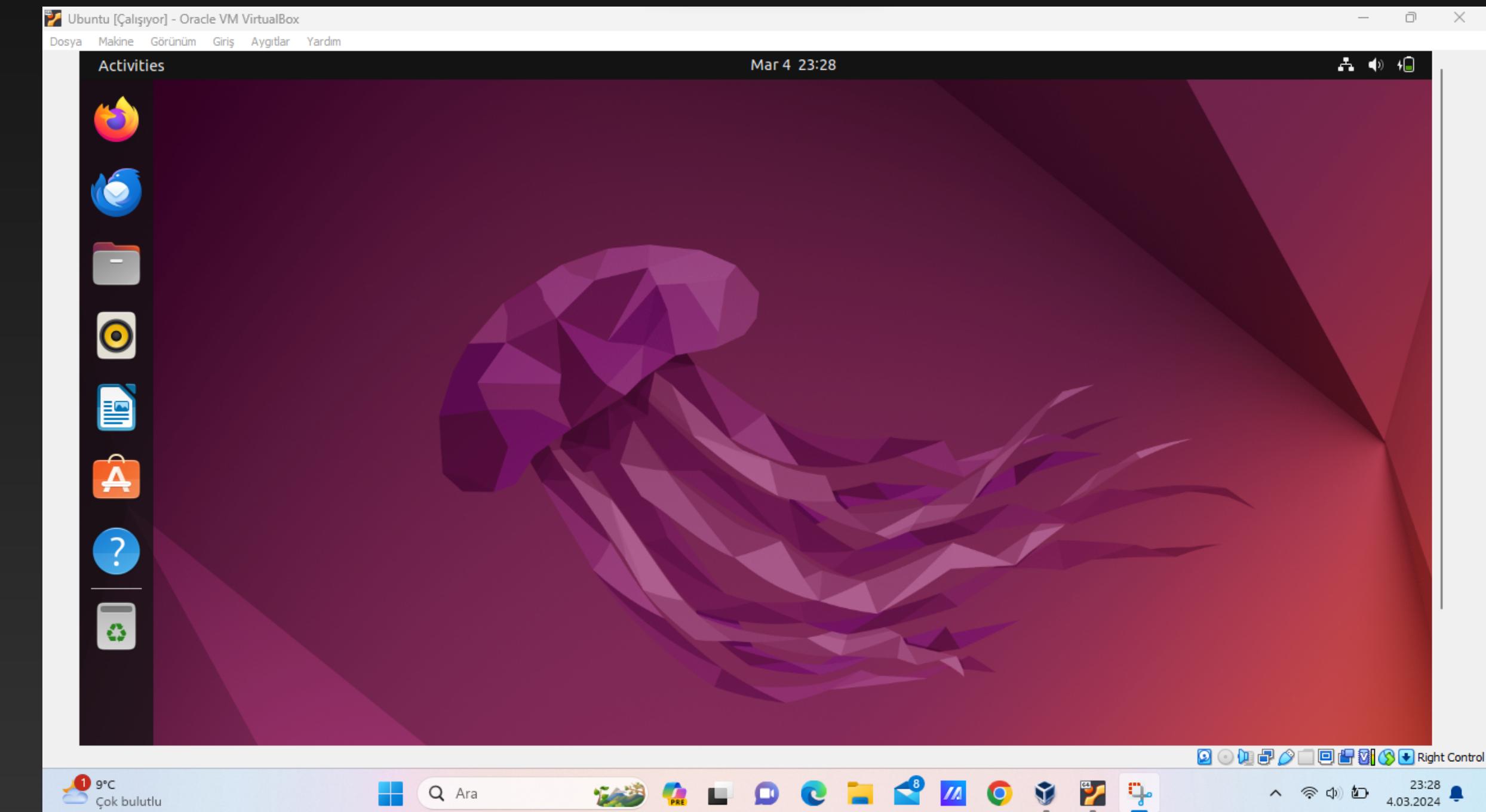
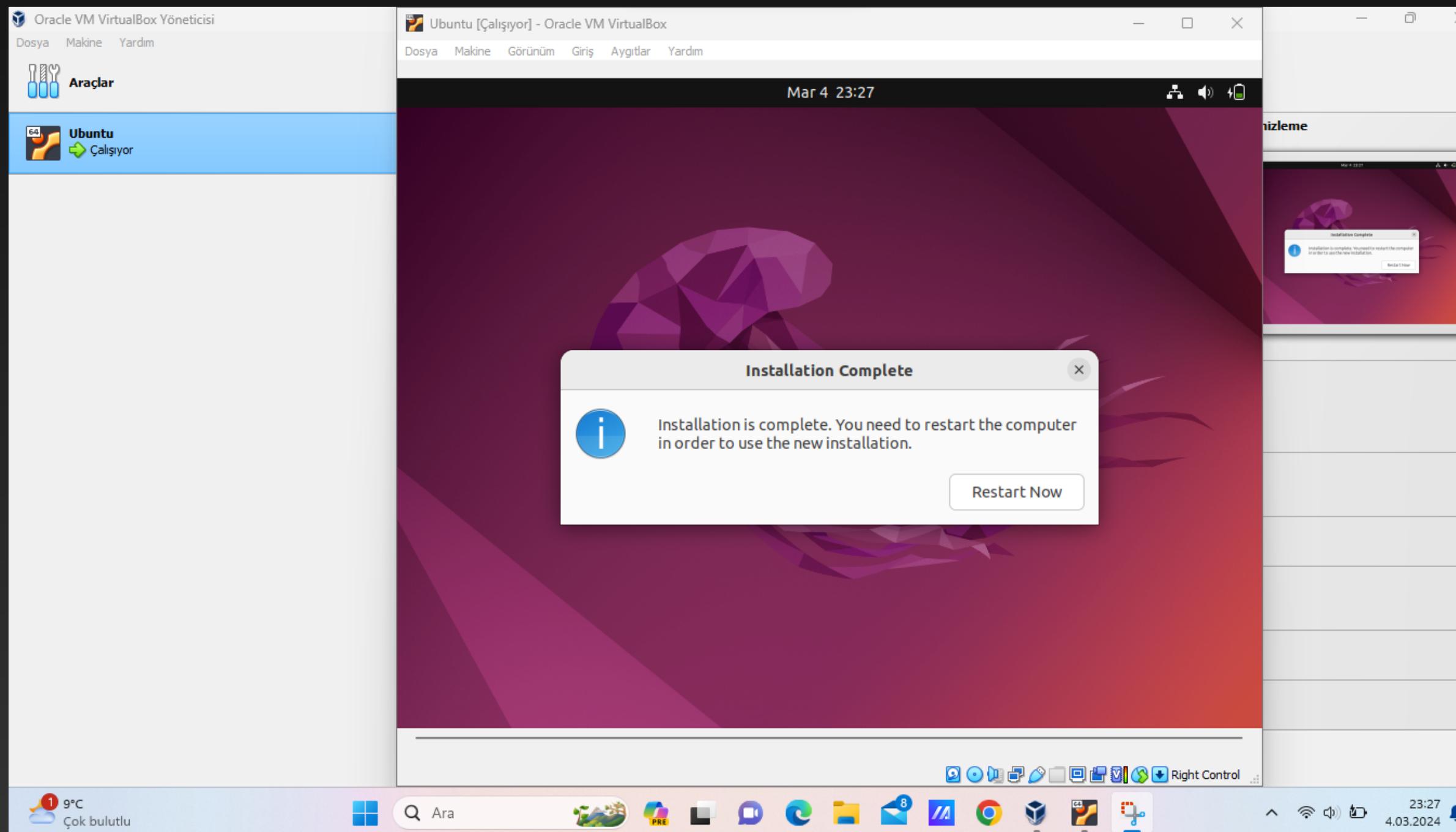
Ubuntu Kurulumu

- Kullanıcı bilgilerini giriyoruz.



Ubuntu Kurulumu

- Tüm işlemler bittiğten sonra Restart Now butonuna tıklıyoruz.
- Tekrar başlatıldıkten sonra Ubuntu kurulumunu bitirmiş oluyoruz.



Kurulumlar

Kurulumlar

- Kurulumlar için bash script dosyalarının çalıştırılması
- Common.sh -> Genel yüklemeler

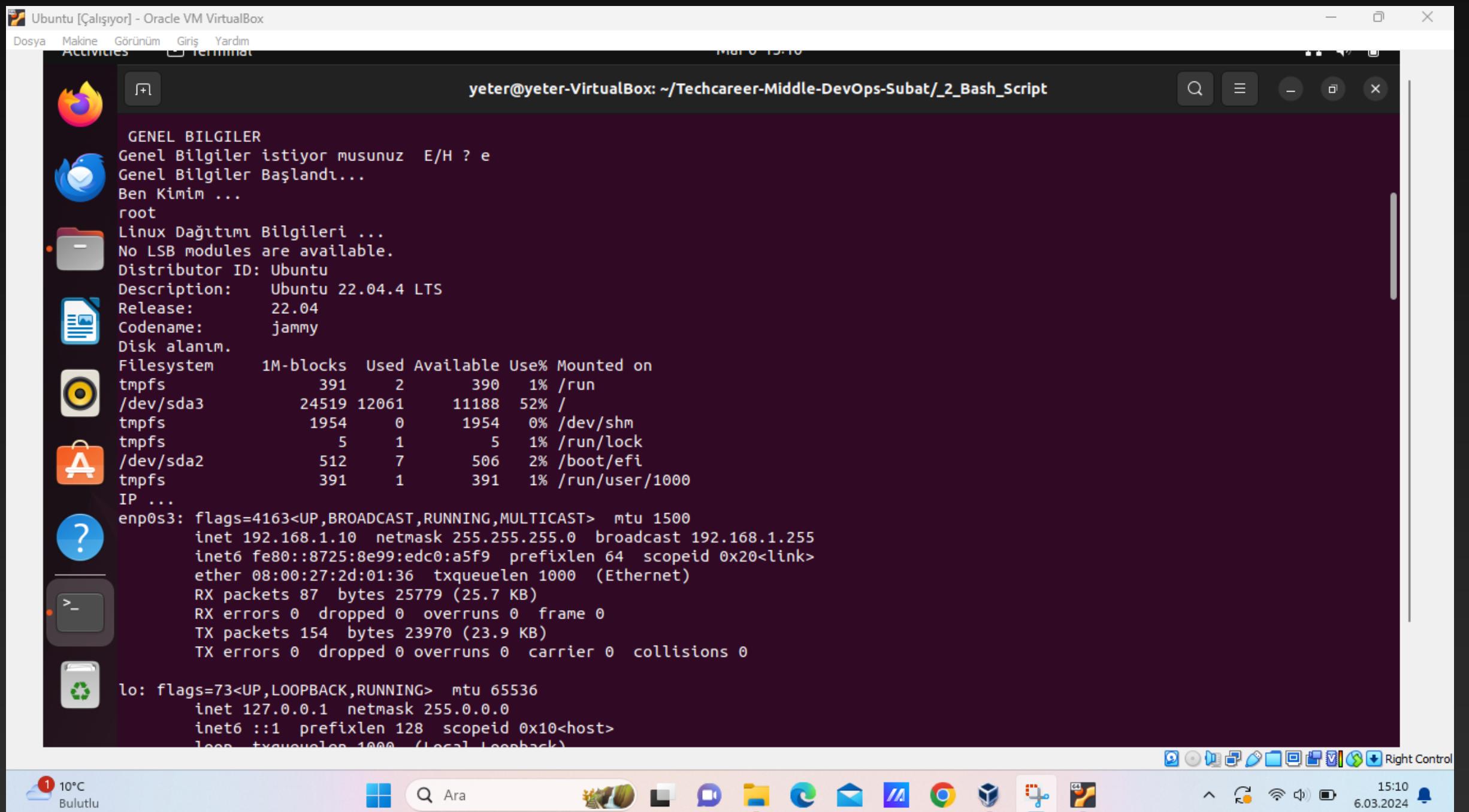
The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal is running a bash script named "Common.sh". The script performs several tasks:

- Changes file permissions: `chmod +x ./_1_common.sh`
- Runs the script: `./_1_common.sh`
- Updates the package list: `Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease`, `Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease`, `Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease`
- Downloads package lists: `Reading package lists... Done`
- Builds dependency tree: `Building dependency tree... Done`
- Checks state information: `Reading state information... Done`
- Calculates upgrade: `Calculating upgrade... Done`
- Shows packages kept back: `The following packages have been kept back:`
libgpgme11 libgpgmepp6
- Shows upgrade statistics: `0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.`
- Shows file permission requests:
 - `Güncelleme`: `Güncelleme istiyor musunuz ? E/H e`
 - `DOSYA IZINLERİ`: `Dosyalara izin vermek istiyor musunuz E/H e`
 - `GENEL BİLGİLER`: `Genel Bilgiler istiyor musunuz E/H ? e`
- Shows system information: `Genel Bilgiler Başlandı...`, `Ben Kimim ...`, `root`, `Linux Dağıtımlı Bilgileri ...`

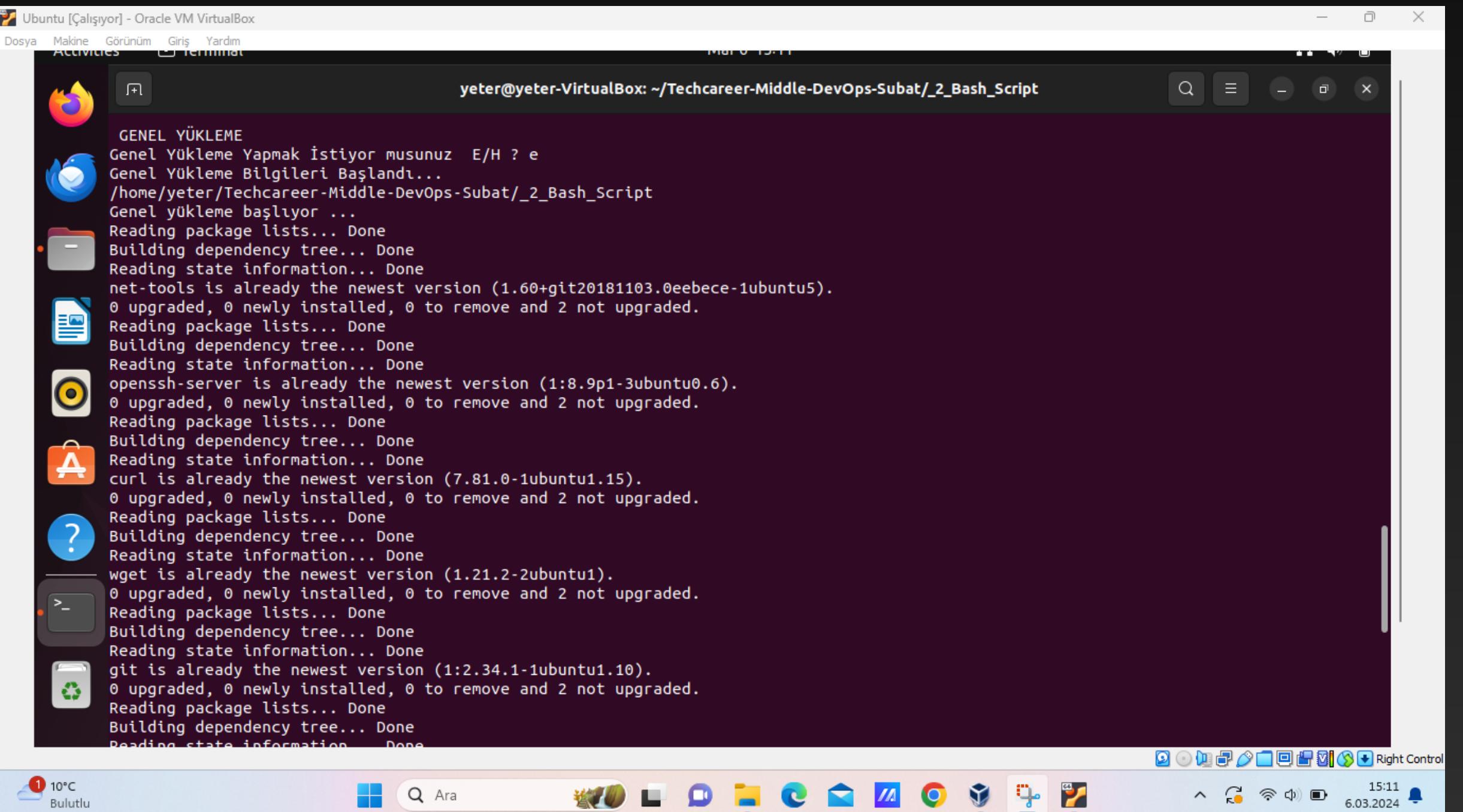
The terminal window has a dark background and light-colored text. It includes standard Linux terminal icons for file operations and help. The bottom of the window shows the Unity desktop interface with various application icons and system status indicators.

Kurulumlar

- Common.sh



```
yeter@yeter-VirtualBox: ~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script
GENEL BİLGİLER
Genel Bilgiler istiyor musunuz E/H ? e
Genel Bilgiler Başlandı...
Ben Kimim ...
root
Linux Dağıtımlı Bilgileri ...
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 22.04.4 LTS
Release:        22.04
Codename:       jammy
Disk alanım.
Filesystem      1M-blocks  Used Available Use% Mounted on
tmpfs            391       2     390   1% /run
/dev/sda3        24519 12061    11188  52% /
tmpfs            1954       0     1954   0% /dev/shm
tmpfs              5       1       5   1% /run/lock
/dev/sda2         512       7     506   2% /boot/efi
tmpfs            391       1     391   1% /run/user/1000
IP ...
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
inet 192.168.1.10  netmask 255.255.255.0  broadcast 192.168.1.255
inet6 fe80::8725:8e99:edc0:af99  prefixlen 64  scopeid 0x20<link>
ether 08:00:27:2d:01:36  txqueuelen 1000  (Ethernet)
RX packets 87  bytes 25779 (25.7 KB)
RX errors 0  dropped 0  overruns 0  frame 0
TX packets 154  bytes 23970 (23.9 KB)
TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
inet 127.0.0.1  netmask 255.0.0.0
inet6 ::1  prefixlen 128  scopeid 0x10<host>
loop  txqueuelen 1000  (Local Loopback)
```



```
yeter@yeter-VirtualBox: ~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script
GENEL YÜKLEME
Genel Yüklemeye Yapmak İstiyor musunuz E/H ? e
Genel Yüklemeye Bilgileri Başlandı...
/home/yeter/Techcareer-Middle-DevOps-Subat/_2_Bash_Script
Genel yüklemeye başlıyor ...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
net-tools is already the newest version (1.60+git20181103.0eebece-1ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.9p1-3ubuntu0.6).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
curl is already the newest version (7.81.0-1ubuntu1.15).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
wget is already the newest version (1.21.2-2ubuntu1).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.10).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

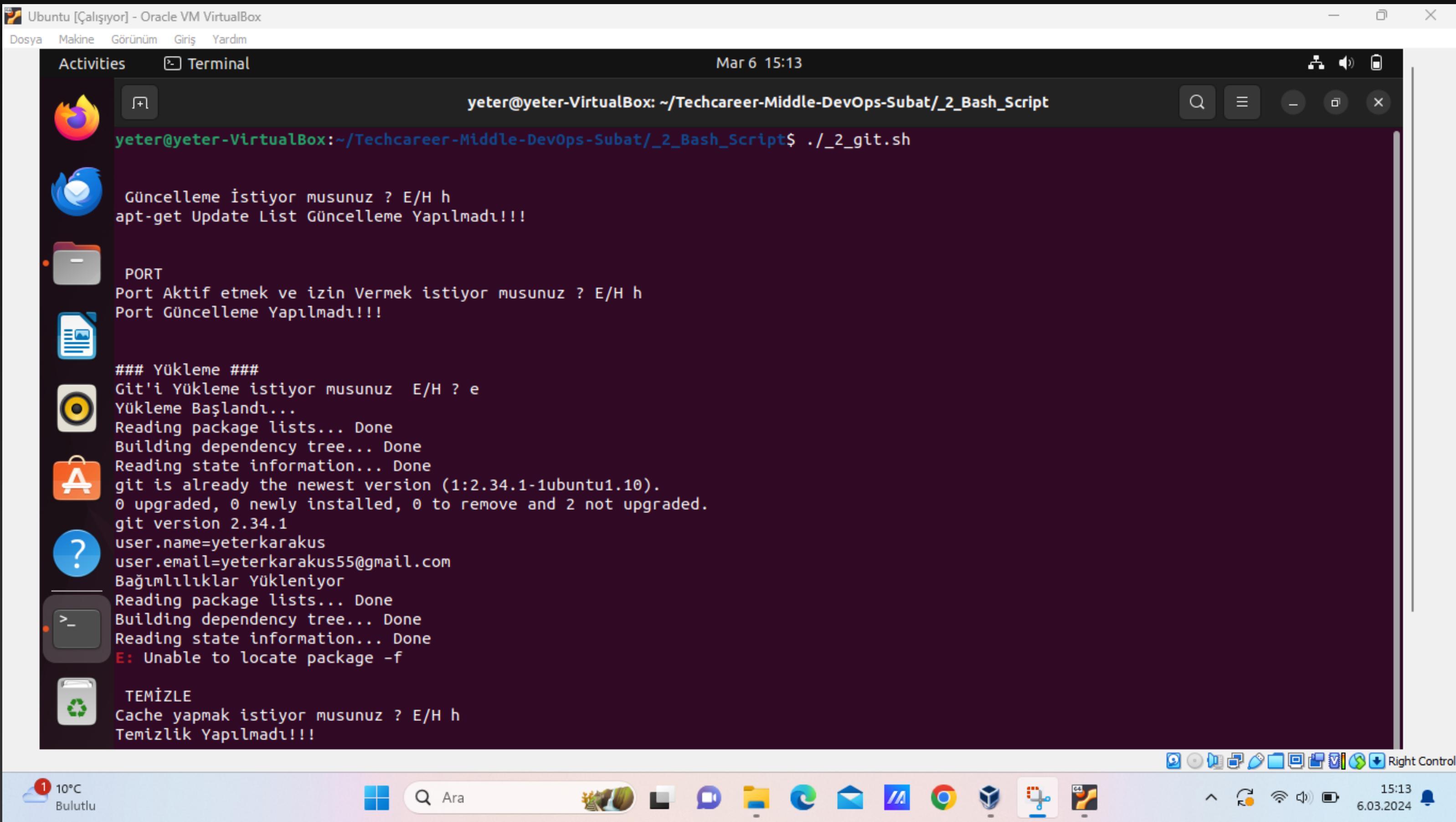
Kurulumlar

- ## • Common.sh

A screenshot of a Linux desktop environment, likely Ubuntu, running in Oracle VM VirtualBox. The terminal window shows the following command and its execution:sudo apt clean
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script\$The terminal also displays a series of "Skipping adding existing rule (v6)" messages, which are typically generated by the apt-clean command as it removes old package files. At the bottom of the terminal, there is a message asking if the user wants to clear the cache, with options "E/H e". The desktop interface includes a dock with various application icons like File Manager, Terminal, and Browser, and a system tray with icons for battery, signal, and date/time.

Kurulumlar

- Git Kurulumu



The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal is running a script named `./_2_git.sh`. The output of the script is as follows:

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_2_git.sh
Güncellemeye istiyor musunuz ? E/H h
apt-get Update List Güncellemeye Yapılmadı!!!

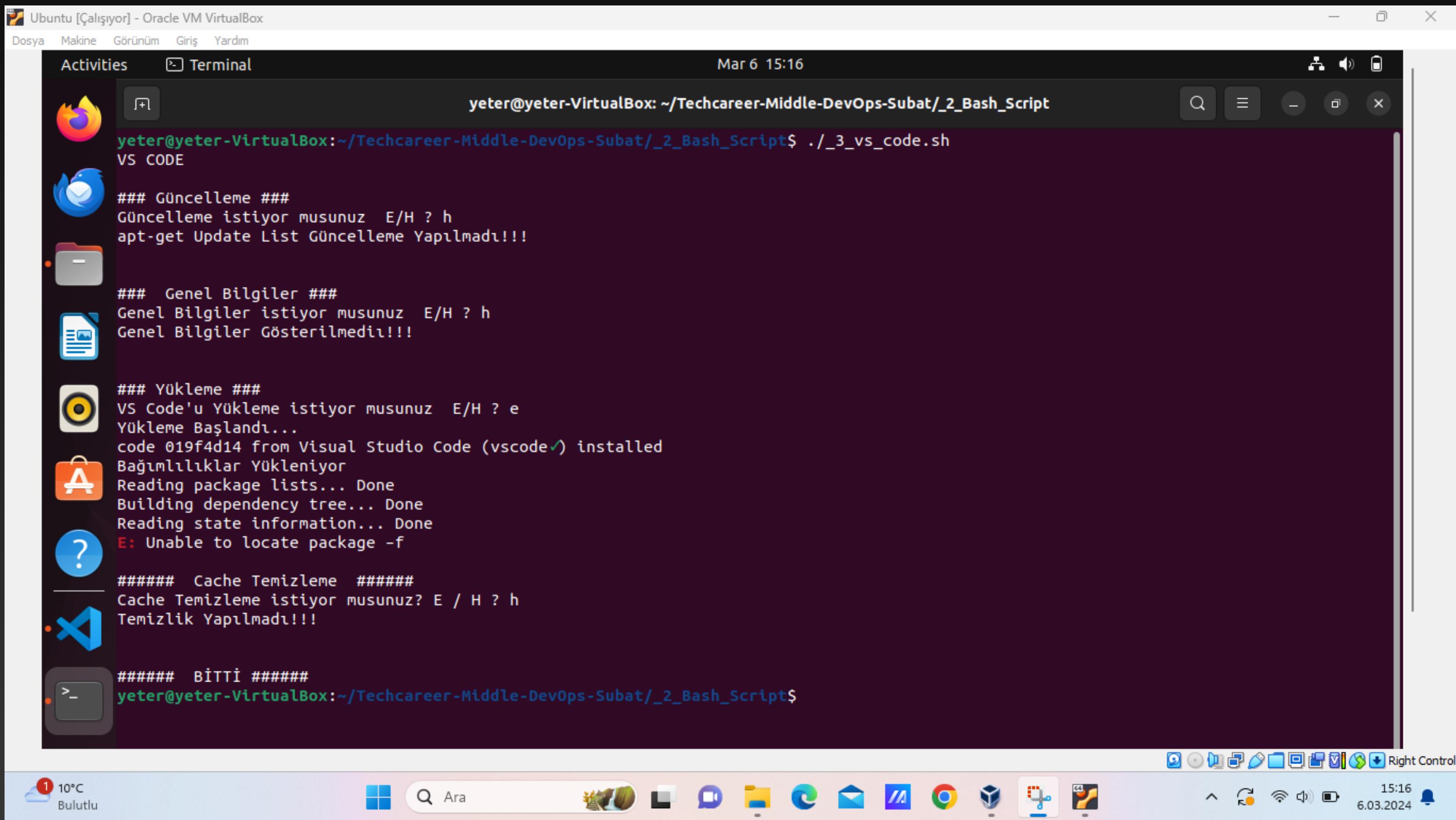
PORT
Port Aktif etmek ve izin Vermek istiyor musunuz ? E/H h
Port Güncelleme Yapılmadı!!!

### Yükleme ###
Git'i Yükleme istiyor musunuz E/H ? e
Yükleme Başlandı...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.10).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
git version 2.34.1
user.name=yeterkarakus
user.email=yeterkarakus55@gmail.com
Bağımlılıklar Yükleniyor
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package -f

TEMİZLE
Cache yapmak istiyor musunuz ? E/H h
Temizlik Yapılmadı!!!
```

Kurulumlar

- Vs Code Kurulumu



The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal is running a script named `./_3_vs_code.sh`. The output of the script is as follows:

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_3_vs_code.sh
VS CODE
### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Başlandı!!!
### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

### Yükleme ###
VS Code'u Yükleme istiyor musunuz E/H ? e
Yükleme Başlandı...
code 019f4d14 from Visual Studio Code (vscode✓) installed
Bağımlılıklar Yükleniyor
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package -f

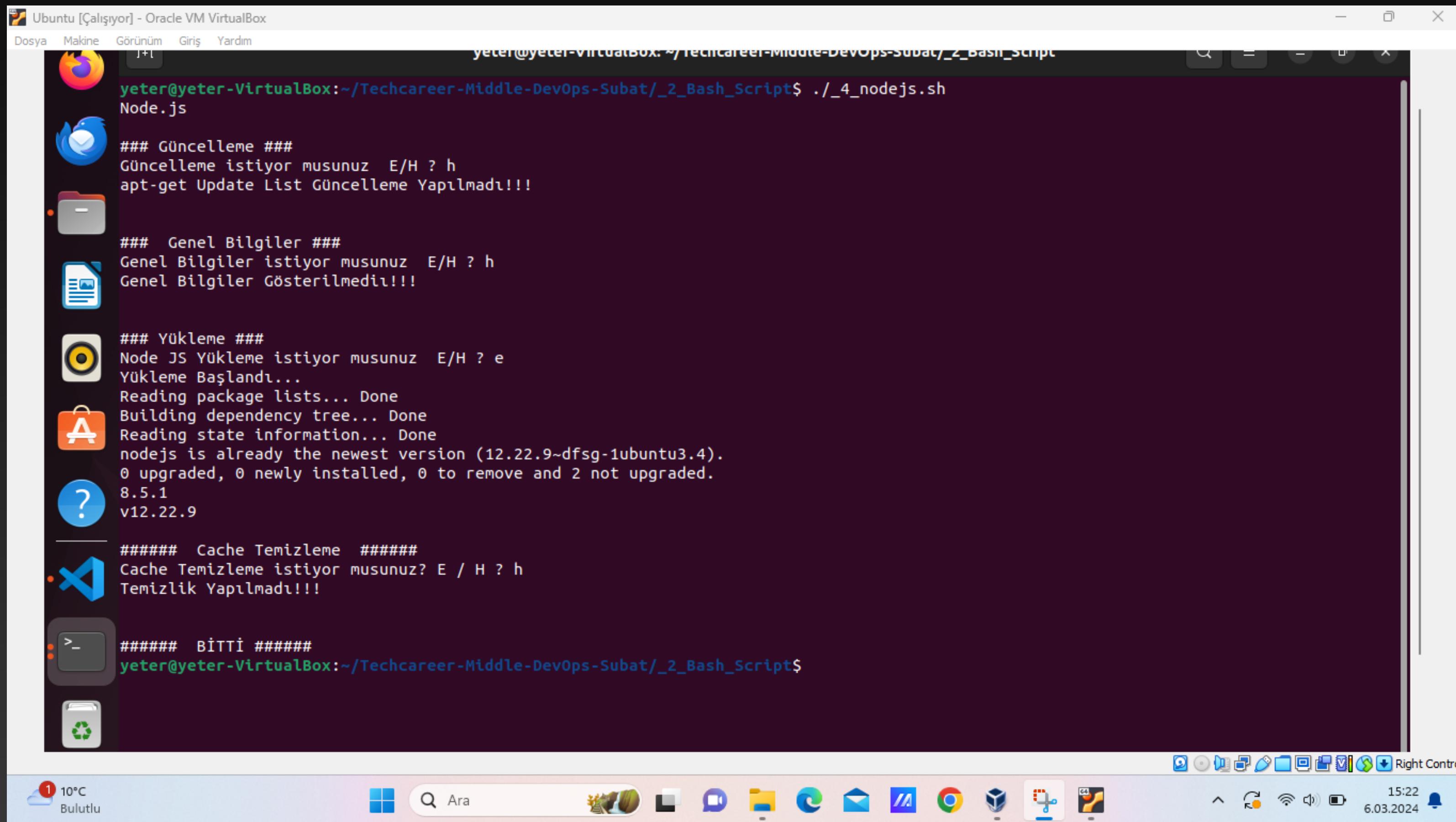
##### Cache Temizleme #####
Cache Temizleme istiyor musunuz? E / H ? h
Temizlik Yapılmadı!!!

#####
BITTI #####
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

The terminal window has a dark theme and includes icons for various applications in its sidebar. The status bar at the bottom shows system information like weather (10°C), date (6.03.2024), and time (15:16).

Kurulumlar

- Node.js Kurulumu



The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal is running a script named `./_4_nodejs.sh`. The output of the script is as follows:

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_4_nodejs.sh
Node.js
### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

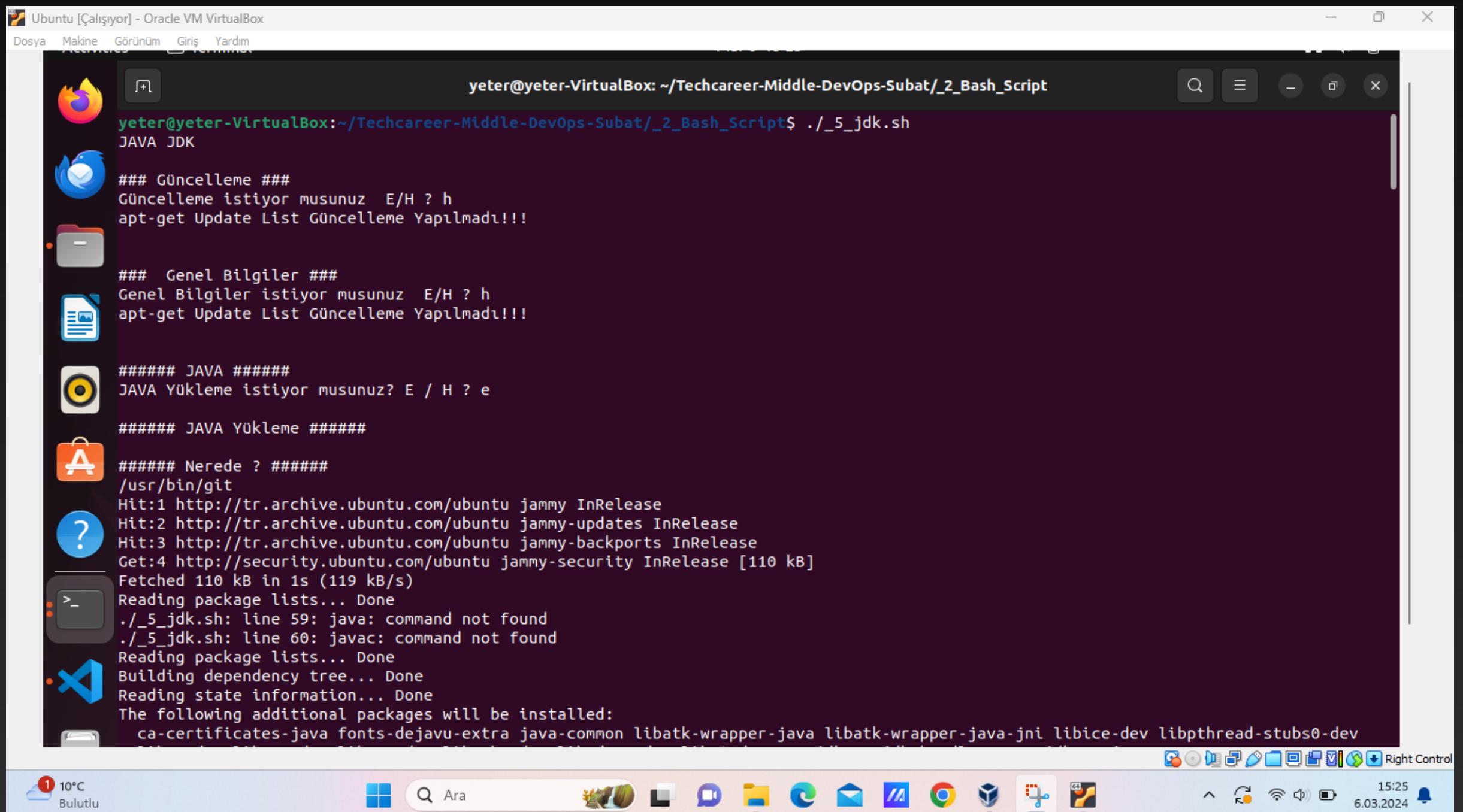
### Yükleme ###
Node JS Yükleme istiyor musunuz E/H ? e
Yükleme Başlandı...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
nodejs is already the newest version (12.22.9~dfsg-1ubuntu3.4).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
8.5.1
v12.22.9

##### Cache Temizleme #####
Cache Temizleme istiyor musunuz? E / H ? h
Temizlik Yapılmadı!!!

##### BITTİ #####
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

Kurulumlar

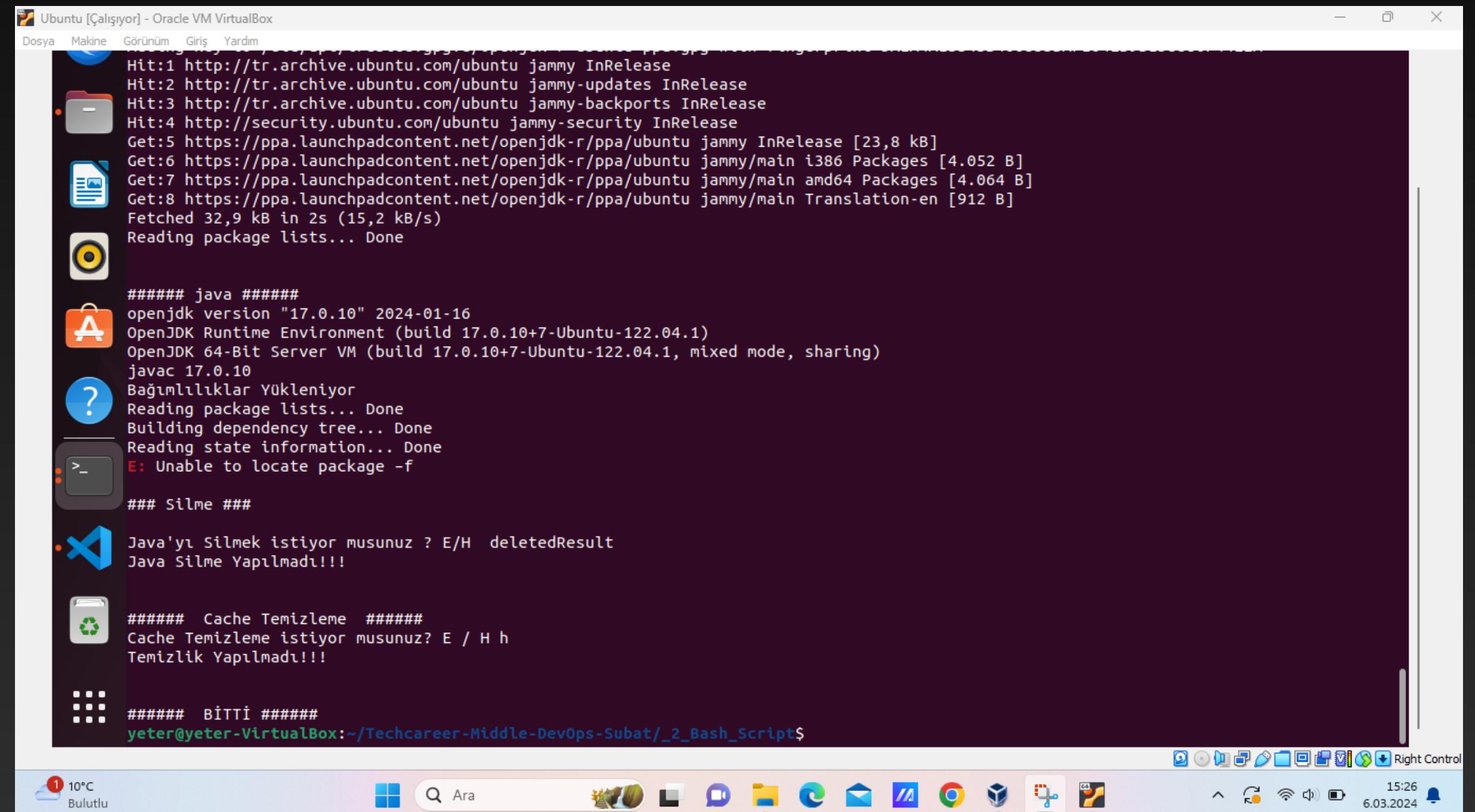
- Java Kurulumu



```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_5_jdk.sh
JAVA JDK
### Güncellemeye ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

##### JAVA #####
JAVA YÜKLEME istiyor musunuz? E / H ? e
##### JAVA YÜKLEME #####
##### Nerede? #####
/usr/bin/git
Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Fetched 110 kB in 1s (119 kB/s)
Reading package lists... Done
./_5_jdk.sh: line 59: java: command not found
./_5_jdk.sh: line 60: javac: command not found
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
 ca-certificates-java fonts-dejavu-extra java-common libatk-wrapper-java libatk-wrapper-java-jni libice-dev libpthread-stubs0-dev
 10°C Bulutlu Ara 15:25 6.03.2024
```



```
Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:5 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy InRelease [23,8 kB]
Get:6 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy/main i386 Packages [4.052 B]
Get:7 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy/main amd64 Packages [4.064 B]
Get:8 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy/main Translation-en [912 B]
Fetched 32,9 kB in 2s (15,2 kB/s)
Reading package lists... Done

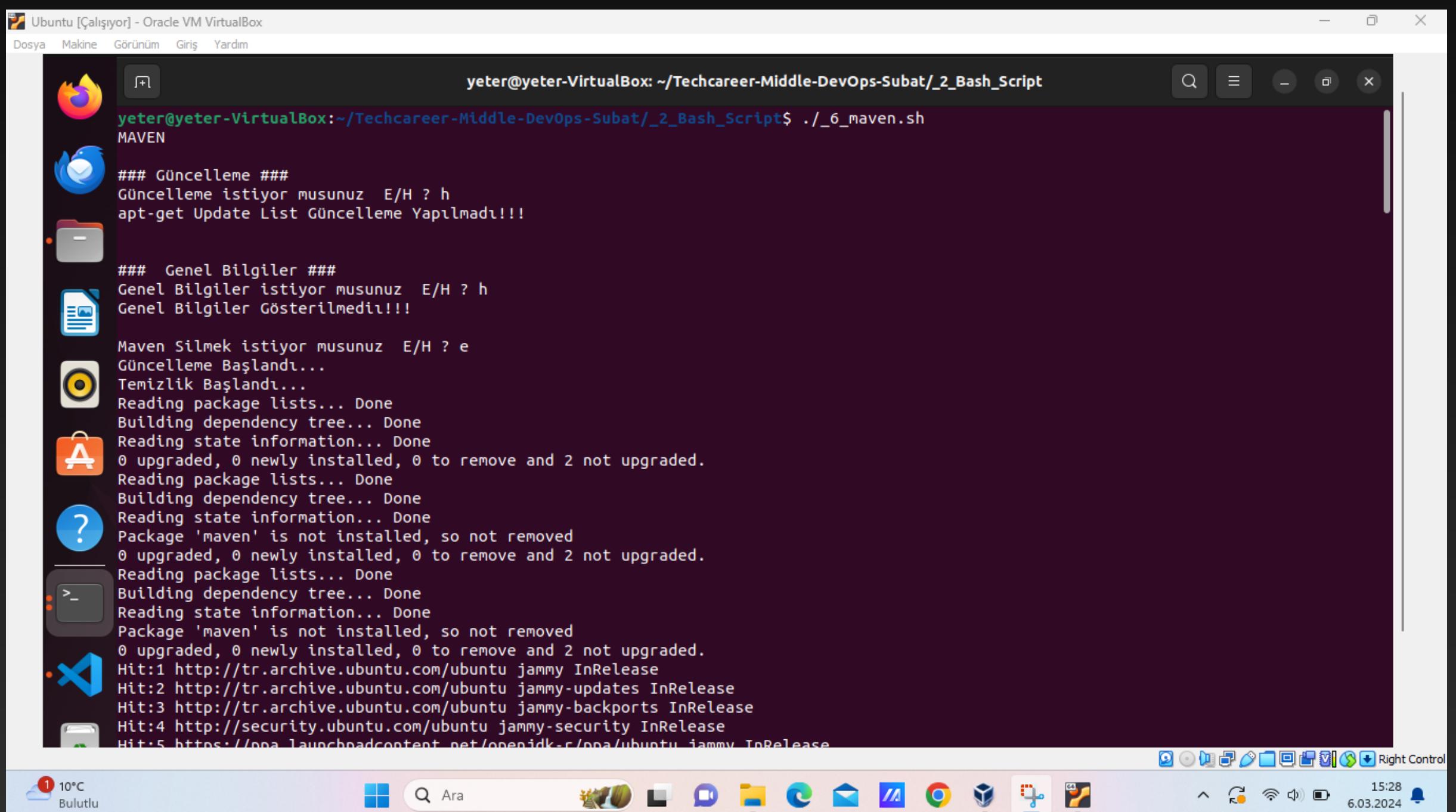
##### java #####
openjdk version "17.0.10" 2024-01-16
OpenJDK Runtime Environment (build 17.0.10+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.10+7-Ubuntu-122.04.1, mixed mode, sharing)
javac 17.0.10
Bağımlılıklar Yükleniyor
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package -f
## Silme ##
Java'yı Silmek istiyor musunuz? E/H deletedResult
Java Silme Yapılmadı!!!

##### Cache Temizleme #####
Cache Temizleme istiyor musunuz? E / H h
Temizlik Yapılmadı!!!

##### BİTTİ #####
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

Kurulumlar

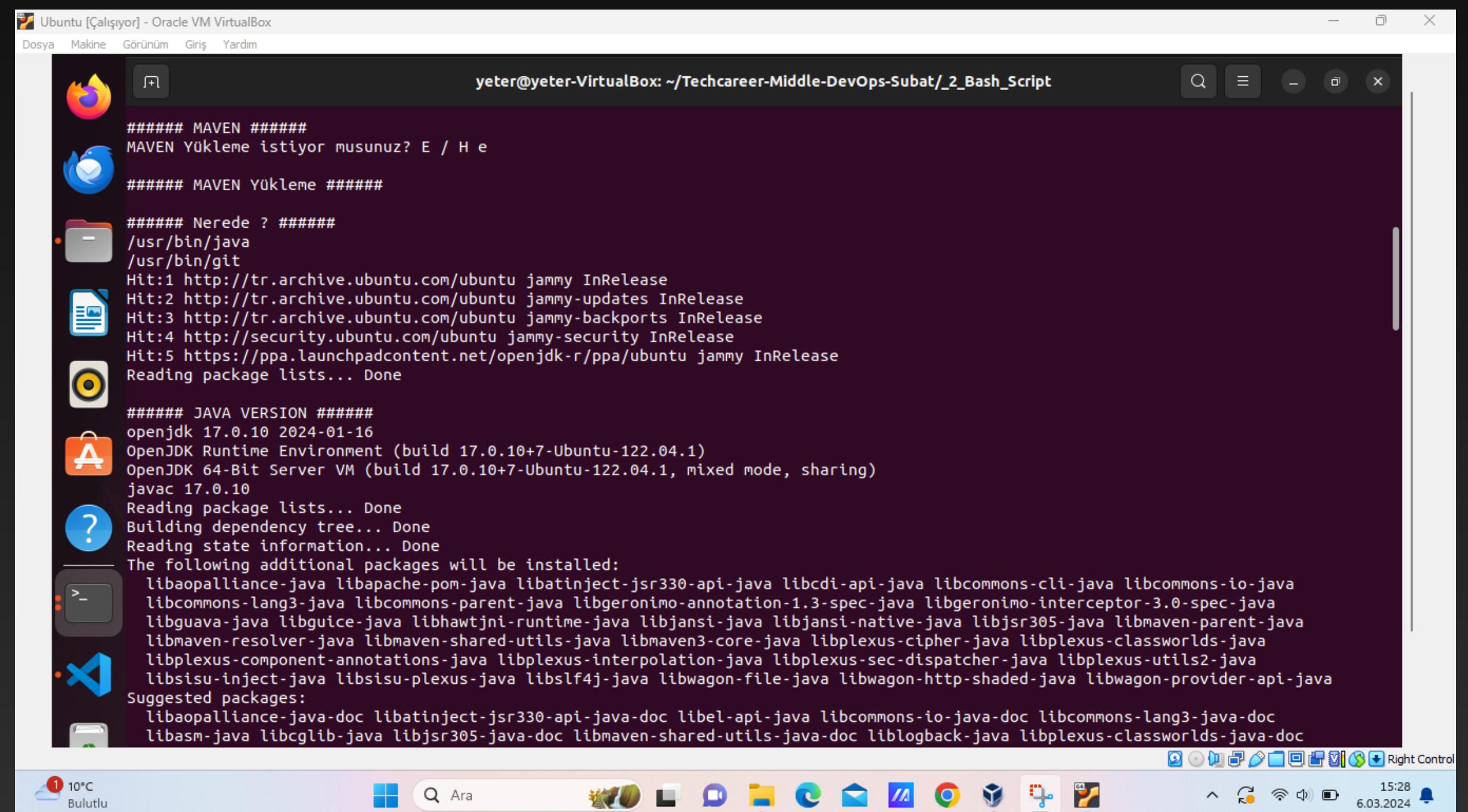
- Maven Kurulumu



```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_6_maven.sh
MAVEN
### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

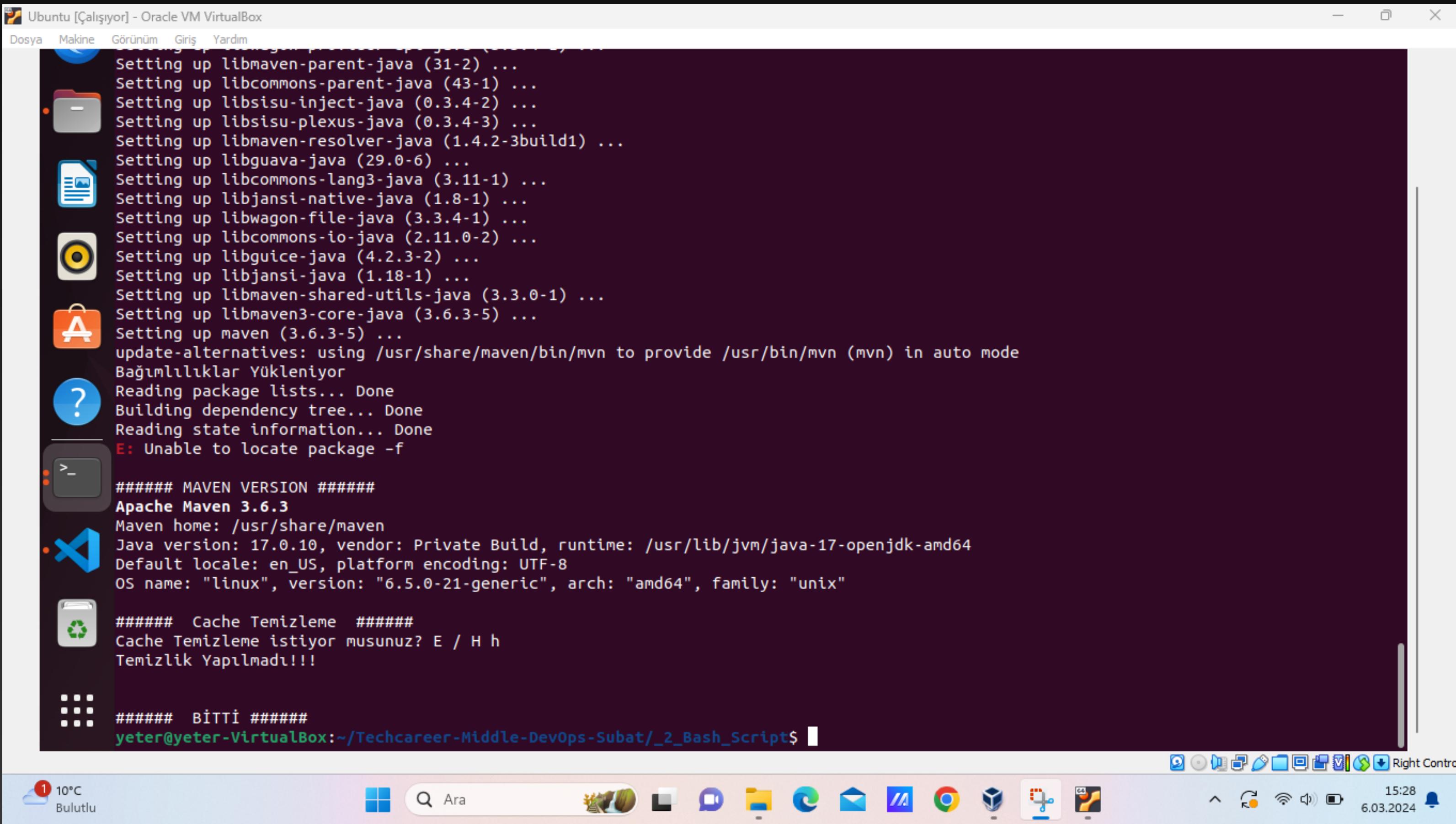
Maven Silmek istiyor musunuz E/H ? e
Güncelleme Başlandı...
Temizlik Başlandı...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'maven' is not installed, so not removed
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'maven' is not installed, so not removed
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package 'maven' is not installed, so not removed
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy InRelease
Reading package lists... Done
```



```
#####
MAVEN #####
MAVEN Yüklemeye istiyor musunuz? E / H e
#####
MAVEN YÜKLEME #####
#####
Nerede? #####
/usr/bin/java
/usr/bin/git
Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy InRelease
Reading package lists... Done
#####
JAVA VERSION #####
openjdk 17.0.10 2024-01-16
OpenJDK Runtime Environment (build 17.0.10+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.10+7-Ubuntu-122.04.1, mixed mode, sharing)
javac 17.0.10
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libaopalliance-java libapache-pom-java libatinject-jsr330-api-java libcdi-api-java libcommons-cli-java libcommons-io-java
  libcommons-lang3-java libcommons-parent-java libgeronimo-annotation-1.3-spec-java libgeronimo-interceptor-3.0-spec-java
  libguava-java libguice-java libhawtjni-runtime-java libjansi-java libjansi-native-java libjsr305-java libmaven-parent-java
  libmaven-resolver-java libmaven-shared-utils-java libmaven3-core-java libplexus-cipher-java libplexus-classworlds-java
  libplexus-component-annotations-java libplexus-interpolation-java libplexus-sec-dispatcher-java libplexus-utils2-java
  libsisu-inject-java libsisu-plexus-java libslf4j-java libwagon-file-java libwagon-http-shaded-java libwagon-provider-api-java
Suggested packages:
  libaopalliance-java-doc libatinject-jsr330-api-java-doc libel-api-java libcommons-io-java-doc libcommons-lang3-java-doc
  libasm-java libcglib-java libjsr305-java-doc libmaven-shared-utils-java-doc liblogback-java libplexus-classworlds-java-doc
10°C Bulutlu Ara 15:28 6.03.2024
```

Kurulumlar

- Maven Kurulumu



The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal displays the output of a Maven installation command. The output includes:

- Setting up libmaven-parent-java (31-2) ...
- Setting up libcommons-parent-java (43-1) ...
- Setting up libsisu-inject-java (0.3.4-2) ...
- Setting up libsisu-plexus-java (0.3.4-3) ...
- Setting up libmaven-resolver-java (1.4.2-3build1) ...
- Setting up libguava-java (29.0-6) ...
- Setting up libcommons-lang3-java (3.11-1) ...
- Setting up libjansi-native-java (1.8-1) ...
- Setting up libwagon-file-java (3.3.4-1) ...
- Setting up libcommons-io-java (2.11.0-2) ...
- Setting up libguice-java (4.2.3-2) ...
- Setting up libjansi-java (1.18-1) ...
- Setting up libmaven-shared-utils-java (3.3.0-1) ...
- Setting up libmaven3-core-java (3.6.3-5) ...
- Setting up maven (3.6.3-5) ...
- update-alternatives: using /usr/share/maven/bin/mvn to provide /usr/bin/mvn (mvn) in auto mode
- Bağımlilikler Yükleniyor
- Reading package lists... Done
- Building dependency tree... Done
- Reading state information... Done
- E: Unable to locate package -f

After the error, the terminal shows the Maven version information:

MAVEN VERSION #####
Apache Maven 3.6.3
Maven home: /usr/share/maven
Java version: 17.0.10, vendor: Private Build, runtime: /usr/lib/jvm/java-17-openjdk-amd64
Default locale: en_US, platform encoding: UTF-8
OS name: "linux", version: "6.5.0-21-generic", arch: "amd64", family: "unix"

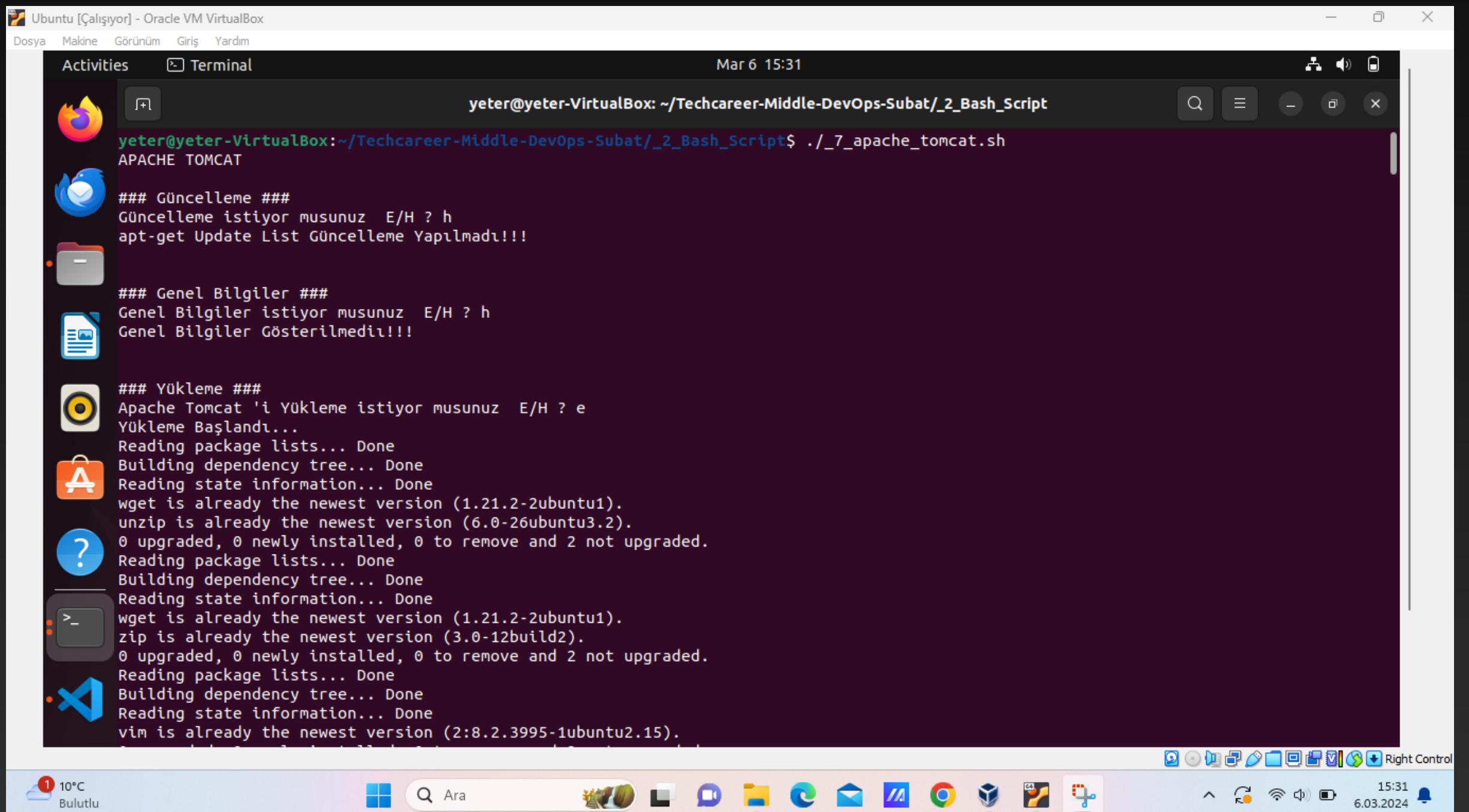
Cache Temizleme #####
Cache Temizleme istiyor musunuz? E / H h
Temizlik Yapılmadı!!!

BITTİ #####
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script\$

The terminal window is part of a desktop environment with a taskbar at the bottom showing various application icons.

Kurulumlar

- Apache Tomcat Kurulumu



Ubuntu [Çalışıyor] - Oracle VM VirtualBox

Dosya Makine Görünüm Giriş Yardım

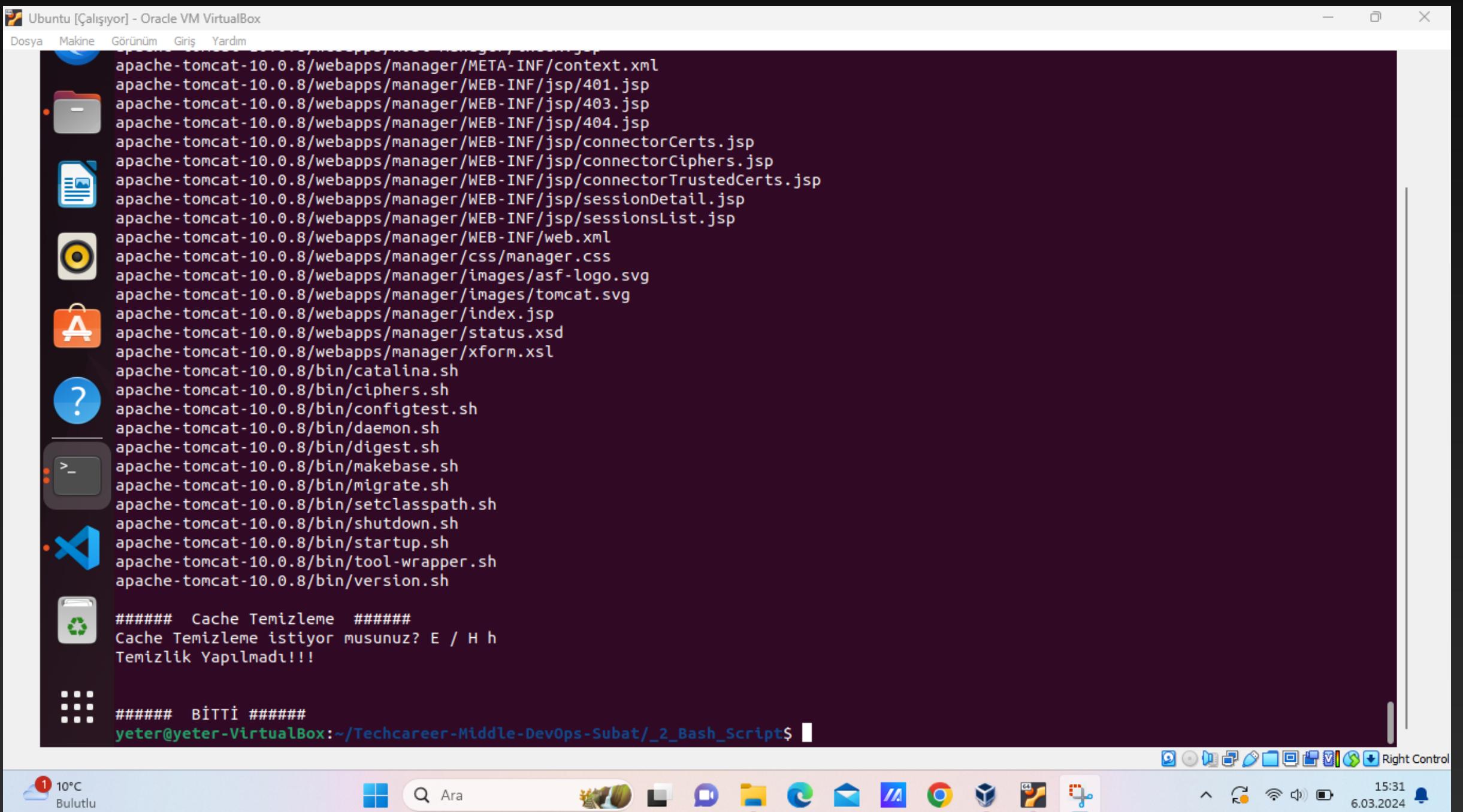
Activities Terminal Mar 6 15:31

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_7_apache_tomcat.sh
APACHE TOMCAT
### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

### Yükleme ###
Apache Tomcat 'i Yükleme istiyor musunuz E/H ? e
Yükleme Başlandı...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
unzip is already the newest version (6.0-26ubuntu3.2).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
zip is already the newest version (3.0-12build2).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
vim is already the newest version (2:8.2.3995-1ubuntu2.15)."
```

Bulutlu Ara 10°C 6.03.2024 15:31



Ubuntu [Çalışıyor] - Oracle VM VirtualBox

Dosya Makine Görünüm Giriş Yardım

```
apache-tomcat-10.0.8/webapps/manager/META-INF/context.xml
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/401.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/403.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/404.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/connectorCerts.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/connectorCiphers.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/connectorTrustedCerts.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/sessionDetail.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/jsp/sessionsList.jsp
apache-tomcat-10.0.8/webapps/manager/WEB-INF/web.xml
apache-tomcat-10.0.8/webapps/manager/css/manager.css
apache-tomcat-10.0.8/webapps/manager/images/asf-logo.svg
apache-tomcat-10.0.8/webapps/manager/images/tomcat.svg
apache-tomcat-10.0.8/webapps/manager/index.jsp
apache-tomcat-10.0.8/webapps/manager/status.xsd
apache-tomcat-10.0.8/webapps/manager/xform.xsl
apache-tomcat-10.0.8/bin/catalina.sh
apache-tomcat-10.0.8/bin/ciphers.sh
apache-tomcat-10.0.8/bin/configtest.sh
apache-tomcat-10.0.8/bin/d daemon.sh
apache-tomcat-10.0.8/bin/digest.sh
apache-tomcat-10.0.8/bin/makebase.sh
apache-tomcat-10.0.8/bin/migrate.sh
apache-tomcat-10.0.8/bin/setclasspath.sh
apache-tomcat-10.0.8/bin/shutdown.sh
apache-tomcat-10.0.8/bin/startup.sh
apache-tomcat-10.0.8/bin/tool-wrapper.sh
apache-tomcat-10.0.8/bin/version.sh

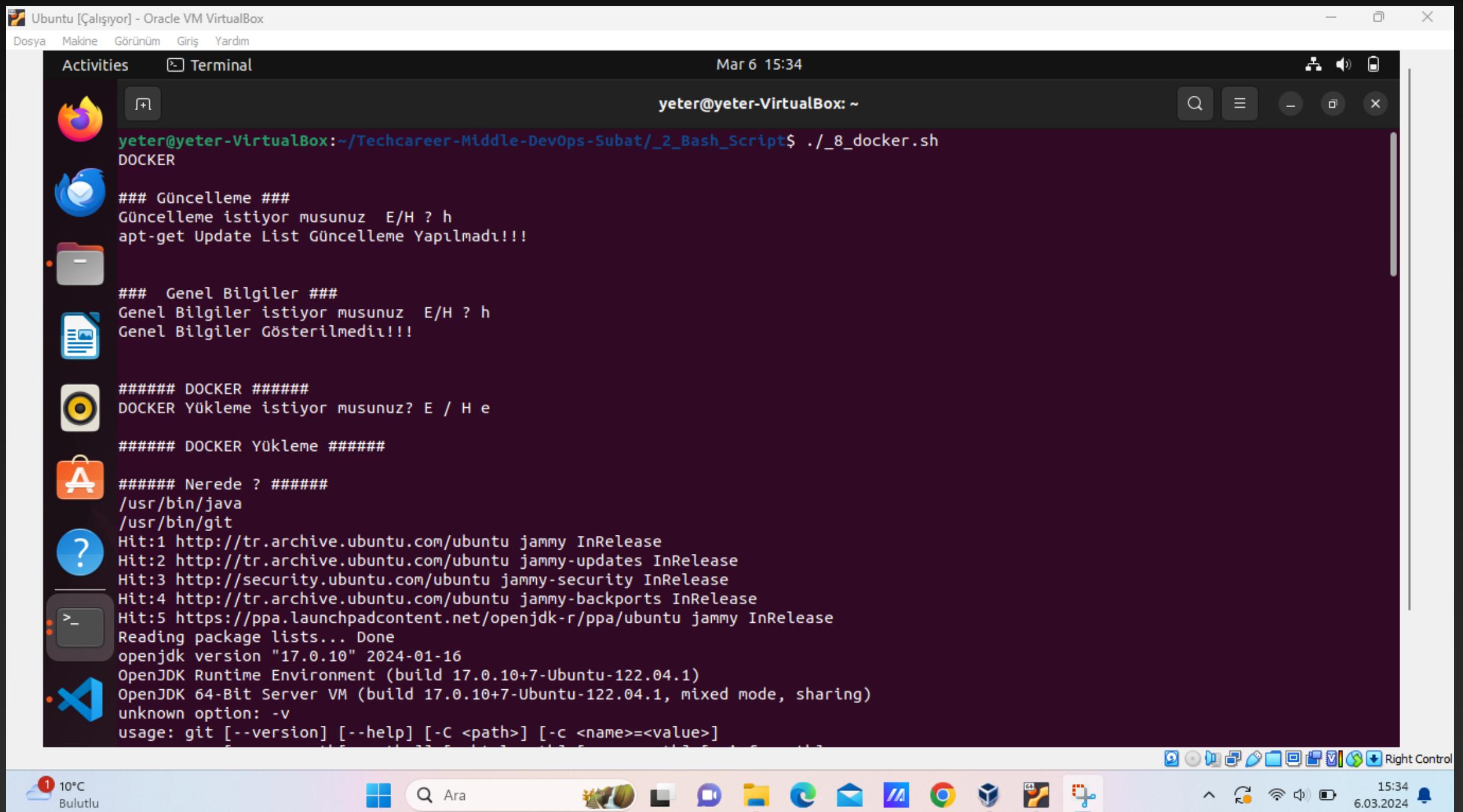
##### Cache Temizleme #####
Cache Temizleme istiyor musunuz? E / H h
Temizlik Yapılmadı!!!

##### BİTTİ #####
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

Bulutlu Ara 10°C 6.03.2024 15:31

Kurulumlar

- Docker Kurulumu

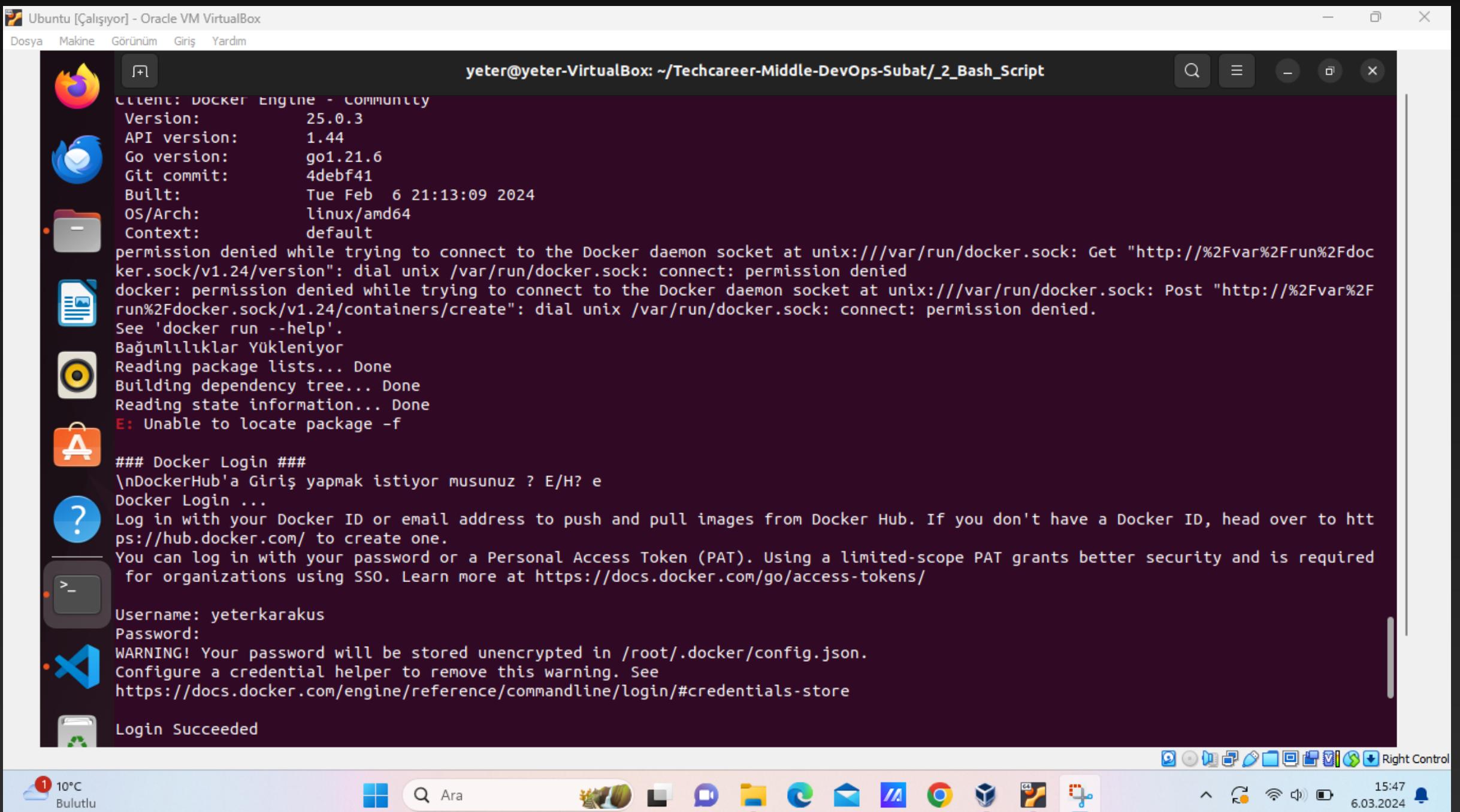


A screenshot of an Ubuntu desktop environment in Oracle VM VirtualBox. The terminal window shows the execution of a script named `./_8_docker.sh`. The logs indicate several steps: checking for Docker updates, attempting to update the package list, displaying general information, and checking Docker's location. It also shows Java and Git installations, and finally executing the Docker script which fails due to permission denied errors.

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_8_docker.sh
DOCKER
### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

##### DOCKER #####
DOCKER Yüklemeye istiyor musunuz? E / H e
##### DOCKER Yüklemeye #####
##### Nerede? #####
/usr/bin/java
/usr/bin/git
Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:4 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:5 https://ppa.launchpadcontent.net/openjdk-r/ppa/ubuntu jammy InRelease
Reading package lists... Done
openjdk version "17.0.10" 2024-01-16
OpenJDK Runtime Environment (build 17.0.10+7-Ubuntu-122.04.1)
OpenJDK 64-Bit Server VM (build 17.0.10+7-Ubuntu-122.04.1, mixed mode, sharing)
unknown option: -v
usage: git [--version] [--help] [-C <path>] [-c <name>=<value>]
```



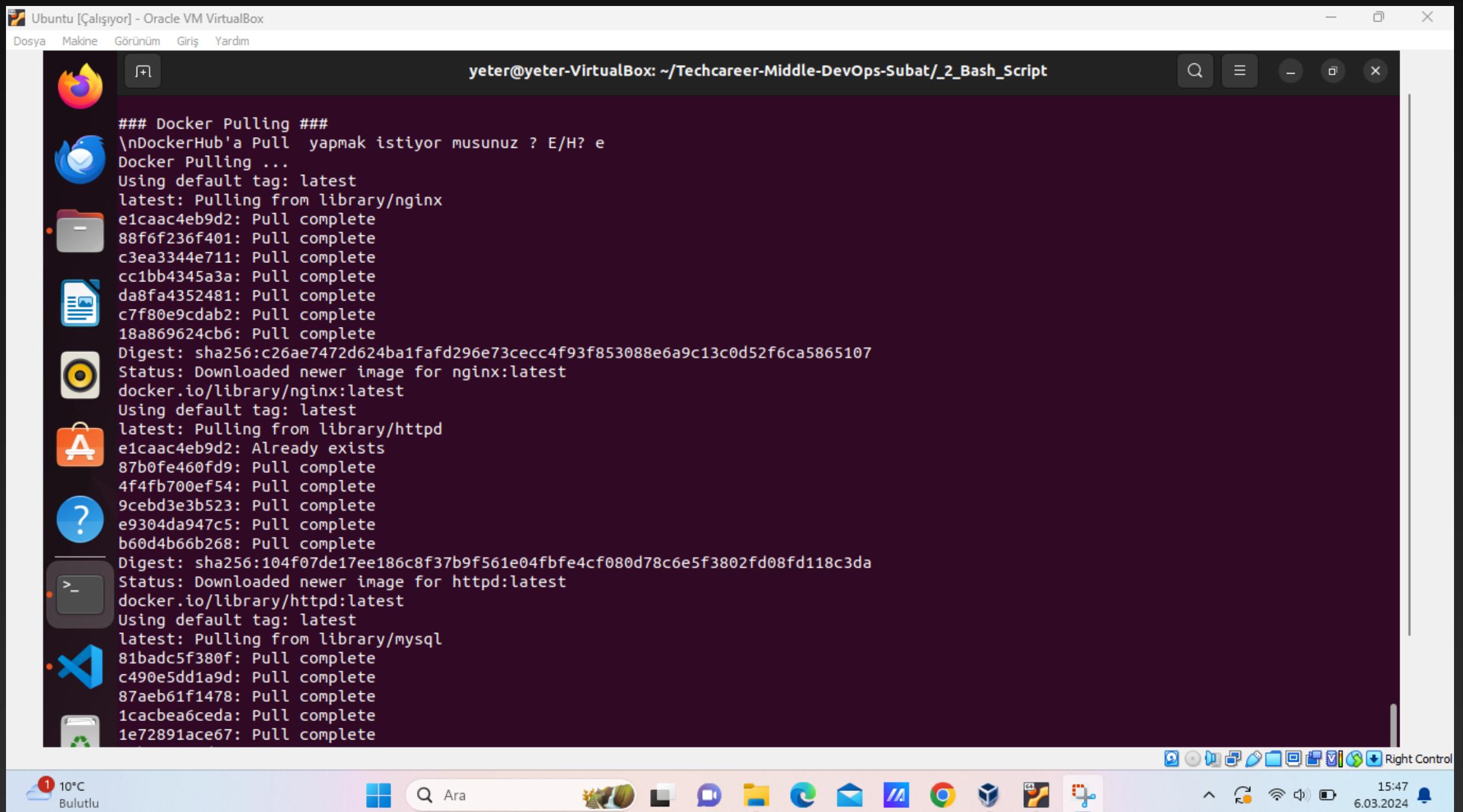
A screenshot of an Ubuntu desktop environment in Oracle VM VirtualBox. The terminal window shows the Docker daemon starting and attempting to connect to the Docker socket at `/var/run/docker.sock`, which fails due to permission denied. It then attempts to log in to Docker Hub, prompting for a Docker ID or email address. Finally, it shows a successful login attempt.

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ docker run --help
Client: Docker Engine - Community
Version: 25.0.3
API version: 1.44
Go version: go1.21.6
Git commit: 4debfa1
Built: Tue Feb 6 21:13:09 2024
OS/Arch: linux/amd64
Context: default
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/version": dial unix /var/run/docker.sock: connect: permission denied
docker: permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Post "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/containers/create": dial unix /var/run/docker.sock: connect: permission denied.
See 'docker run --help'.
Bağımlılıklar Yükleniyor
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package -f

## Docker Login ##
\nDockerHub'a Giriş yapmak istiyor musunuz? E/H? e
Docker Login ...
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/
Username: yeterkarakus
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See https://docs.docker.com/engine/reference/commandline/login/#credentials-store
Login Succeeded
```

Kurulumlar

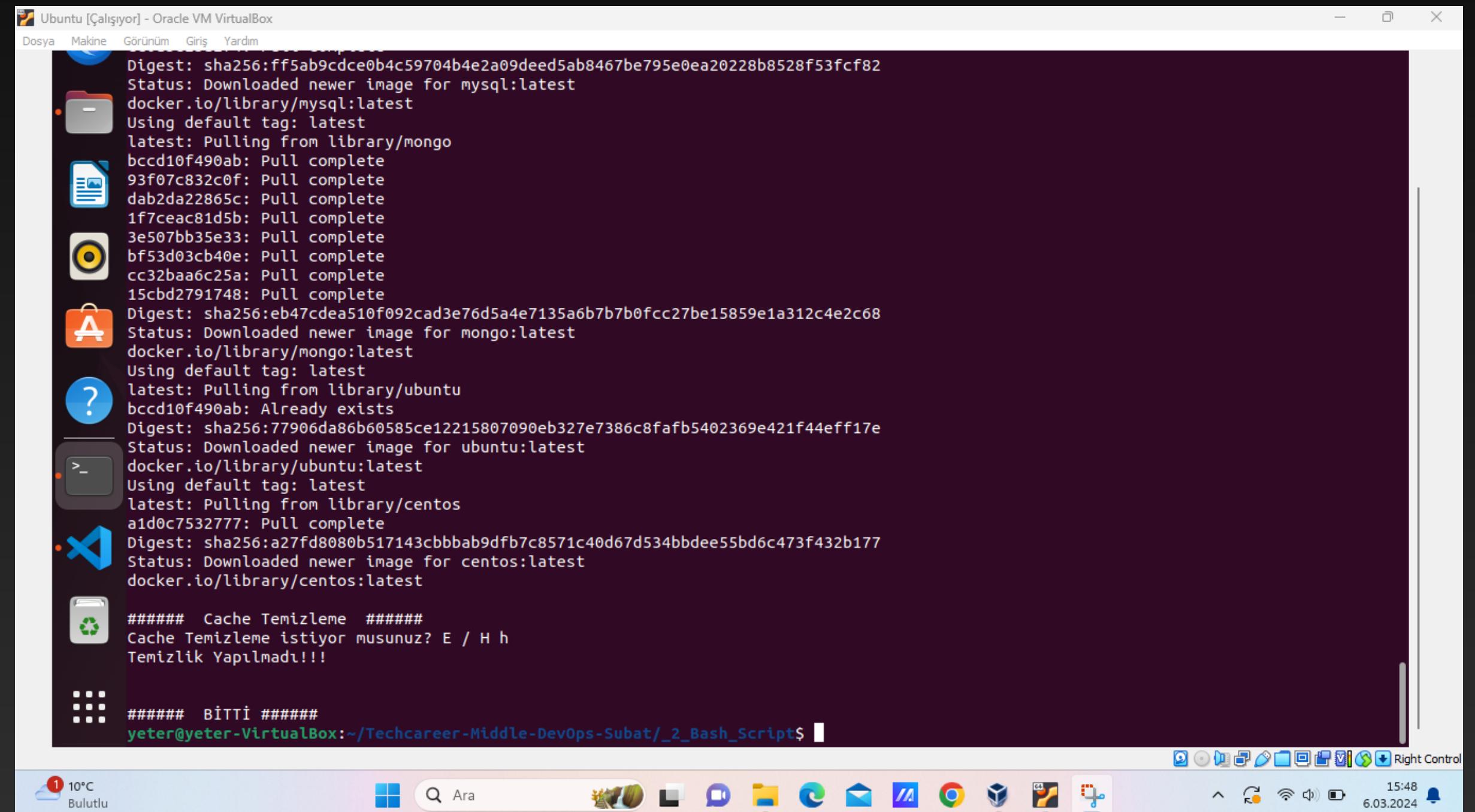
- Docker Kurulumu



```
Ubuntu [Çalışıyor] - Oracle VM VirtualBox
Dosya Makine Görünüm Giriş Yardım

yeter@yeter-VirtualBox: ~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script

## Docker Pulling ##
\nDockerHub'a Pull yapmak istiyor musunuz ? E/H? e
Docker Pulling ...
Using default tag: latest
latest: Pulling from library/nginx
e1caac4eb9d2: Pull complete
88f6f236f401: Pull complete
c3ea3344e711: Pull complete
cc1bb4345a3a: Pull complete
da8fa4352481: Pull complete
c7f80e9cdab2: Pull complete
18a869624cb6: Pull complete
Digest: sha256:c26ae7472d624ba1fafd296e73cecc4f93f853088e6a9c13c0d52f6ca5865107
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest
Using default tag: latest
latest: Pulling from library/httpd
e1caac4eb9d2: Already exists
87b0fe460fd9: Pull complete
4f4fb700ef54: Pull complete
9cebd3e3b523: Pull complete
e9304da947c5: Pull complete
b60d4b66b268: Pull complete
Digest: sha256:104f07de17ee186c8f37b9f561e04fbfe4cf080d78c6e5f3802fd08fd118c3da
Status: Downloaded newer image for httpd:latest
docker.io/library/httpd:latest
Using default tag: latest
latest: Pulling from library/mysql
81badc5f380f: Pull complete
c490e5dd1a9d: Pull complete
87aeb61f1478: Pull complete
1cacbea6ced4: Pull complete
1e72891ace67: Pull complete
```



```
Ubuntu [Çalışıyor] - Oracle VM VirtualBox
Dosya Makine Görünüm Giriş Yardım

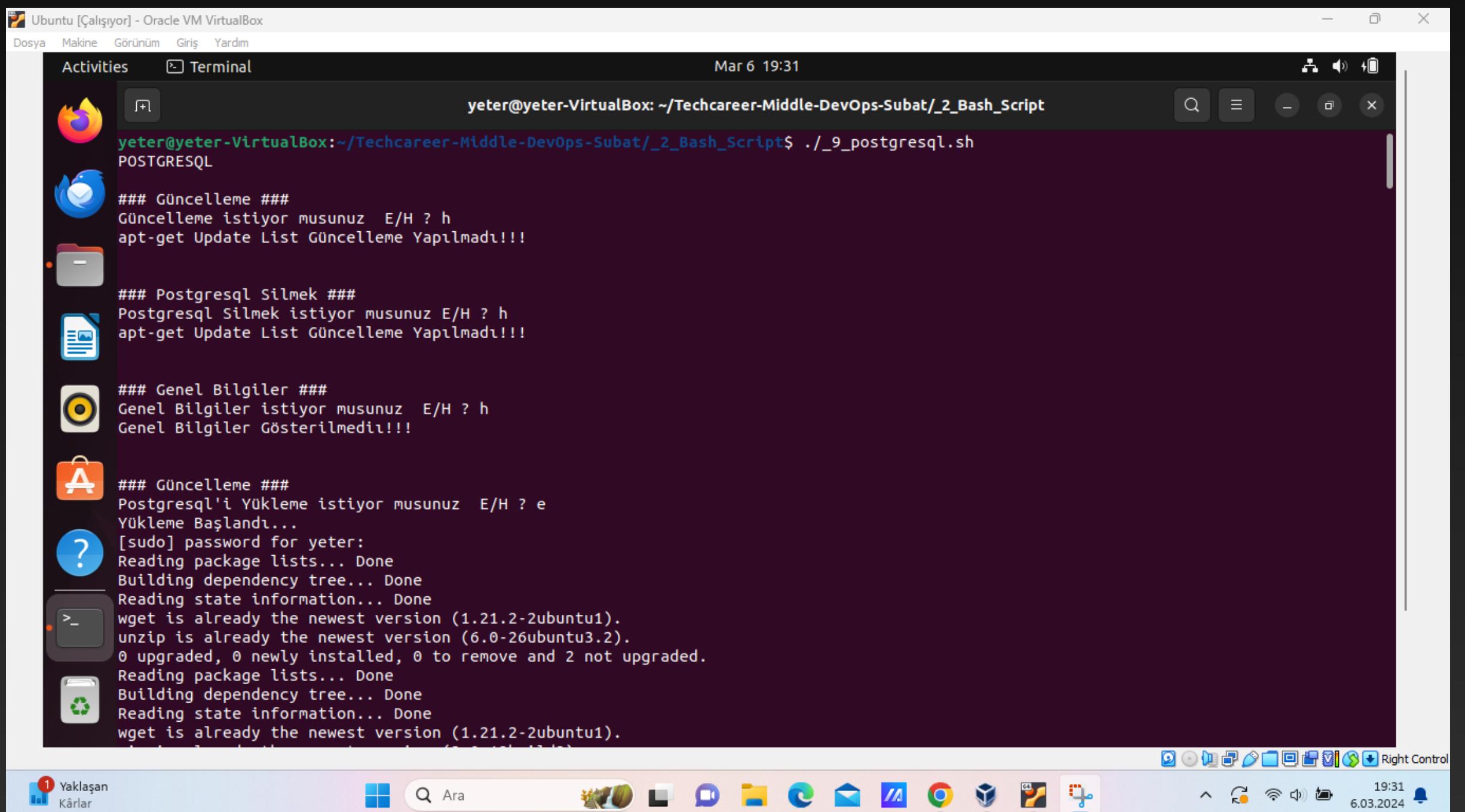
yeter@yeter-VirtualBox: ~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script

Digest: sha256:ff5ab9cdce0b4c59704b4e2a09deed5ab8467be795e0ea20228b8528f53fcf82
Status: Downloaded newer image for mysql:latest
docker.io/library/mysql:latest
Using default tag: latest
latest: Pulling from library/mongo
bccd10f490ab: Pull complete
93f07c832c0f: Pull complete
dab2da22865c: Pull complete
1f7ceac81d5b: Pull complete
3e507bb35e33: Pull complete
bf53d03cb40e: Pull complete
cc32baa6c25a: Pull complete
15cbd2791748: Pull complete
Digest: sha256:eb47cdea510f092cad3e76d5a4e7135a6b7b0fcc27be15859e1a312c4e2c68
Status: Downloaded newer image for mongo:latest
docker.io/library/mongo:latest
Using default tag: latest
latest: Pulling from library/ubuntu
bccd10f490ab: Already exists
Digest: sha256:77906da86b60585ce12215807090eb327e7386c8fafb5402369e421f44eff17e
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
Using default tag: latest
latest: Pulling from library/centos
a1d0c7532777: Pull complete
Digest: sha256:a27fd8080b517143cbbb9dfb7c8571c40d67d534bbdee55bd6c473f432b177
Status: Downloaded newer image for centos:latest
docker.io/library/centos:latest
#####
Cache Temizleme #####
Cache Temizleme istiyor musunuz? E / H h
Temizlik Yapılmadı!!!

#####
BITTİ #####
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

Kurulumlar

- PostgreSQL Kurulumu



A screenshot of an Ubuntu desktop environment in Oracle VM VirtualBox. The terminal window shows the execution of a bash script named `./_9_postgresql.sh`. The logs indicate several steps: an update check, removal of old PostgreSQL versions, and the installation of new ones. It also shows the creation of a PostgreSQL user account ('yeter') and the configuration of the PostgreSQL service.

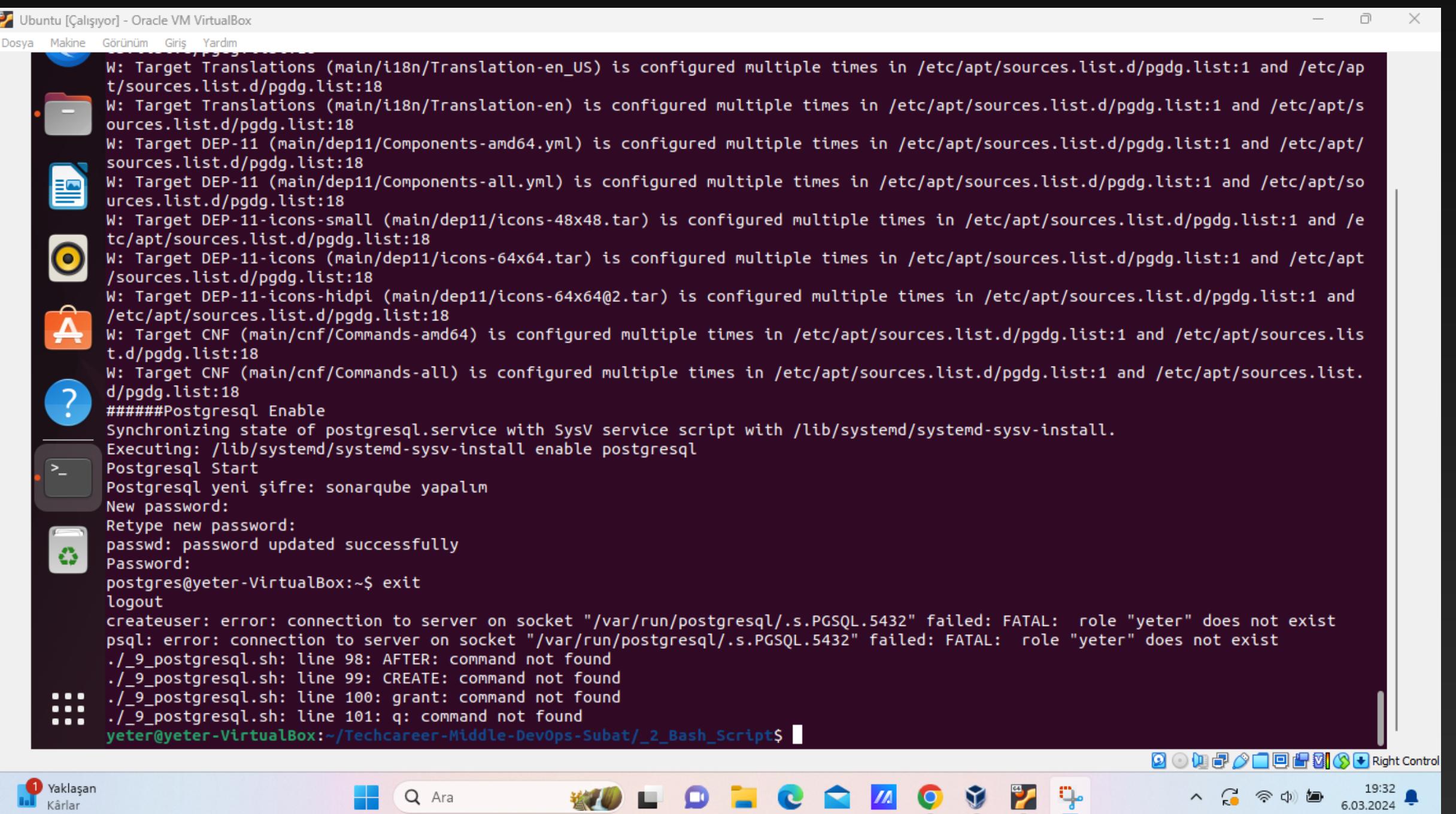
```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_9_postgresql.sh
POSTGRESQL
### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Postgres Silmek ###
Postgres Silmek istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

### Güncelleme ###
Postgres'i Yüklemeye İstiyor musunuz E/H ? e
Yüklemeye Başlandı...
[sudo] password for yeter:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
unzip is already the newest version (6.0-26ubuntu3.2).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).

```

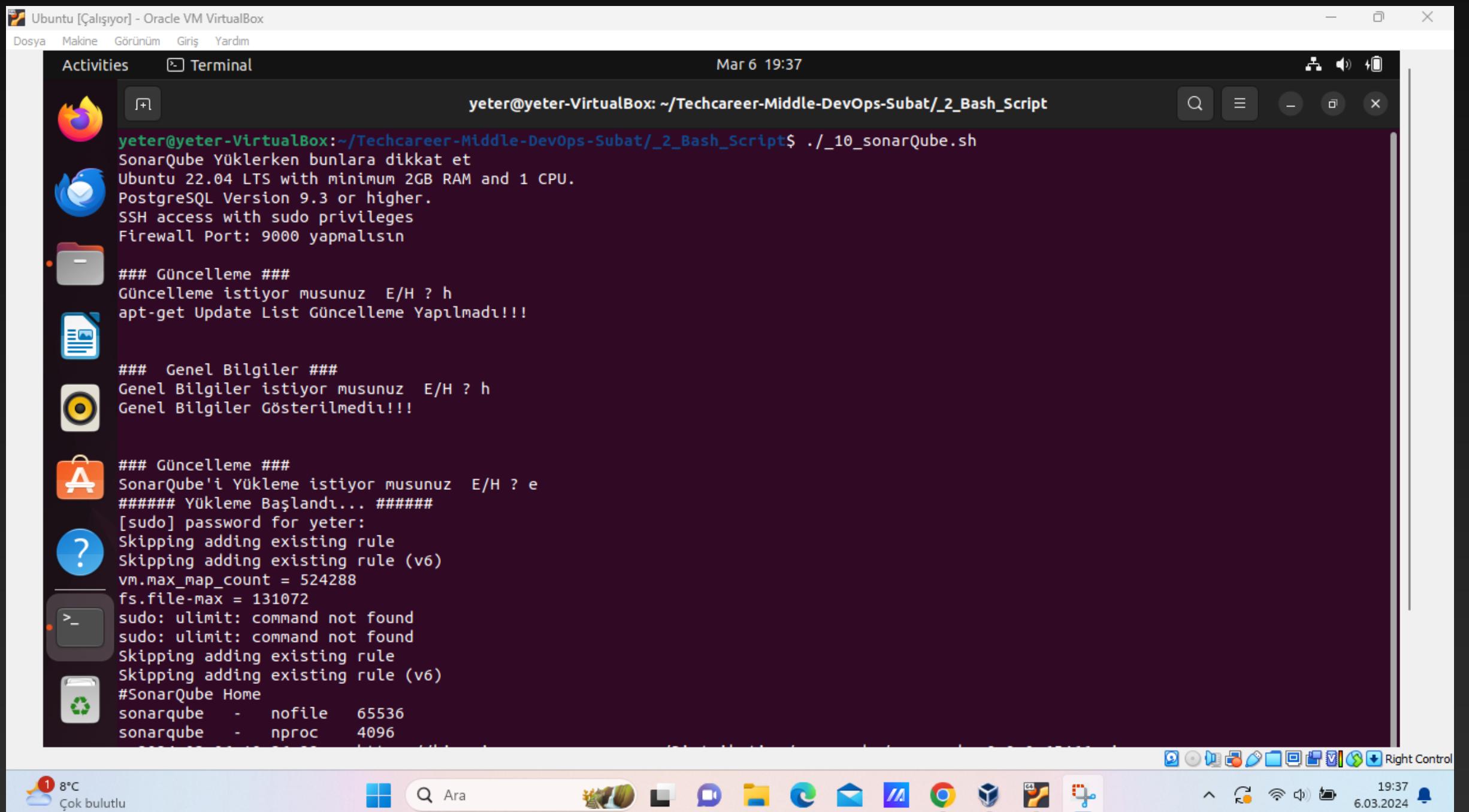


A screenshot of an Ubuntu desktop environment in Oracle VM VirtualBox. The terminal window shows the continuation of the PostgreSQL installation process. It includes error messages about multiple target translations being configured in sources.list files, and it shows the synchronization of the PostgreSQL service with the SysV service script. The user is prompted to set a new password for the PostgreSQL user 'postgres'.

```
W: Target Translations (main/i18n/Translation-en_US) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target Translations (main/i18n/Translation-en) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target DEP-11 (main/dep11/Components-amd64.yml) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target DEP-11 (main/dep11/Components-all.yml) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target DEP-11-icons-small (main/dep11/icons-48x48.tar) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target DEP-11-icons (main/dep11/icons-64x64.tar) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target DEP-11-icons-hidpi (main/dep11/icons-64x64@2.tar) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target CNF (main/cnf/Commands-amd64) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
W: Target CNF (main/cnf/Commands-all) is configured multiple times in /etc/apt/sources.list.d/pgdg.list:1 and /etc/apt/sources.list.d/pgdg.list:18
#####Postgresql Enable
Synchronizing state of postgresql.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable postgresql
Postgresql Start
Postgresql yeni şifre: sonarqube yapalım
New password:
Retype new password:
passwd: password updated successfully
Password:
postgres@yeter-VirtualBox:~$ exit
logout
createuser: error: connection to server on socket "/var/run/postgresql/.s.PGSQL.5432" failed: FATAL:  role "yeter" does not exist
psql: error: connection to server on socket "/var/run/postgresql/.s.PGSQL.5432" failed: FATAL:  role "yeter" does not exist
./_9_postgresql.sh: line 98: AFTER: command not found
./_9_postgresql.sh: line 99: CREATE: command not found
./_9_postgresql.sh: line 100: grant: command not found
./_9_postgresql.sh: line 101: q: command not found
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

Kurulumlar

- SonarQube Kurulumu



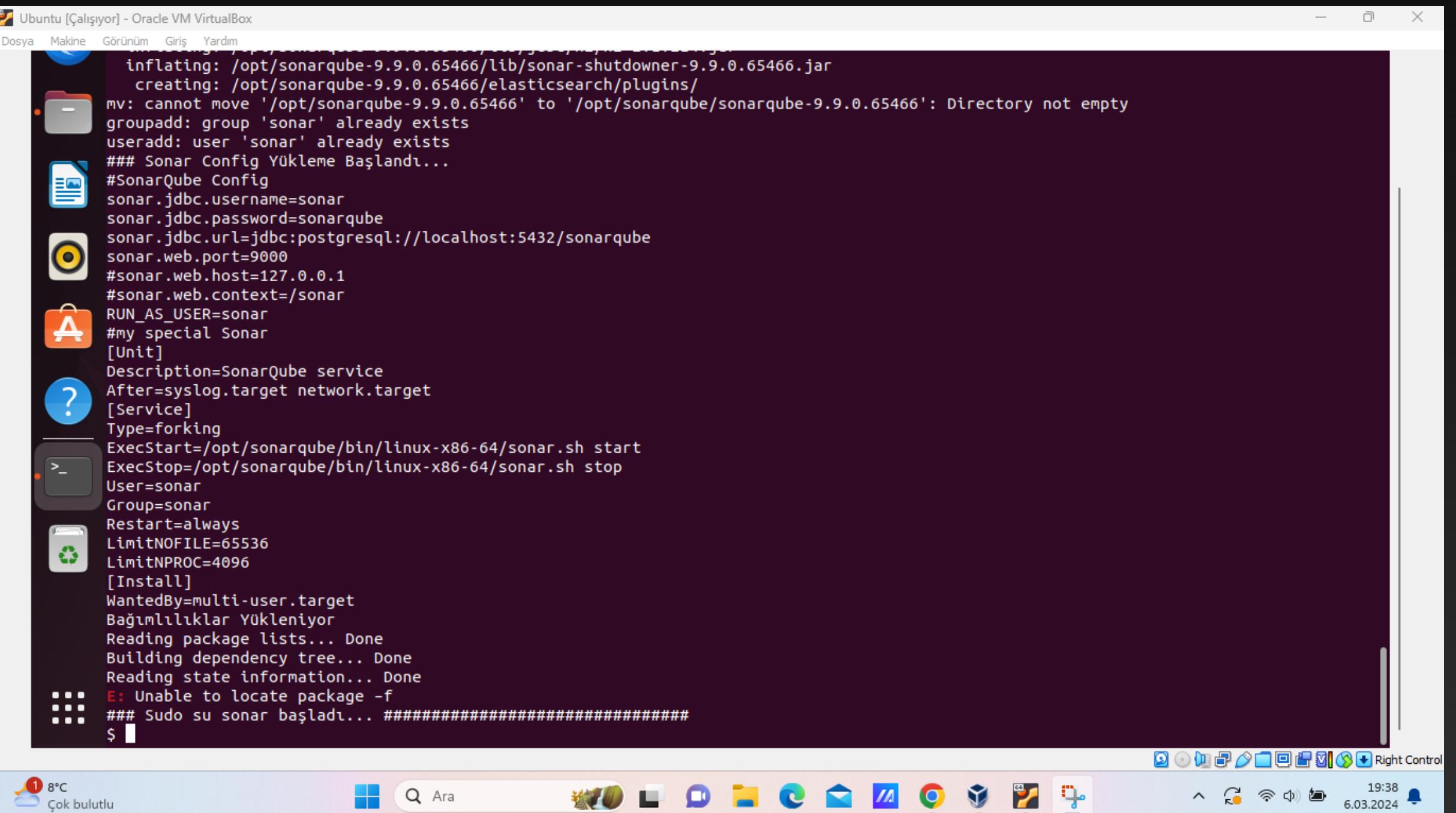
A screenshot of an Ubuntu desktop environment in Oracle VM VirtualBox. The terminal window shows the execution of a bash script to set up SonarQube. The logs indicate that SonarQube is being installed on a system with 2GB RAM and 1 CPU, and PostgreSQL Version 9.3 or higher. It also shows the creation of a service configuration file for SonarQube.

```
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$ ./_10_sonarQube.sh
SonarQube YÜKLERKEN bunlara dikkat et
Ubuntu 22.04 LTS with minimum 2GB RAM and 1 CPU.
PostgreSQL Version 9.3 or higher.
SSH access with sudo privileges
Firewall Port: 9000 yapmalısın

### Güncelleme ###
Güncelleme istiyor musunuz E/H ? h
apt-get Update List Güncellemeye Yapılmadı!!!

### Genel Bilgiler ###
Genel Bilgiler istiyor musunuz E/H ? h
Genel Bilgiler Gösterilmemiş!!!

### Güncelleme ###
SonarQube'i Yüklemeye İstiyor Musunuz E/H ? e
##### Yüklemeye Başlandı... #####
[sudo] password for yeter:
Skipping adding existing rule
Skipping adding existing rule (v6)
vm.max_map_count = 524288
fs.file-max = 131072
sudo: ulimit: command not found
sudo: ulimit: command not found
Skipping adding existing rule
Skipping adding existing rule (v6)
#SonarQube Home
sonarqube - nofile 65536
sonarqube - nproc 4096
```

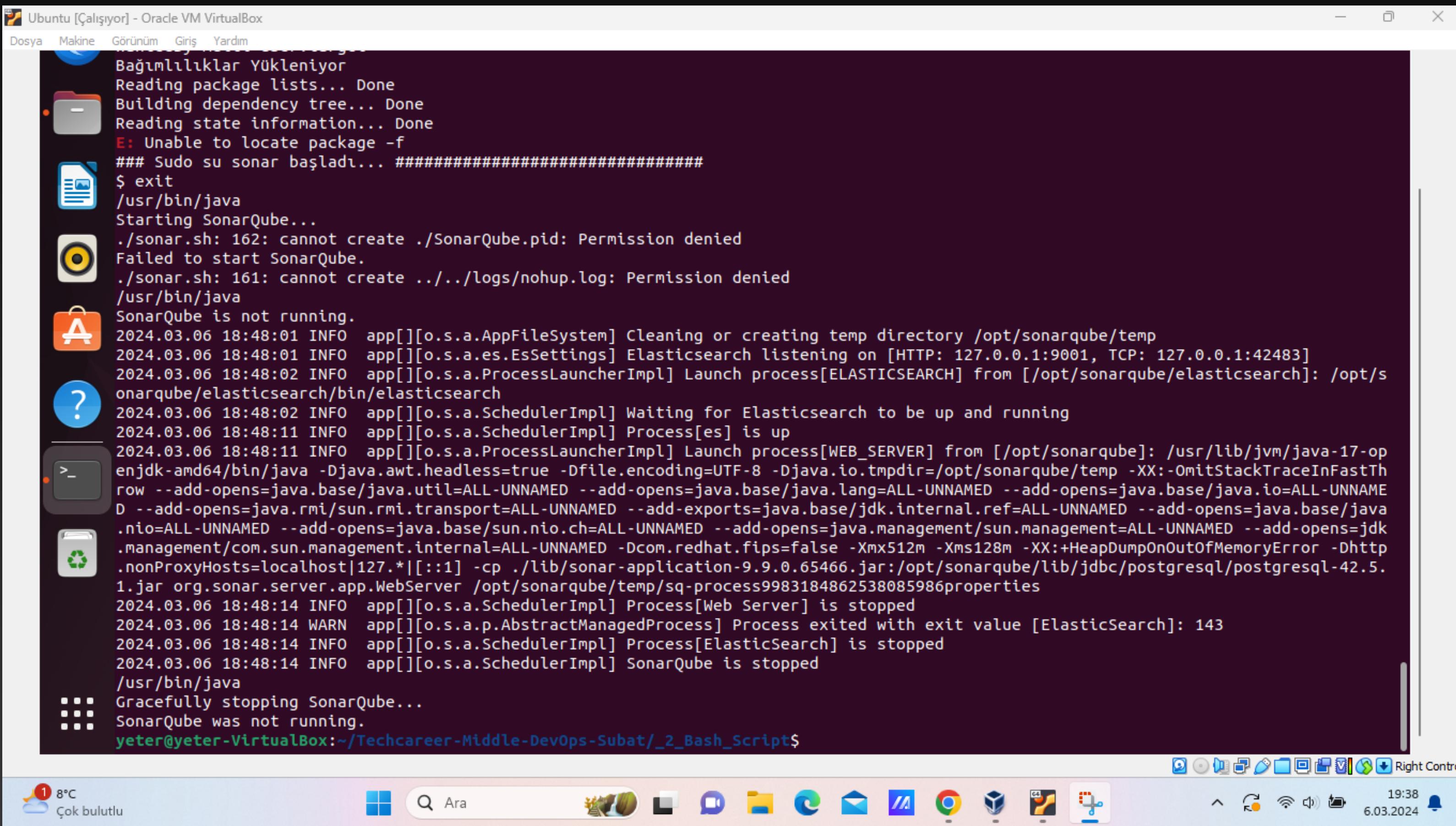


A screenshot of an Ubuntu desktop environment in Oracle VM VirtualBox. The terminal window shows the continuation of the SonarQube setup process. It includes the creation of a service configuration file for SonarQube, which specifies the JDBC URL, web port, and other parameters. The logs also show the start of the SonarQube service.

```
inflating: /opt/sonarqube-9.9.0.65466/lib/sonar-shutdowner-9.9.0.65466.jar
creating: /opt/sonarqube-9.9.0.65466/elasticsearch/plugins/
mv: cannot move '/opt/sonarqube-9.9.0.65466' to '/opt/sonarqube/sonarqube-9.9.0.65466': Directory not empty
groupadd: group 'sonar' already exists
useradd: user 'sonar' already exists
### Sonar Config YÜKLEMESİ Başlandı...
#SonarQube Config
sonar.jdbc.username=sonar
sonar.jdbc.password=sonarqube
sonar.jdbc.url=jdbc:postgresql://localhost:5432/sonarqube
sonar.web.port=9000
#sonar.web.host=127.0.0.1
#sonar.web.context=/sonar
RUN_AS_USER=sonar
#my special Sonar
[Unit]
Description=SonarQube service
After=syslog.target network.target
[Service]
Type=forking
ExecStart=/opt/sonarqube/bin/linux-x86-64/sonar.sh start
ExecStop=/opt/sonarqube/bin/linux-x86-64/sonar.sh stop
User=sonar
Group=sonar
Restart=always
LimitNOFILE=65536
LimitNPROC=4096
[Install]
WantedBy=multi-user.target
Bağımlılıklar Yükleniyor
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package -f
### Sudo su sonar başlıyor... #####
```

Kurulumlar

- SonarQube Kurulumu



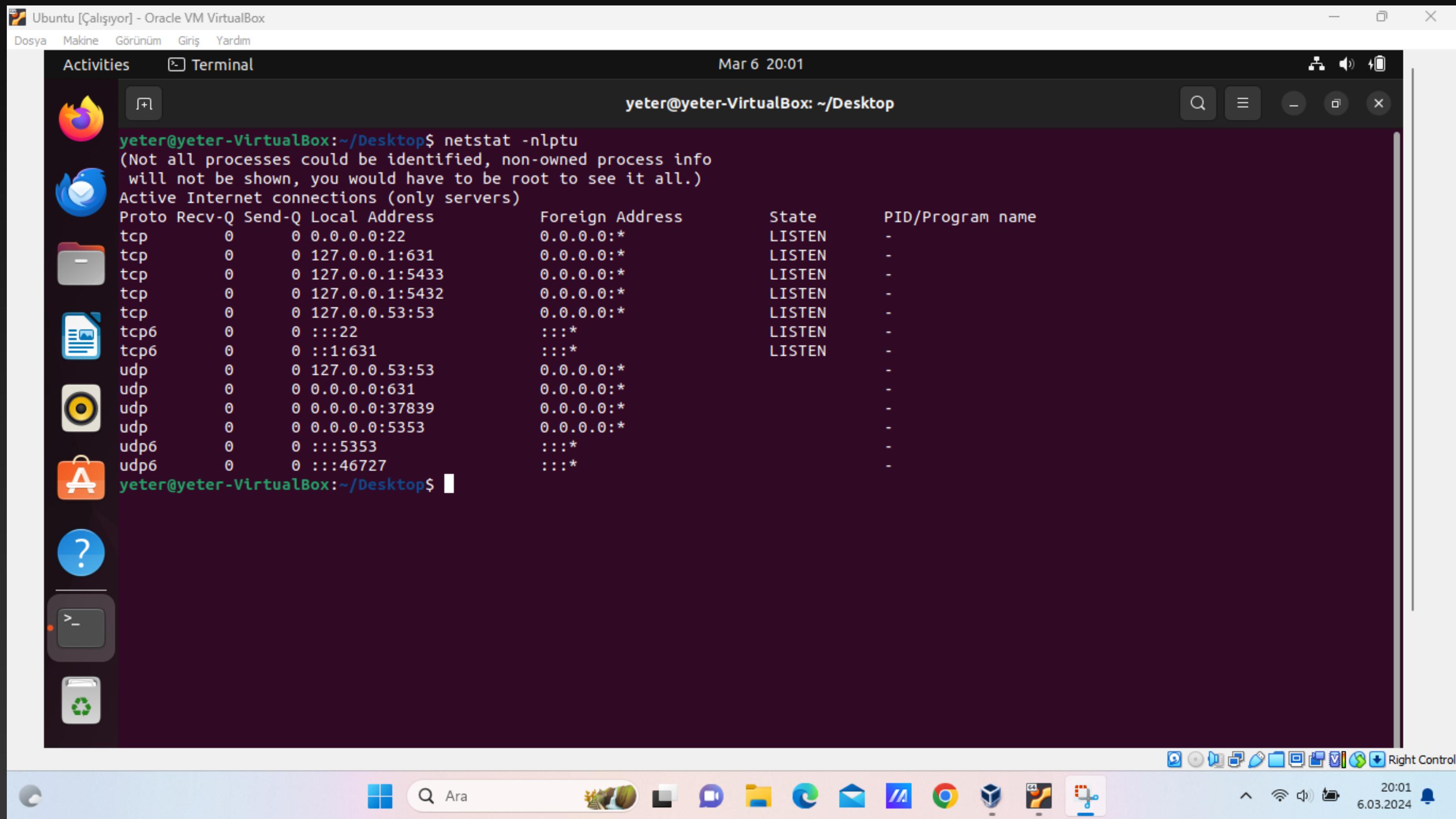
The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal is displaying the output of a command-line session for installing SonarQube. The session starts with dependency checking and package installation, followed by starting the SonarQube service, which fails due to permission denied. It then attempts to start Elasticsearch, which also fails. Finally, it tries to start the Web Server, which succeeds. The session ends with a graceful stop command.

```
Bağımlilikler Yükleniyor
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package -f
### Sudo su sonar başladı... #####
$ exit
/usr/bin/java
Starting SonarQube...
./sonar.sh: 162: cannot create ./SonarQube.pid: Permission denied
Failed to start SonarQube.
./sonar.sh: 161: cannot create ../../logs/nohup.log: Permission denied
/usr/bin/java
SonarQube is not running.
2024.03.06 18:48:01 INFO app[][o.s.a.AppFileSystem] Cleaning or creating temp directory /opt/sonarqube/temp
2024.03.06 18:48:01 INFO app[][o.s.a.es.EsSettings] Elasticsearch listening on [HTTP: 127.0.0.1:9001, TCP: 127.0.0.1:42483]
2024.03.06 18:48:02 INFO app[][o.s.a.ProcessLauncherImpl] Launch process[ELASTICSEARCH] from [/opt/sonarqube/elasticsearch]: /opt/sonarqube/elasticsearch/bin/elasticsearch
2024.03.06 18:48:02 INFO app[][o.s.a.SchedulerImpl] Waiting for Elasticsearch to be up and running
2024.03.06 18:48:11 INFO app[][o.s.a.SchedulerImpl] Process[es] is up
2024.03.06 18:48:11 INFO app[][o.s.a.ProcessLauncherImpl] Launch process[WEB_SERVER] from [/opt/sonarqube]: /usr/lib/jvm/java-17-openjdk-amd64/bin/java -Djava.awt.headless=true -Dfile.encoding=UTF-8 -Djava.io.tmpdir=/opt/sonarqube/temp -XX:-OmitStackTraceInFastThrow --add-opens=java.base/java.util=ALL-UNNAMED --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED --add-exports=java.base/jdk.internal.ref=ALL-UNNAMED --add-opens=java.base/java.nio=ALL-UNNAMED --add-opens=java.base/sun.nio.ch=ALL-UNNAMED --add-opens=java.management/sun.management=ALL-UNNAMED --add-opens=jdk.management/com.sun.management.internal=ALL-UNNAMED -Dcom.redhat.fips=false -Xmx512m -Xms128m -XX:+HeapDumpOnOutOfMemoryError -Dhttp.nonProxyHosts=localhost|127.*|[::1] -cp ./lib/sonar-application-9.9.0.65466.jar:/opt/sonarqube/lib/jdbc/postgresql/postgresql-42.5.1.jar org.sonar.server.app.WebServer /opt/sonarqube/temp/sq-process9983184862538085986properties
2024.03.06 18:48:14 INFO app[][o.s.a.SchedulerImpl] Process[Web Server] is stopped
2024.03.06 18:48:14 WARN app[][o.s.a.p.AbstractManagedProcess] Process exited with exit value [ElasticSearch]: 143
2024.03.06 18:48:14 INFO app[][o.s.a.SchedulerImpl] Process[ElasticSearch] is stopped
2024.03.06 18:48:14 INFO app[][o.s.a.SchedulerImpl] SonarQube is stopped
/usr/bin/java
Gracefully stopping SonarQube...
SonarQube was not running.
yeter@yeter-VirtualBox:~/Techcareer-Middle-DevOps-Subat/_2_Bash_Script$
```

At the bottom of the terminal window, there is a status bar showing system icons and the date/time (19:38, 6.03.2024).

Kurulumlar

- Netstat -nlptu => Aktif olan portları gösterir.



The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox". The terminal displays the output of the "netstat -nlptu" command. The output lists active Internet connections (only servers) with columns for Proto, Recv-Q, Send-Q, Local Address, Foreign Address, State, and PID/Program name. The terminal interface includes a docked application menu on the left and a system tray at the bottom.

```
yeter@yeter-VirtualBox:~/Desktop$ netstat -nlptu
(Not all processes could be identified, non-owned process info
will not be shown, you would have to be root to see it all.)
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address          Foreign Address        State      PID/Program name
tcp     0      0 0.0.0.0:22              0.0.0.0:*            LISTEN
tcp     0      0 127.0.0.1:631           0.0.0.0:*            LISTEN
tcp     0      0 127.0.0.1:5433          0.0.0.0:*            LISTEN
tcp     0      0 127.0.0.1:5432          0.0.0.0:*            LISTEN
tcp     0      0 127.0.0.53:53          0.0.0.0:*            LISTEN
tcp6    0      0 ::1:22                ::*:*
tcp6    0      0 ::1:631               ::*:*
udp     0      0 127.0.0.53:53          0.0.0.0:*            -
udp     0      0 0.0.0.0:631            0.0.0.0:*            -
udp     0      0 0.0.0.0:37839          0.0.0.0:*            -
udp     0      0 0.0.0.0:5353           0.0.0.0:*            -
udp6    0      0 ::1:5353              ::*:*
udp6    0      0 ::1:46727             ::*:*
```

Git

Git

- ReadMe.md dosyasını local bilgisayara pull yapma

git init

git remote add origin https://github.com/yeterkarakus/devops_project.git

git pull origin main

```
● ● ● devops_project — yeterkarakus@192 — ..evops_project — -zsh — 80x41
[→ devops_project git init
Initialized empty Git repository in /Users/yeterkarakus/devops_project/.git/
[→ devops_project git:(main) ✘ git remote add origin https://
@github.com/yeterkarakus/devops_project.git
[→ devops_project git:(main) ✘ git pull origin main
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 878 bytes | 219.00 KiB/s, done.
From https://github.com/yeterkarakus/devops_project
 * branch           main      -> FETCH_HEAD
 * [new branch]     main      -> origin/main
→ devops_project git:(main) ✘
```

Git

Git Nedir ?

- VCS -> Version Control System
- Git bir versiyon kontrol sistemidir.
- Git birden fazla kişinin farklı yerlerde aynı proje üzerinde çalışmasına olanak tanır.

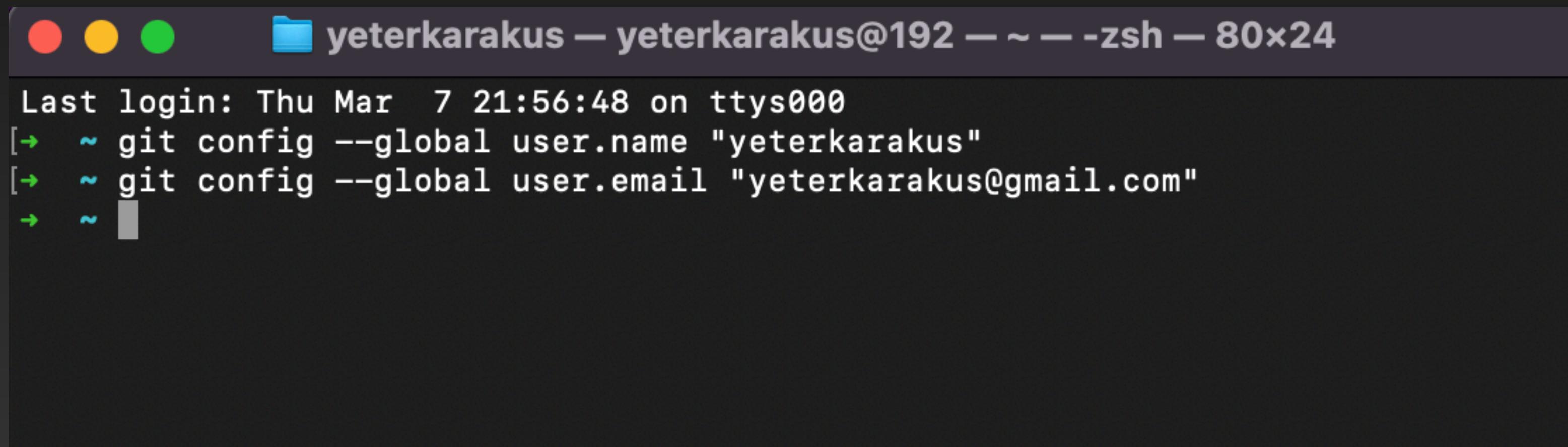
İyi bir commit mesajı nasıl olmalıdır ?

- Kısa ve anlaşılır olmalıdır.
- İçerik ne, nasıl gibi sorulara cevap vermelidir.
- Başlık 50 karakterden uzun olmamalıdır.
- Büyük harfle başlanmalıdır.
- Nokta ile bitmemelidir.

Git

- Git config ayarları

1. git config --global user.name "yeterkarakus"
2. git config --global user.email "yeterkarakus55@gmail.com"



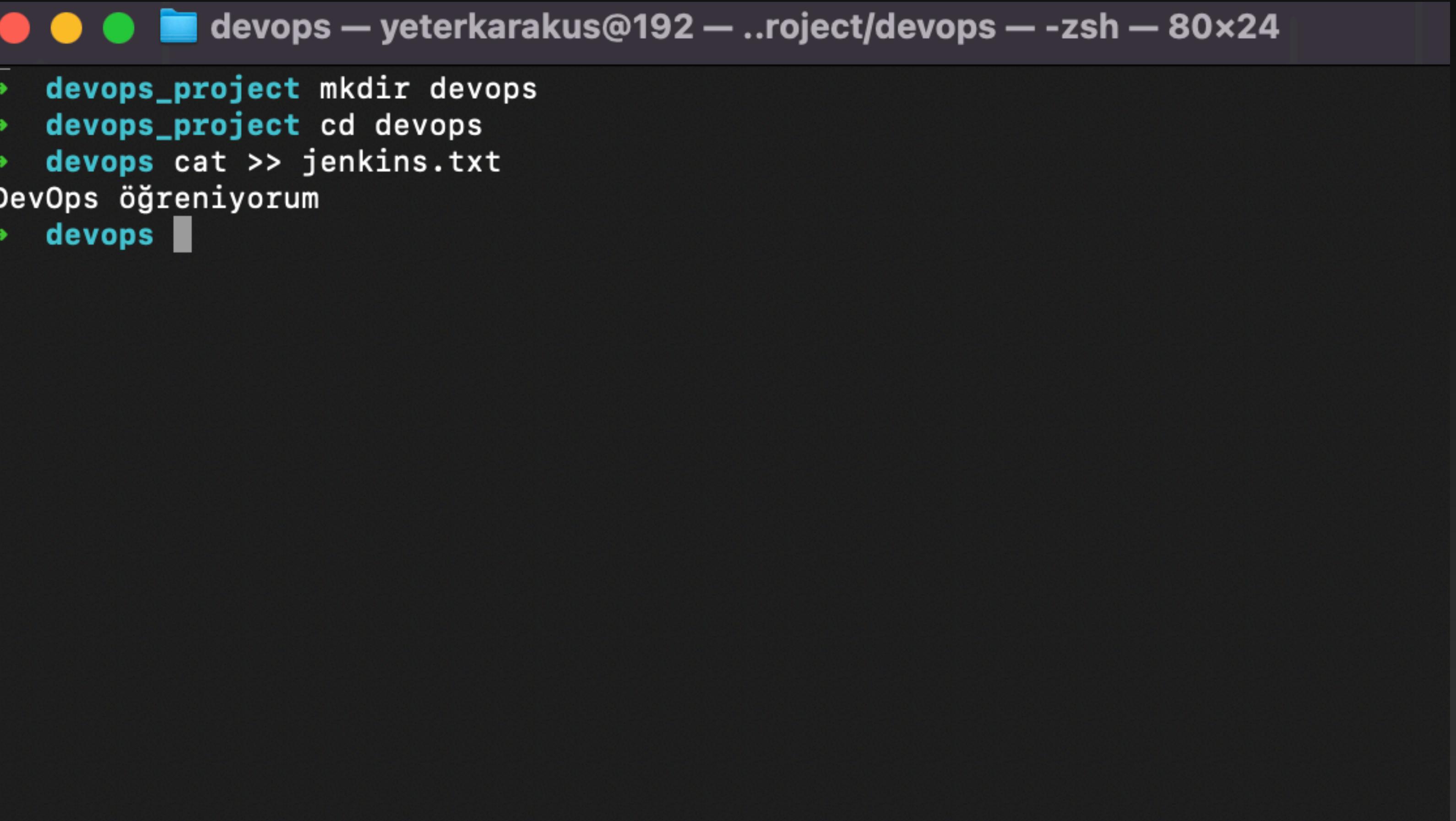
The screenshot shows a terminal window with a dark background and light-colored text. The title bar reads "yeterkarakus — yeterkarakus@192 — ~ — zsh — 80x24". The window contains the following text:

```
Last login: Thu Mar  7 21:56:48 on ttys000
[~] ~ git config --global user.name "yeterkarakus"
[~] ~ git config --global user.email "yeterkarakus@gmail.com"
[~] ~
```

Git

- Linux komutlarıyla klasör ve dosya oluşturma

1. mkdir devops
2. cd devops
3. cat >> jenkins.txt
4. DevOps öğreniyorum



```
● ● ● devops — yeterkarakus@192 — ..roject/devops — -zsh — 80x24
└─> devops_project mkdir devops
└─> devops_project cd devops
└─> devops cat >> jenkins.txt
DevOps öğreniyorum
└─> devops ┌
```

Git

Git staged area nedir?

- Dosyalardaki değişiklikleri git add yaptıktan sonra commitlemeden önce değişiklerin kaydedildiği yerdir.

Git unstaged area nedir?

- Eklenmiş veya değiştirilmiş dosyaları gitin takip etmediğini yani git add yapılmadığını ifade eder.

Git

- Oluşturulan dosyaları GitHub repository gönderme

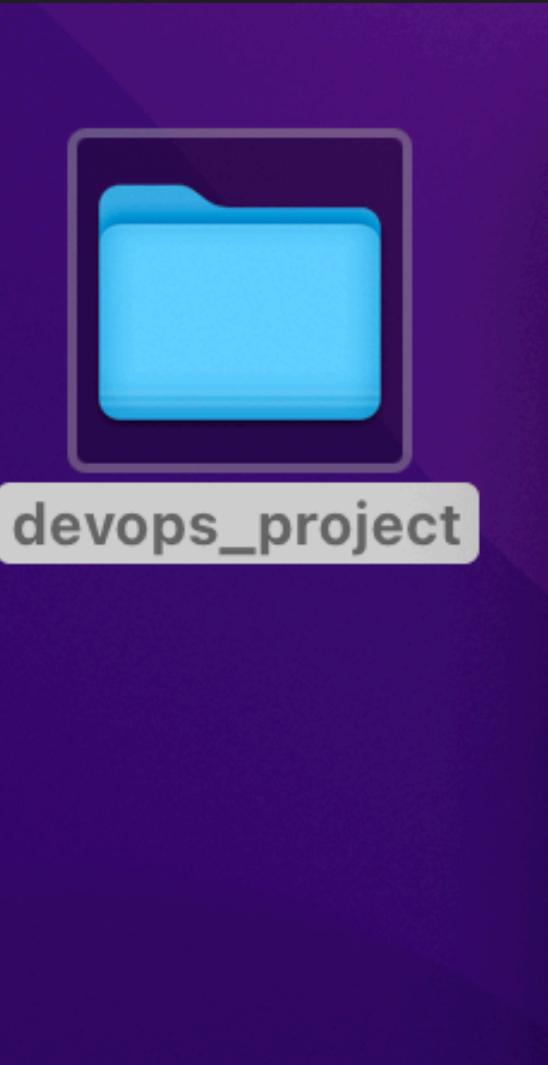
1. git remote add origin https:...
2. git branch -M "main"
3. git add .
4. git commit -m "first commit"
5. git push -u origin master

```
[→ devops_project git init
Initialized empty Git repository in /Users/yeterkarakus/devops_project/.git/
[→ devops_project git:(main) ✘ git remote add origin https://
@github.com/yeterkarakus/devops_project.git
[→ devops_project git:(main) ✘ git pull origin main
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 878 bytes | 219.00 KiB/s, done.
From https://github.com/yeterkarakus/devops_project
 * branch            main      -> FETCH_HEAD
 * [new branch]       main      -> origin/main
[→ devops_project git:(main) ✘ git branch -M main
[→ devops_project git:(main) ✘ git add .
[→ devops_project git:(main) ✘ git commit -m "first commit"
[main 04b53c7] first commit
 1 file changed, 1 insertion(+)
 create mode 100644 devops/jenkins.txt
[→ devops_project git:(main) ✘ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 343 bytes | 343.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/yeterkarakus/devops_project.git
  b2fe89b..04b53c7 main -> main
branch 'main' set up to track 'origin/main'.
[→ devops_project git:(main) ]
```

Git

- Github repository local bilgisayara klonlama

1. pwd
2. git clone https://github.com/yeterkarakus/devops_project.git



```
● ● ● └ Desktop — yeterkarakus@192 — ~/Desktop — -zsh — 75x27
[→ Desktop pwd
/Users/yeterkarakus/Desktop
[→ Desktop git clone https://github.com/yeterkarakus/devops_project.git
Cloning into 'devops_project'...
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 7 (delta 0), reused 4 (delta 0), pack-reused 0
Receiving objects: 100% (7/7), done.
→ Desktop
```

Git

- Son atılan commitin commit içeriğini değiştirmek

1. git commit --amend -m "commit message changed"
2. git push -u origin main

```
devops_project — yeterkarakus@192 — ..evops_project — -zsh — 80x29
[→ devops_project git:(main) git commit --amend -m "commit message changed"
[main 5736ff7] commit message changed
Date: Fri Mar 8 00:38:18 2024 +0300
1 file changed, 1 insertion(+)
create mode 100644 devops/jenkins.txt
[→ devops_project git:(main) git push origin main -f
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 356 bytes | 356.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/yeterkarakus/devops_project.git
 + 04b53c7...5736ff7 main -> main (forced update)
[→ devops_project git:(main)]
```

Git

Git log ne iş yapar ?

- Oluşturulmuş commitleri sondan başa doğru sıralar.

Git status ne iş yapar?

- Projenin o anki durumu hakkında bilgi verir.

```
devops_project — git log — git — less • git log — 80x24
commit 5736ff7858c3db35376e704211df6722eb87cd8a (HEAD -> main, origin/main)
Author: yeterkarakus <yeterkarakus@gmail.com>
Date:   Fri Mar 8 00:38:18 2024 +0300

    commit message changed

commit b2fe89b9cfbcf2f9c9602e066b0f5e750a070102
Author: Yeter Karakuş <61097057+yeterkarakus@users.noreply.github.com>
Date:   Fri Mar 8 00:32:08 2024 +0300

    Initial commit
(END)
```

```
devops_project — yeterkarakus@192 — ..evops_project — -zsh — 80x24
[→ devops_project git:(main) ✘ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    DevOps_Sunum.key

nothing added to commit but untracked files present (use "git add" to track)
→ devops_project git:(main) ✘ ]
```

Git

- Backend adında branch oluşturma
- Branche bir takım dizinler ekleme ve commit yapma
- Merge işleminde fast-forward yapma

1. git add .
2. git commit -m "merge öncesinde commit"
3. git branch backend
4. git checkout backend
5. cat >> backend.txt
6. git add .
7. git commit -m "backend"
8. git checkout main
9. git merge backend
10. git push -u origin main

```
[ devops_project git:(main) ] git add .
[ devops_project git:(main) ] git commit -m "merge öncesi commit"
[main 272bf79] merge öncesi commit
  1 file changed, 0 insertions(+), 0 deletions(-)
  create mode 100644 DevOps_Sunum.key
[ devops_project git:(main) ] git branch backend
[ devops_project git:(main) ] git checkout backend
Switched to branch 'backend'
[ devops_project git:(backend) ] cat >> backend.txt
Java
Spring Boot
API
JSON
XML
[ devops_project git:(backend) ] git add .
[ devops_project git:(backend) ] git commit -m "backend"
[backend daf807d] backend
  1 file changed, 5 insertions(+)
  create mode 100644 backend.txt
[ devops_project git:(backend) ] git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
[ devops_project git:(main) ] git merge backend
Updating 272bf79..daf807d
Fast-forward
  backend.txt | 5 +++++
  1 file changed, 5 insertions(+)
  create mode 100644 backend.txt
[ devops_project git:(main) ] git push -u origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 14.99 MiB | 566.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/yeterkarakus/devops_project.git
  5736ff7..daf807d main -> main
branch 'main' set up to track 'origin/main'.
[ devops_project git:(main) ]
```

Git

Git CLI

- Command Line Interface
 - Terminal üzerinden git komutlarını kullanarak işlemleri yapmayı sağlar.

Git GUI

- Git User Interface
 - Giti grafiksel bir arayüz üzerinden git komutlarını yazmadan kullanmayı sağlar.

Git

- Frontend adında branch oluşturma
- Branche bir takım dizinler ekleme ve commit yapma
- Merge işleminde no-fast-forward yapma

1. git add .
2. git commit -m "merge öncesinde commit"
3. git branch frontend
4. git checkout frontend
5. cat >> frontend.txt
6. git add .
7. git commit -m "frontend"
8. git checkout main
9. git merge --no-ff backend
10. git push -u origin main

```
● ● ● devops_project — yeterkarakus@192 — ..evops_project — -zsh...
[→ devops_project git:(main) git add .
[→ devops_project git:(main) ✘ git commit -m "merge öncesinde commit"
[main a7805e6] merge öncesinde commit
  1 file changed, 0 insertions(+), 0 deletions(-)
  mode change 100644 => 100755 DevOps_Sunum.key
[→ devops_project git:(main) git branch frontend
[→ devops_project git:(main) git checkout frontend
Switched to branch 'frontend'
[→ devops_project git:(frontend) cat >> frontend.txt
HTML
CSS
JavaScript
[→ devops_project git:(frontend) ✘ git add .
[→ devops_project git:(frontend) ✘ git commit -m "frontend"
[frontend 0341930] frontend
  1 file changed, 3 insertions(+)
  create mode 100644 frontend.txt
[→ devops_project git:(frontend) git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
[→ devops_project git:(main) git merge --no-ff frontend
Merge made by the 'ort' strategy.
  frontend.txt | 3 +++
  1 file changed, 3 insertions(+)
  create mode 100644 frontend.txt
[→ devops_project git:(main) git push -u origin main
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (7/7), 807.45 KiB | 5.42 MiB/s, done.
Total 7 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
To https://github.com/yeterkarakus/devops_project.git
  daf807d..0a08095  main -> main
branch 'main' set up to track 'origin/main'.
[→ devops_project git:(main) ]
```

Git

- Github repository açma ve SSH-KEY ile github veri gönderme
- Linux komutları ile "devops" dizin adı ve dosya adı "jenkins.txt" oluşturma ve "DevOps öğreniyorum" yazma

1. echo "# devops_ssh" >> README.md
2. git init
3. git add .
4. git commit -m "first commit"
5. git branch -M main
6. git remote add origin git@github.com:yeterkarakus devops_ssh.git
7. git push -u origin main
8. mkdir devops
9. cd devops
10. cat >> jenkins.txt
11. git add .
12. git commit -m "initial commit"
13. git push -u origin main

```
devops_ssh echo "# devops_ssh" >> README.md
devops_ssh git init
Initialized empty Git repository in /Users/yeterkarakus/devops_ssh/.git/
devops_ssh git:(main) ✘ git add .
devops_ssh git:(main) ✘ git commit -m "first commit"
[main (root-commit) f3e8e02] first commit
 1 file changed, 4 insertions(+)
 create mode 100644 README.md
devops_ssh git:(main) ✘ git branch -M main
devops_ssh git:(main) ✘ git remote add origin git@github.com:yeterkarakus/
devops_ssh.git
devops_ssh git:(main) ✘ git push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 226 bytes | 226.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:yeterkarakus/devops_ssh.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
devops_ssh git:(main) ✘ mkdir devops
devops_ssh git:(main) ✘ cd devops
devops git:(main) ✘ cat >> jenkins.txt
DevOps Öğreniyorum
devops git:(main) ✘ cd ..
devops_ssh git:(main) ✘ git add .
devops_ssh git:(main) ✘ git commit -m "initial commit"
[main b2a44ea] initial commit
 1 file changed, 1 insertion(+)
 create mode 100644 devops/jenkins.txt
devops_ssh git:(main) ✘ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 343 bytes | 343.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:yeterkarakus/devops_ssh.git
f3e8e02..b2a44ea  main -> main
branch 'main' set up to track 'origin/main'.
devops_ssh git:(main) ✘
```

Git

Git stash nedir?

- Üzerinde çalışılan henüz bitmemiş olan bir iş varsa, başka bir iş geldiyse yapılan değişiklikler commitlenmeden git stash komutu ile geçici olarak kayıt edilir. Gelen iş yapıldıktan sonra kaydettiğimiz işi stash'ten kaldırıp kaldığımız yerden devam edebiliriz.

1. git add .
2. git stash --save "aran"
3. cat >> acil.txt
4. git add .
5. git commit -m "acil iş"
6. git push -u origin main
7. git stash list
8. stash apply stash@{0}
9. git add .
10. git commit -m "stash sonrası commit"
11. push -u origin main
12. git stash drop stash@{0}

Git

- Projelerimizi pushlama yaparken acil.txt adında bir iş geldi ve bu iş öncelik olduğu söylendi var olan add yapılmış dosyalarımızı commitleme yapmadan özel bir alanda saklama

```
● ● ● devops_project — yeterkarakus@192 — ..evops_project — -zsh...
→ devops_project git:(main) ✘ git add .
→ devops_project git:(main) ✘ git stash save "araf"
Saved working directory and index state On main: araf
→ devops_project git:(main) cat >> acil.txt
Acil iş
→ devops_project git:(main) ✘ git add .
→ devops_project git:(main) ✘ git commit -m "acil iş"
[main c9239f0] acil iş
 1 file changed, 1 insertion(+)
   create mode 100644 acil.txt
→ devops_project git:(main) git push -u origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 274 bytes | 274.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/yeterkarakus/devops_project.git
  0a08095..c9239f0  main -> main
branch 'main' set up to track 'origin/main'.
→ devops_project git:(main) git stash list
```

```
● ● ● devops_project — yeterkarakus@192 — ..evops_project — -zsh...
[→ devops_project git:(main) git stash list
[→ devops_project git:(main) git stash apply stash@{0}
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
    (use "git restore <file>..." to discard changes in working directory)
          modified:   DevOps_Sunum.key

no changes added to commit (use "git add" and/or "git commit -a")
[→ devops_project git:(main) ✘ git add .
[→ devops_project git:(main) ✘ git commit -m "stash sonrası commit"
[main 5e37811] stash sonrası commit
  1 file changed, 0 insertions(+), 0 deletions(-)
[→ devops_project git:(main) git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 1.56 MiB | 455.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/yeterkarakus/devops_project.git
  c9239f0..5e37811  main -> main
branch 'main' set up to track 'origin/main'.
[→ devops_project git:(main) git stash drop stash@{0}
Dropped stash@{0} (c0030f2cafab65227fe86b4bcacf205ad55c1855d)
→ devops_project git:(main) ]
```

Git

- git log --all --oneline --decorate --graph komutunu graph adından alias kullanarak kısaltma
1. git config --global alias.graph "log --all --graph --decorate --oneline"
 2. git graph

```
devops_project — yeterkarakus@192 — ..evops_project — -zsh — 76...
→ devops_project git:(main) ✘ git config --global alias.graph "log --all --
graph --decorate --oneline"
→ devops_project git:(main) ✘ git graph
→ devops_project git:(main) ✘
```

```
devops_project — git graph — git — less ◁ git graph — 76x24
* 5e37811 (HEAD → main, origin/main) stash sonrası commit
* c9239f0 acil iş
* 0a08095 Merge branch 'frontend'
| \
| * 0341930 (frontend) frontend
| /
* a7805e6 merge öncesinde commit
* daf807d (backend) backend
* 272bf79 merge öncesi commit
* 5736ff7 commit message changed
* b2fe89b Initial commit
(END)
```

Git

Rebase ile merge arasındaki fark nedir ?

Merge

- Merge işlemi, iki veya daha fazla dalın değişikliklerini birleştirerek sonuçta birleştirme komutu oluşturur.
- Merge işlemi, kaynak dalın tamamını hedef dala uygular ve bu değişikliklerin geçişini korur.
- Merge işlemi sonucunda, kaynak dalın değişiklikleriyle hedef dalın değişiklikleri ayrı ayrı belirlenmiş birleştirme komutları olarak görülebilir.
- Merge, çatallanmış (branched) bir iş akışı ile daha uyumludur ve birden çok kişinin aynı projede aynı anda çalışmasını kolaylaştırır.
- Merge işlemi, temel dalın geçmişini etkilemez ve mevcut dala uygulanan değişiklikler ayrı birleştirme komutları olarak korunur.

Rebase

- Rebase işlemi, bir dalın temel dala dayandırılmasıyla gerçekleşir. Temel daki en son değişiklikleri alır ve mevcut dalın üzerine uygular.
- Rebase işlemi, mevcut dalın geçmişini yeniden düzenler ve temel dalın en son haliyle birleştirir. Bu nedenle, birleştirme geçmişi daha düzgün ve sade olur.
- Rebase işlemi sonucunda, mevcut dalın değişiklikleri, temeldeki en son değişikliklere eklenmiş gibi görünür. Bu, birleştirme komutları yerine tek bir düzgünleştirilmiş geçmiş elde edilmesini sağlar.
- Rebase işlemi, daha doğrusal bir iş akışı sağlar ve geçmişi daha okunabilir hale getirir.

Git

Git Conflict nedir ?

- Farklı branchlerin bir dosyanın aynı satırlarında değişiklik yaptığında bu değişiklikler birleştirileceği zaman conflict olur.

Bir conflict yediğimizde ne yapmamız gereklidir ?

- Kullanıcının ilk olarak conflict olan dosyayı bulması ve karşılaştırma yapması gereklidir.
- Karşılaştırma sonrasında hangi kodun önemli olduğunu karar verilir.
- Eğer iki kodda önemli ise birleştirilir.

Git

git ignore nedir ?

- Git tarafından takip edilmesini istemediğimiz dosyaları veya dizinleri git ignore dosyasına ekleriz.

git tag v1.1 ? Bu komutu ne iş yapar ?

- Git tag komutu versiyonlama yapmamıza olanak tanır.
- git tag v1.1 -> projeye 1.1 versiyonunu ekler

Git

- Git diff -> İki commit arasındaki değişiklikleri gösterir.
- git diff 5e378117c1a47de34ef5cd523829f1b1b4a26d86 c9239f025f6bbb6f27d06bbf3092891dbe8 2809

```
● ● ● devops_project — yeterkarakus@192 — ..evops_project...
[→ devops_project git:(main) ✘ git diff 5e378117c1a47de34ef5cd523829f1b1b4a26d86 c9239f0275f6bbb6f27d06bbf3092891dbe82809
→ devops_project git:(main) ✘
```

```
● ● ● devops_project — git diff 5e378117c1a47de34ef5cd52...
diff --git a/DevOps_Sunum.key b/DevOps_Sunum.key
index a00661a..88697d9 100755
Binary files a/DevOps_Sunum.key and b/DevOps_Sunum.key differ
~
```

DevOps

DevOps

DevOps kültür felsefesi nedir ?

- DevOps , geliştirici ve operasyon ekipleri arasında iş birliği yapan , iki ekip arasındaki süreci otomatikleştiren ve entegre eden bir kültürdür.

DevOps Açılamı

- DevOps -> Development ve Operation kelimelerinin birleşimidir.

DevOps

DevOps Yöntemlerinden Continuous /Continuous Delivery-Deployment süreçleri hakkında bildiklerimiz

- CI sürecinden proje planlanır, kod yazılır ,derlenir ve test edilir.
- CI sürecinden başarılı olan yazılım CD sürecine geçmiş olur.
- CD süreci uygulamanın canlıya alınması , monitoring işlemi ve geri dönüşleri kapsar.
- Bu süreç sürekli olarak devam eder.

DevOps

DevOps Yöntemlerinden git nedir ?

- DevOps süreçlerinde Git, sürekli entegrasyon ve sürekli dağıtım gibi uygulamalar için önemli bir rol oynar.
- Geliştirici ekipleri, kod tabanlarını yönetmek ve işbirliği yapmak için Git'i tercih ederler.

DevOps

DevOps Yöntemlerinden Agile nedir ?

- Agile, bir görevi yerine getirirken en uygun ve etkili çalışma yolunu bulmak için insanları, süreçleri, teknolojiyi, zamanı ve yeri bir araya getirmekle ilgiliidir.
- Agile metodу şu şekilde uygulanır:
 - Çevik takım oluşturulur ve her bir kişiye ayrı bir görev verilir.
 - Görevler ile ilgili bir çerçeve oluşturulur.
 - Belirlenen süre içerisinde görevler yerine getirilir.
 - Takıma iş tecrübesi yüksek bir lider seçilir.
 - Proje sürecinde karşılaşılan değişimler ve yeni ihtiyaçlar dikkate alınır.
 - Proje sürdürülebilir yöntemlerle planlanır ve tasarlanır.
 - Ekipler kendi kendine organize olmalıdır.
 - Gerektiğinde takım içindeki yönetici olmayan kişiler de karar almalıdır.
 - Yapılan işler denetlenmeli ve elde edilen çıktılar kontrol edilmelidir.
 - Düzenli toplantılarla durum değerlendirmesi yapılır.

DevOps

DevOps Yöntemlerinden monitoring nedir ?

- Monitoring, bir sistem veya uygulamanın performansını, durumunu ve davranışını sürekli olarak izleme ve değerlendirme işlemidir.
- DevOps süreçlerinde monitoring, uygulamaların ve altyapının sağlığını kontrol etmek, performans sorunlarını tespit etmek ve hızlı bir şekilde müdahale bulunmak için önemli bir rol oynar.
- Monitoring için kullanılan araçlardan bazıları Prometheus, Grafana, Datadog vb. Örnek verilebilir.

DevOps

XML nedir ?

- Xml -> Extensible Markup Language
- XML, bilgileri depolamak ve transfer etmek için kullanılan bir metin işaretleme dilidir.

JSON nedir ?

- Json ->JavaScript Object Notation
- JSON , basit veri yapılarını temsil etmek için tasarlanmış bağımsız bir veri değişim formatıdır. Esas olarak iki sistem arasındaki veri alışverişi için kullanılır. Örneğin JSON kullanarak sunucu ile web uygulaması arasında veri aktarabilirsiniz.

Yaml nedir ?

- Yaml -> YAML Ain't Markup Language
- YAML, yapılandırma dosyaları ve veri seri hale getirme işlemleri için kullanılır

DevOps

Http nedir ?

- HTTP -> Hyper Text Transfer Protocol
- Ağ üzerinde kullanılan iletişim protokolüdür.
- İstemci ve sunucu arasındaki veri akışının kurallarını belirler
- Ağ üzerinde client bir istek atar server geri dönüş sağlar.

Server nedir ?

- Ağdaki bilgisayarların (istemciler) erişebildiği ve belirli işlemleri gerçekleştirmek için özel olarak yapılandırılmış yüksek performanslı güçlü bilgisayarlardır

Java JDK nedir ?

- Java JDK -> Java Development Kit
- Java ile geliştirme yapmak için gerekli kütüphaneleri içinde bulunduran yapıdır.

DevOps

Maven nedir ?

- Yazılım projesinin geliştirilmesini kolaylaştıran, basitleştiren ve proje bağımlılıklarının kontrolünü yapmayı sağlayan bir araçtır
- Maven proje dosyasına eklenen bağımlılıklar ile kolay bir şekilde indirmeyi ve proje yerleştirmeyi sağlar.

Clean install ne iş yapar ?

- Target dosyalarını temizlemek ve yeniden oluşturmak için kullanılır.

DevOps

Docker nedir ?

- Docker, aynı işletim sistemi üzerinde, yüzlerce hatta binlerce birbirinden izole ve bağımsız containerlar sayesinde sanallaştırma sağlayan bir platformdur.
- Docker, uygulamaların oluşturma, yönetme, çalışma ve dağıtma sürecini basitleştirmeye yardımcı olur.

Docker Daemon ne iş yapar ?

- Docker imajları, container'ları, ağları ve depolama birimlerini oluşturup yöneten bileşendir.

Docker CLI ne iş yapar ?

- Docker CLI -> Command Line Interface
- Kullanıcıların Docker Daemon ile etkileşim kurmasını ve koyternerların yönetiminin yapılmasını sağlar

DevOps

docker search nginx

- Nginx image hakkında bilgi verir.

NAME	DESCRIPTION	STARS
FFICIAL/nginx	Official build of Nginx.	19678
OK]unit	Official build of NGINX Unit: Universal Web ...	25
OK]nginx/nginx-ingress	NGINX and NGINX Plus Ingress Controllers fo...	88
nginxinc/nginx-unprivileged	Unprivileged NGINX Dockerfiles	141
nginx/nginx-prometheus-exporter	NGINX Prometheus Exporter for NGINX and NGIN...	38
nginxinc/nginx-s3-gateway	Authenticating and caching gateway based on ...	6
nginx/unit	This repository is retired, use the Docker o...	64
nginx/nginx-ingress-operator	NGINX Ingress Operator for NGINX and NGINX P...	2
nginxinc/amplify-agent	NGINX Amplify Agent docker repository	1
nginx/nginx-quic-qns	NGINX QUIC interop	1
nginxinc/ingress-demo	Ingress Demo	4
nginxproxy/nginx-proxy	Automated nginx proxy for Docker containers ...	132
nginxproxy/acme-companion	Automated ACME SSL certificate generation fo...	130
bitnami/nginx	Bitnami nginx Docker Image	183
bitnami/nginx-ingress-controller	Bitnami Docker Image for NGINX Ingress Contr...	32
ubuntu/nginx	Nginx, a high-performance reverse proxy & we...	112
nginxproxy/docker-gen	Generate files from docker container meta-da...	16
nginxinc/nginmesh_proxy_debug		0
nginxinc/mra-fakes3		0
kasmweb/nginx	An Nginx image based off nginx:alpine and in...	7
nginxinc/nginmesh_proxy_init		0
rancher/nginx-ingress-controller		12
nginxinc/mra_python_base		0
nginxinc/ngx-rust-tool		0

DevOps

docker pull nginx

- Docker Hub' tan nginx image çekmek için kullanılır.

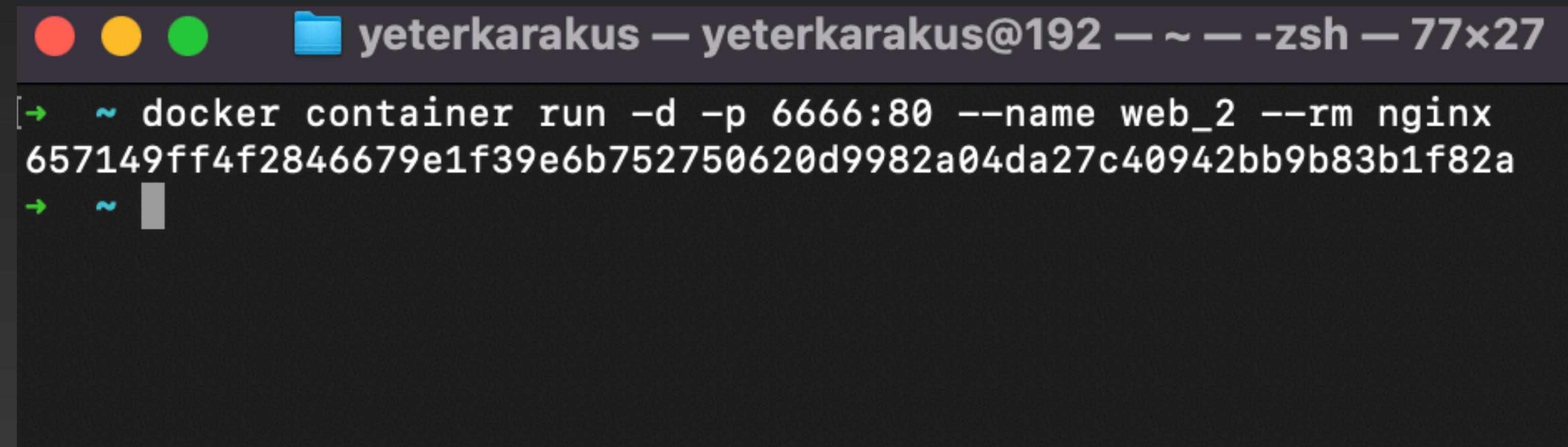
```
● ● ●   yeterkarakus — yeterkarakus@192 — ~ — -zsh — 79x29
→ ~ docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
f546e941f15b: Pull complete
2d258780861a: Pull complete
a7d6e9feb830: Pull complete
42e0f9421c7a: Pull complete
14a95f763a2f: Pull complete
164c21b63fde: Pull complete
5b452a5fd809: Pull complete
Digest: sha256:c26ae7472d624ba1fafd296e73cecc4f93f853088e6a9c13c0d52f6ca5865107
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest

What's Next?
1. Sign in to your Docker account → docker login
2. View a summary of image vulnerabilities and recommendations → docker scout
quickview nginx
→ ~
```

DevOps

Aşağıdaki özelliklere sahip nginx container oluşturma

- 80 portundan 6666 portuna yönlendiren,
- arka planda çalışan(-d)
- yeni adı web_2 (--name)
- container kapatıldıkten sonra silinen komut (--rm)



```
[yeterkarakus ~]$ docker container run -d -p 6666:80 --name web_2 --rm nginx
657149ff4f2846679e1f39e6b752750620d9982a04da27c40942bb9b83b1f82a
[yeterkarakus ~]$
```

DevOps

Github adresindeki veriyi github ile clone yapalım. Yapılacakları aşağıda yazılmıştır.

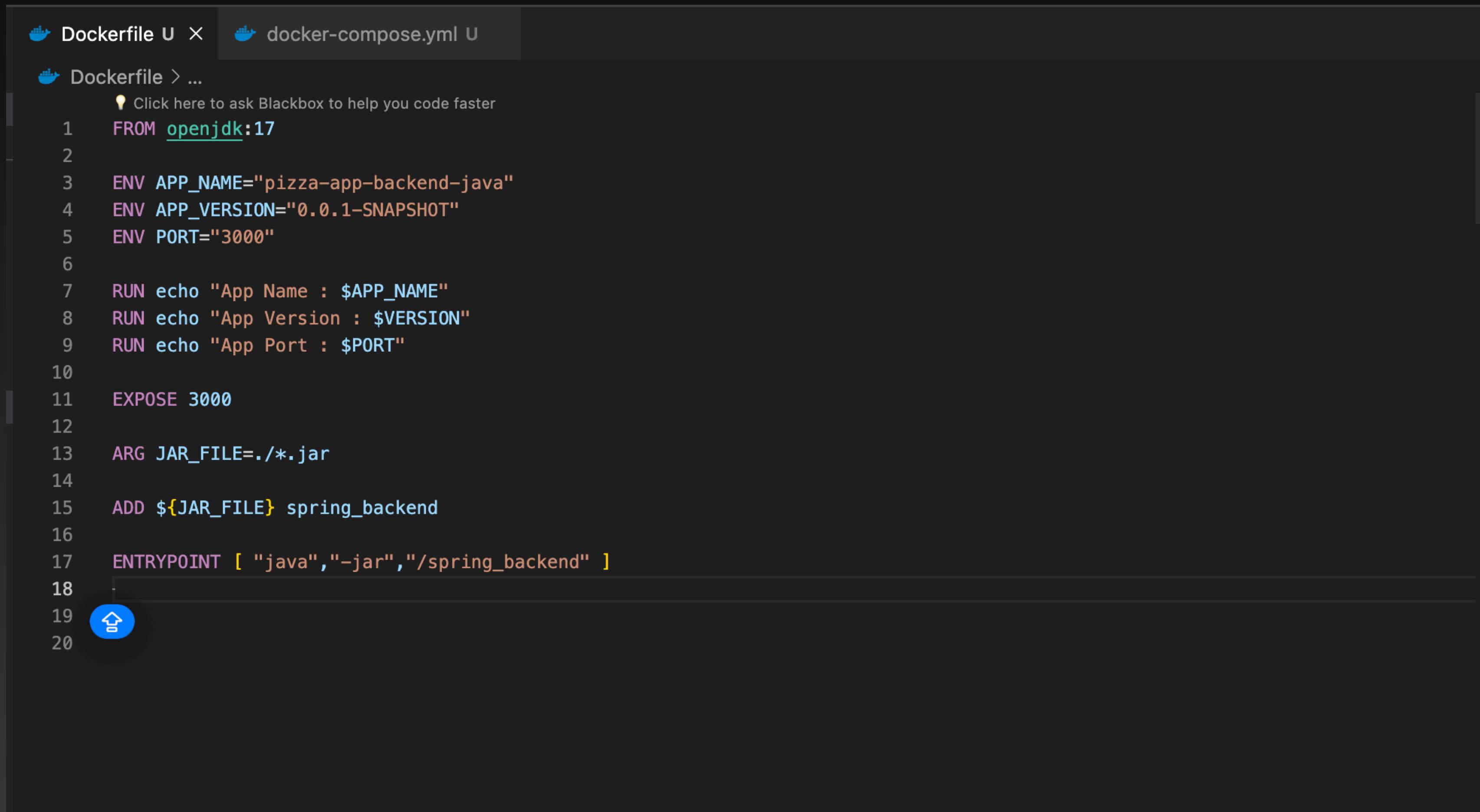
- git clone URL_ADDRESS

```
✖ ➗ ➘ ➙ yeterkarakus — yeterkarakus@192 — ~ — -zsh — 69x24
→ ~ git clone git@github.com:yeterkarakus/pizza-app-backend-java.git

Cloning into 'pizza-app-backend-java'...
Enter passphrase for key '/Users/yeterkarakus/.ssh/id_rsa':
remote: Enumerating objects: 812, done.
remote: Counting objects: 100% (812/812), done.
remote: Compressing objects: 100% (398/398), done.
remote: Total 812 (delta 467), reused 653 (delta 308), pack-reused 0
Receiving objects: 100% (812/812), 135.38 KiB | 830.00 KiB/s, done.
Resolving deltas: 100% (467/467), done.
→ ~ █
```

DevOps

- JAR dosyasının Dockerfile ve docker-compose.yml yazarak image oluşturalım.



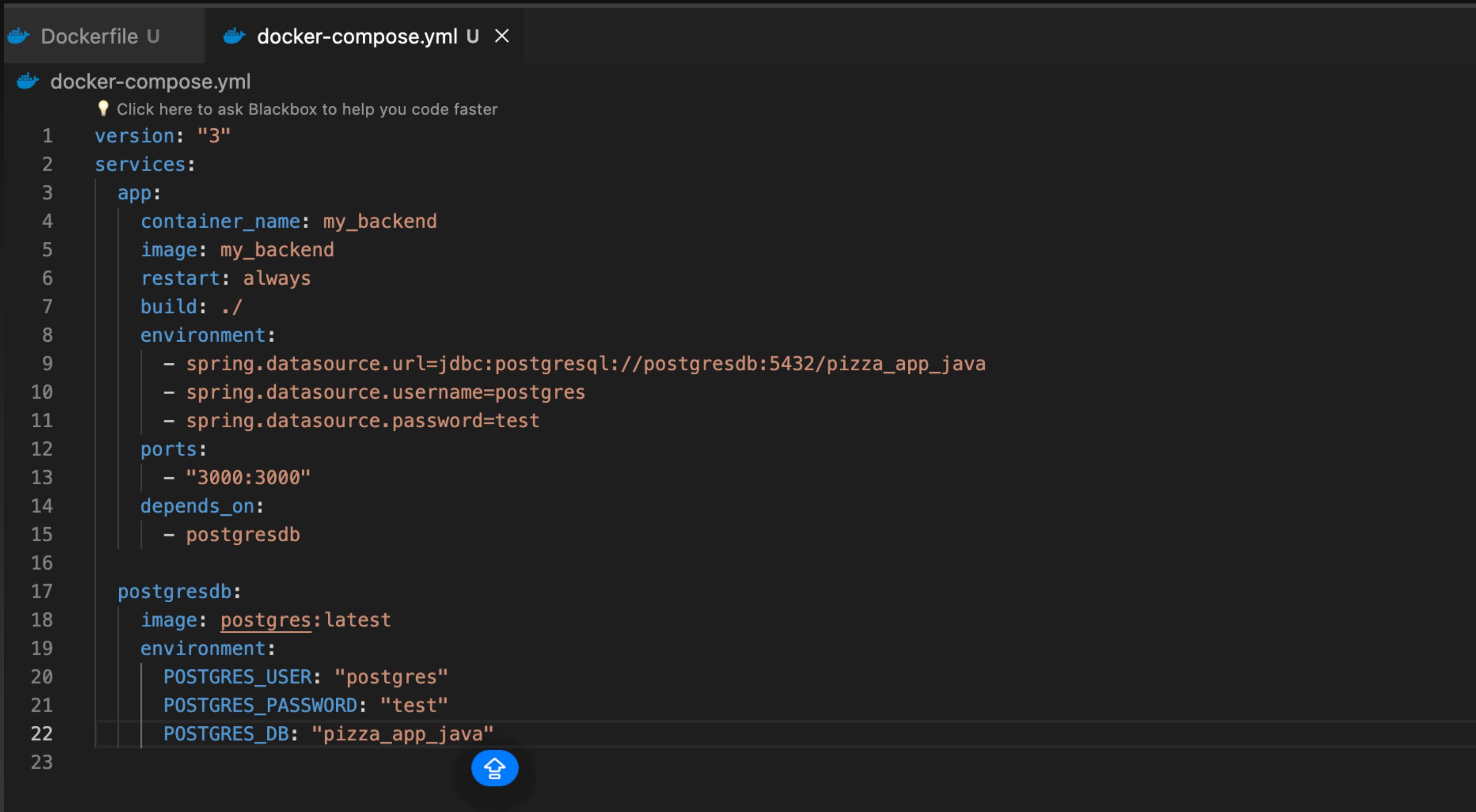
The screenshot shows a code editor interface with two tabs: 'Dockerfile' and 'docker-compose.yml'. The 'Dockerfile' tab is active, displaying the following Dockerfile content:

```
FROM openjdk:17
ENV APP_NAME="pizza-app-backend-java"
ENV APP_VERSION="0.0.1-SNAPSHOT"
ENV PORT="3000"
RUN echo "App Name : $APP_NAME"
RUN echo "App Version : $VERSION"
RUN echo "App Port : $PORT"
EXPOSE 3000
ARG JAR_FILE=.*.jar
ADD ${JAR_FILE} spring_backend
ENTRYPOINT [ "java", "-jar", "/spring_backend" ]
```

The code editor has a dark theme with syntax highlighting for Dockerfile commands. Line numbers are visible on the left, and a small circular icon with a Korean character is at the bottom left of the Dockerfile tab.

DevOps

- JAR dosyasının Dockerfile ve docker-compose.yml yazarak image oluşturalım.



The screenshot shows a code editor interface with two tabs: "Dockerfile" and "docker-compose.yml". The "docker-compose.yml" tab is active and displays the following configuration:

```
version: "3"
services:
  app:
    container_name: my_backend
    image: my_backend
    restart: always
    build: ./app
    environment:
      - spring.datasource.url=jdbc:postgresql://postgresdb:5432/pizza_app_java
      - spring.datasource.username=postgres
      - spring.datasource.password=test
    ports:
      - "3000:3000"
    depends_on:
      - postgresdb

  postgresdb:
    image: postgres:latest
    environment:
      POSTGRES_USER: "postgres"
      POSTGRES_PASSWORD: "test"
      POSTGRES_DB: "pizza_app_java"
```

The Dockerfile tab is visible but contains no code. A small blue circular icon with a white upward arrow is located at the bottom center of the editor window.

DevOps

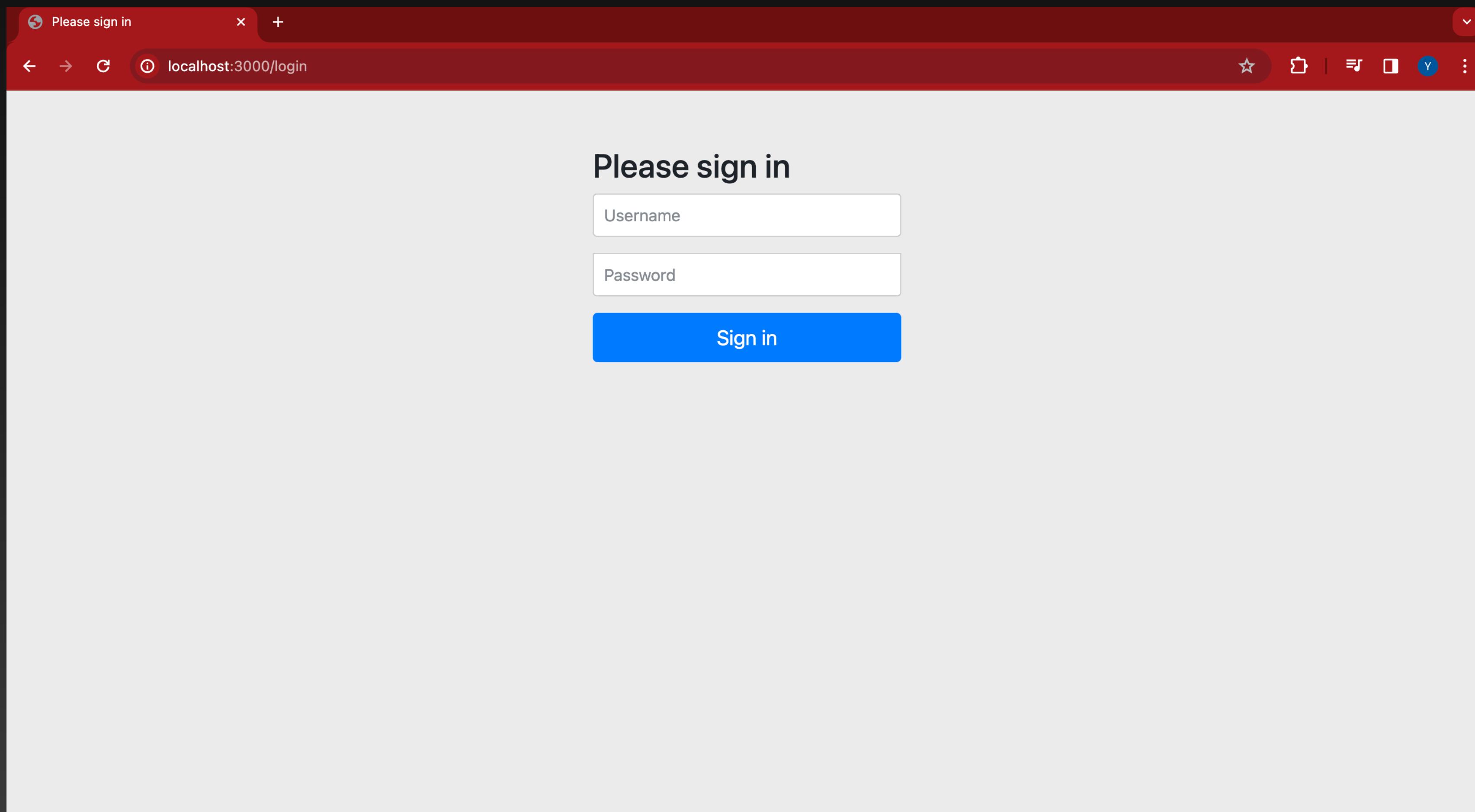
- JAR dosyasının Dockerfile ve docker-compose.yml yazarak image oluşturalım.

1. docker compose -f docker-compose.yml up

```
[+ devops_project git:(main) ✘ docker compose -f docker-compose.yml up
[+] Running 16/16
  ✓ postgresdb 14 layers [██████████████]    0B/0B      Pulled
    ✓ f546e941f15b Pull complete
    ✓ 926c64b890ad Pull complete
    ✓ eca757527cc4 Pull complete
    ✓ 93d9b27ec7dc Pull complete
    ✓ 86e78387c4e9 Pull complete
    ✓ 8776625edd8f Pull complete
    ✓ d1afcbffdf18 Pull complete
    ✓ 6a6c8f936428 Pull complete
    ✓ ae47f32f8312 Pull complete
    ✓ 82fb85897d06 Pull complete
    ✓ ce4a61041646 Pull complete
    ✓ ca83cd3ae7cf Pull complete
    ✓ f7fbf31fd41d Pull complete
    ✓ 353df72b8bf7 Pull complete
  ! app Warning
[+] Building 90.3s (10/10) FINISHED
=> [app internal] load build definition from Dockerfile
=> => transferring dockerfile: 392B
=> [app internal] load metadata for docker.io/library/openjdk:17
=> [app internal] load .dockerrcignore
=> => transferring context: 2B
=> [app 1/5] FROM docker.io/library/openjdk:17@sha256:528707081fdb9562eb819128a9f85ae7fe000e2fbaeaf9f87662e7b3f38cb7d8
=> => resolve docker.io/library/openjdk:17@sha256:528707081fdb9562eb819128a9f85ae7fe000e2fbaeaf9f87662e7b3f38cb7d8
=> => sha256:1250d2aa493e8744c8f6cb528c8a882c14b6d7ff0af862bbfe676f60ea979e 186.36MB / 186.36MB
=> => sha256:528707081fdb9562eb819128a9f85ae7fe000e2fbaeaf9f87662e7b3f38cb7d8 1.04kB / 1.04kB
=> => sha256:2fd12c42c12bf7077ac0f5fa630ff9c59868dfc4428daaf34d9d82a0c5b101 954B / 954B
=> => sha256:4717374ea15130b05563033600c237efe452e58018595092592ed35a1fb8d5e 4.46kB / 4.46kB
=> => sha256:416105dc84fc8cf66df5d2c9f81570a2cc36a6cae58aedd4d58792f041f7a2f5 42.02MB / 42.02MB
=> => sha256:fe66142579ff5bb9bb5f98922e2bc77a97dcbd0283887dec04d5b9dfd48cfa 14.29MB / 14.29MB
=> => extracting sha256:416105dc84fc8cf66df5d2c9f81570a2cc36a6cae58aedd4d58792f041f7a2f5
=> => extracting sha256:fe66142579ff5bb9bb5f98922e2bc77a97dcbd0283887dec04d5b9dfd48cfa
=> => extracting sha256:1250d2aa493e8744c8f6cb528c8a882c14b6d7ff0af862bbfe676f60ea979e
=> [app internal] load build context
=> => transferring context: 45B
=> [app 2/5] RUN echo "App Name : pizza-app-backend-java"
=> [app 3/5] RUN echo "App Version : $VERSION"
=> [app 4/5] RUN echo "App Port : 3000"
=> [app 5/5] ADD ./*.jar spring_backend
=> [app] exporting to image
=> => exporting layers
=> => writing image sha256:c6c61aaa700197bd831e86dc6d3ee59f6a664a6ccc760e519f4005812af2c4da
=> => naming to docker.io/library/my_backend
[+] Running 3/3
  ✓ Network devops_project_default     Created
  ✓ Container devops_project-postgresdb-1 Created
  ✓ Container my_backend                Created
Attaching to postgresdb-1, my_backend
postgresdb-1 | The files belonging to this database system will be owned by user "postgres".
postgresdb-1 | This user must also own the server process.
postgresdb-1 |
postgresdb-1 | The database cluster will be initialized with locale "en_US.utf8".
postgresdb-1 | The default database encoding has accordingly been set to "UTF8".
postgresdb-1 | The default text search configuration will be set to "english".
```

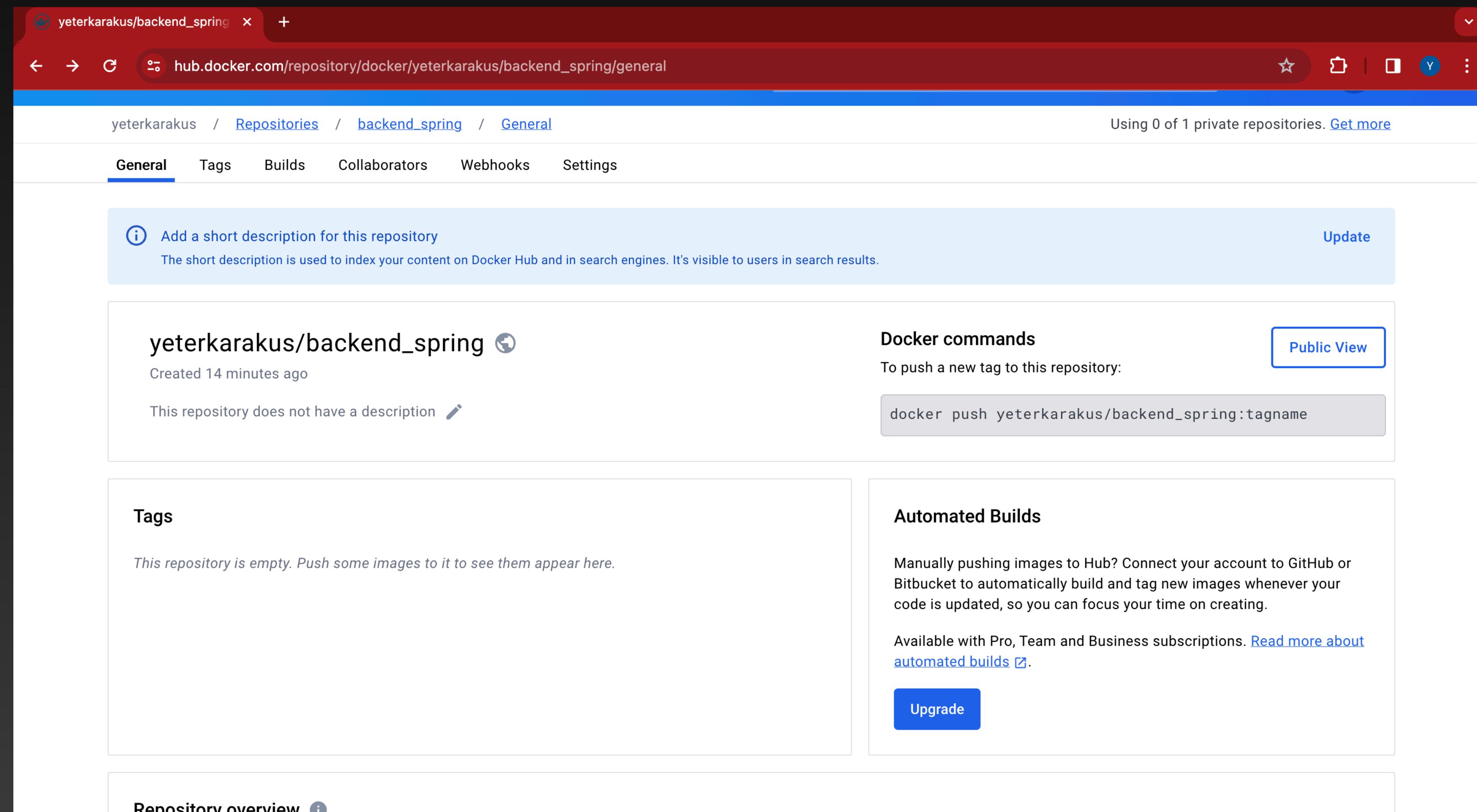
DevOps

- JAR dosyasının Dockerfile ve docker-compose.yml yazarak image oluşturalım.
- localhost:3000



DevOps

- Docker hub repo oluşturma



DevOps

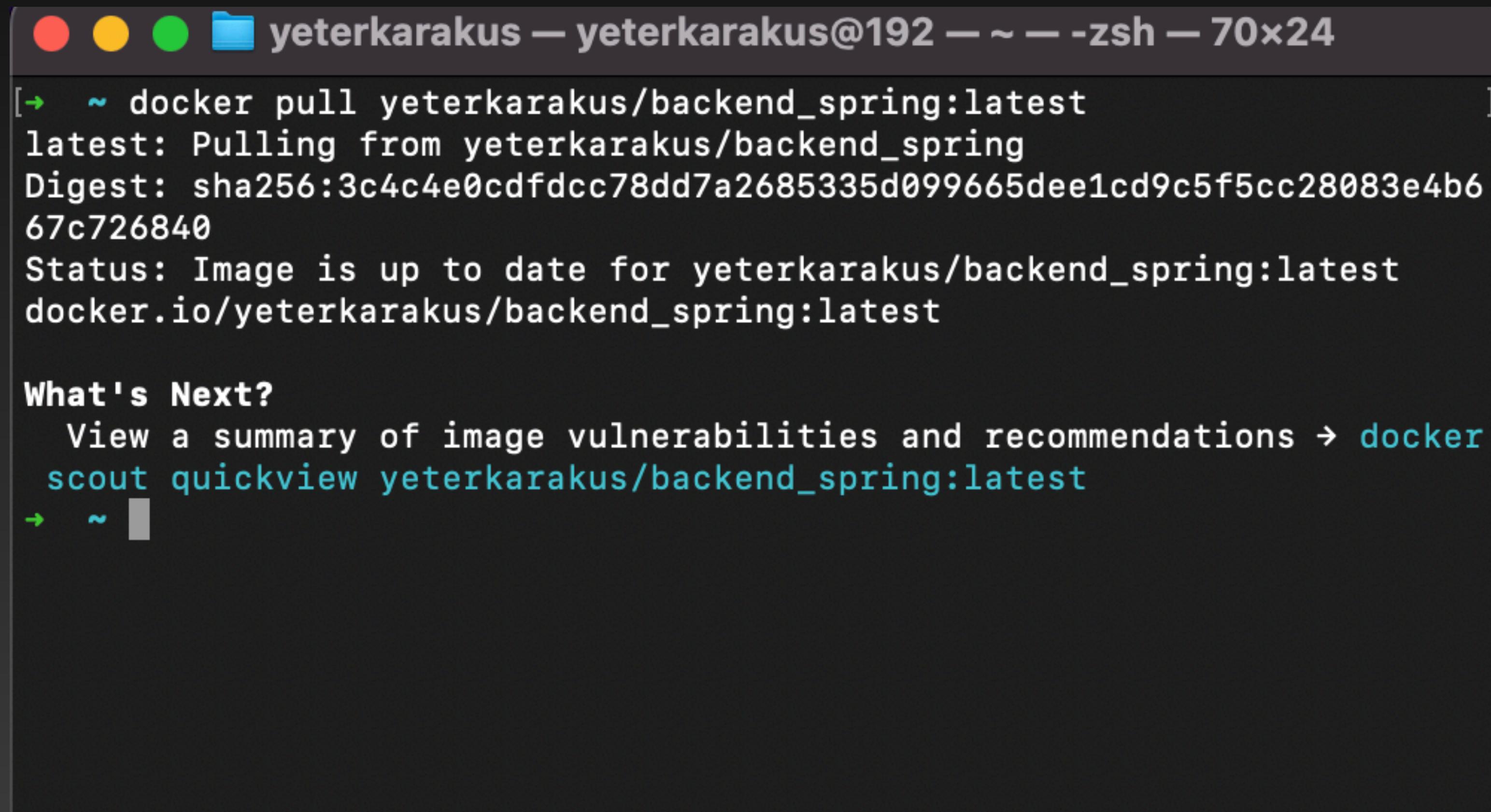
- Bu oluşturduğunuz image kendi dockerHub'ta repository'a pushlama
 1. docker login
 2. docker image tag my_backend:latest yeterkarakus/backend_spring
 3. docker push yeterkarakus/backend_spring

```
● ● ● 📂 yeterkarakus — yeterkarakus@192 — ~ — -zsh — 70x24
[→ ~ docker login
Authenticating with existing credentials...
Login Succeeded
[→ ~ docker image tag my_backend:latest yeterkarakus/backend_spring
[→ ~ docker push yeterkarakus/backend_spring
Using default tag: latest
The push refers to repository [docker.io/yeterkarakus/backend_spring]
b4122a583052: Pushed
852d45eedc68: Pushed
ac1eba4c924d: Pushed
e017d39c755a: Pushed
03ee828ef0e4: Pushed
b0d4c4485e7e: Pushed
latest: digest: sha256:3c4c4e0cdfdcc78dd7a2685335d099665dee1cd9c5f5cc2
8083e4b667c726840 size: 1784
→ ~ ]
```

DevOps

- Kendi repository gönderdiğiniz bu image docker pull ... diyerek tekrardan local bilgisayarına veriyi alma

1. docker pull yeterkarakus/backend_spring:latest



```
[yeterkarakus@192 ~]$ docker pull yeterkarakus/backend_spring:latest
latest: Pulling from yeterkarakus/backend_spring
Digest: sha256:3c4c4e0cdfdcc78dd7a2685335d099665dee1cd9c5f5cc28083e4b6
67c726840
Status: Image is up to date for yeterkarakus/backend_spring:latest
docker.io/yeterkarakus/backend_spring:latest

What's Next?
View a summary of image vulnerabilities and recommendations → docker
scout quickview yeterkarakus/backend_spring:latest
[yeterkarakus@192 ~]$
```

DevOps

SonarQube nedir ?

- Statik kod analizi yapmaya yarayan bir araçtır.
- Projede bulunan hataları, kod tekrarları, güvenlik açıkları gibi parametreleri analiz eder.
- Kod kalitesini artırmaya yardımcı olur.
- Hem hataları gösterir hem de öneri sunar.
- Java dili ile yazılmıştır.

DevOps

GitLab nedir ?

- GitLab, yazılım geliştirme ekiplerinin kaynak kodun tek bir yerde planlamasına, kodlamasına, test etmesine, dağıtmamasına ve izlemesine olanak tanıyan bir platformdur.
- GitLab, CI/CD süreçlerini kolaylaştıran entegre bir platformdur.

DevOps

CI/CD nedir ?

- Continuous Integration (Sürekli Entegrasyon) / Continuous Delivery (Sürekli Teslimat)
- CI/CD, yazılım geliştirme sürecinin farklı aşamalarında otomatik test, derleme, dağıtım ve sürüm yönetimini içeren bir süreklilik döngüsüdür.
- CI süreci kodun sürekli olarak entegre edilmesini ve test edilmesini sağlar.
- CD sürecini yazılımın otomatik olarak test ve üretim ortamlarına dağıtılmasını sağlar.

DevOps

GitLab Runner nedir ?

- GitLab Runner, GitLab CI/CD süreçlerini yürütmek için kullanılan bir araçtır.
- GitLab Runner, GitLab CI/CD pipeline'larını çalıştırırmak, testleri yürütmek, uygulamaları dağıtmak ve süreçleri otomatikleştirmek için kullanılır.
- gitlab-ci.yml dosyasında belirtilen jobların yürütülmesini ve çıktılarının geri GitLab sunucusuna gönderilmesini sağlayan açık kaynak kodlu bir projedir.
- Gitlab sunucusu ile iletişime geçmek içi GitLab API'sini kullanır.

DevOps

SSH nedir ?

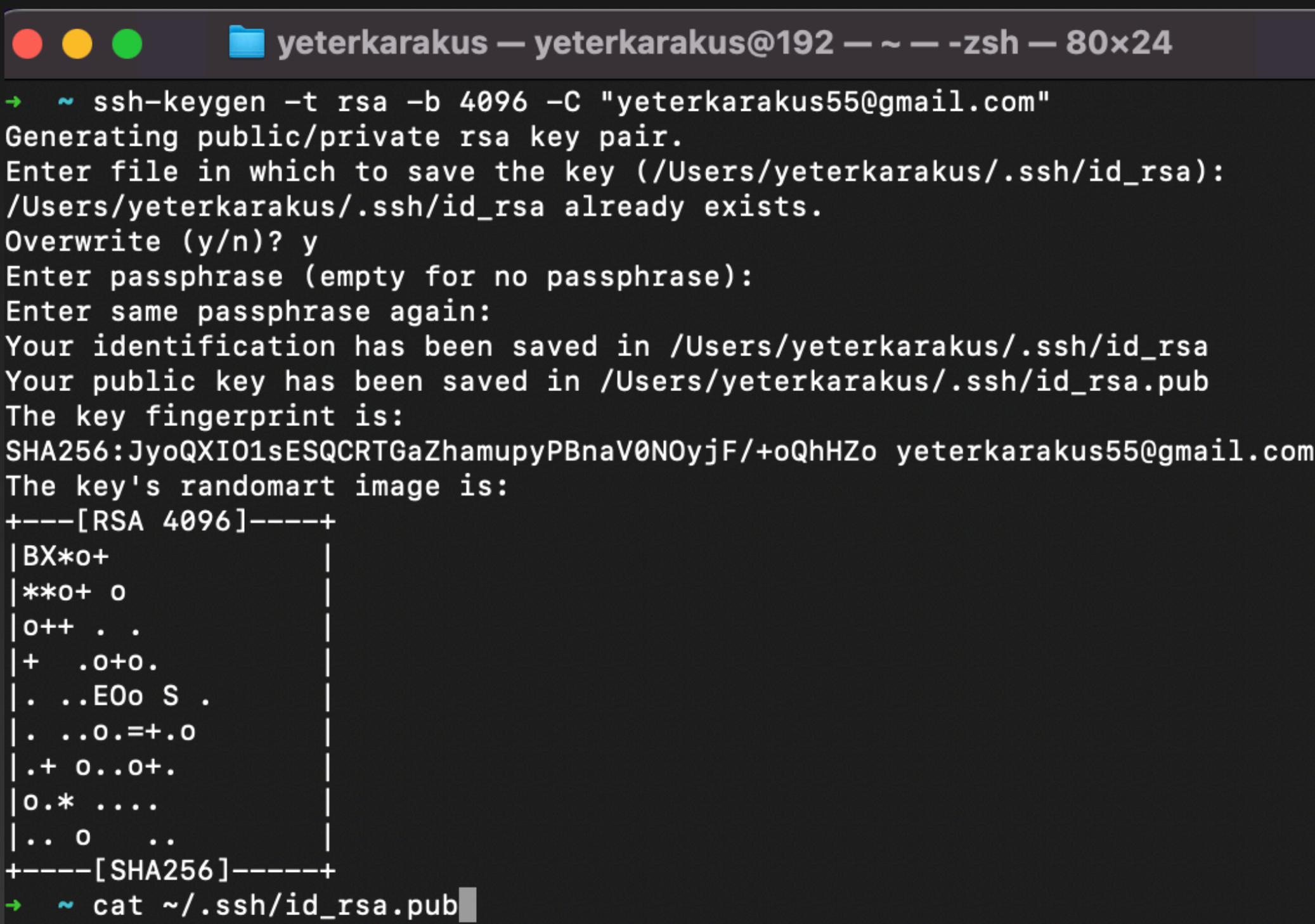
- SSH -> Secure Shell
- Bilgisayar ve sunucu arasında güvenli bağlantı kurmayı sağlayan protokoldür.
- Bilgisayarlar arasında veri transferini şifreleyerek kullanıcıların bilgilerini yetkisiz erişimlere karşı korur.
- SSH'nin temel amacı ise ağ üzerinden iletişimde bulunan taraflar arasında gizliliği, bütünlüğünü korumaktır.

DevOps

GitLab ve GitHub SSH-Keygen oluşturarak bilgisayarına bağlama

SSH -Keygen oluşturma ;

- ssh-keygen -t rsa -b 4096 -C "yeterkarakus55@gmail.com"



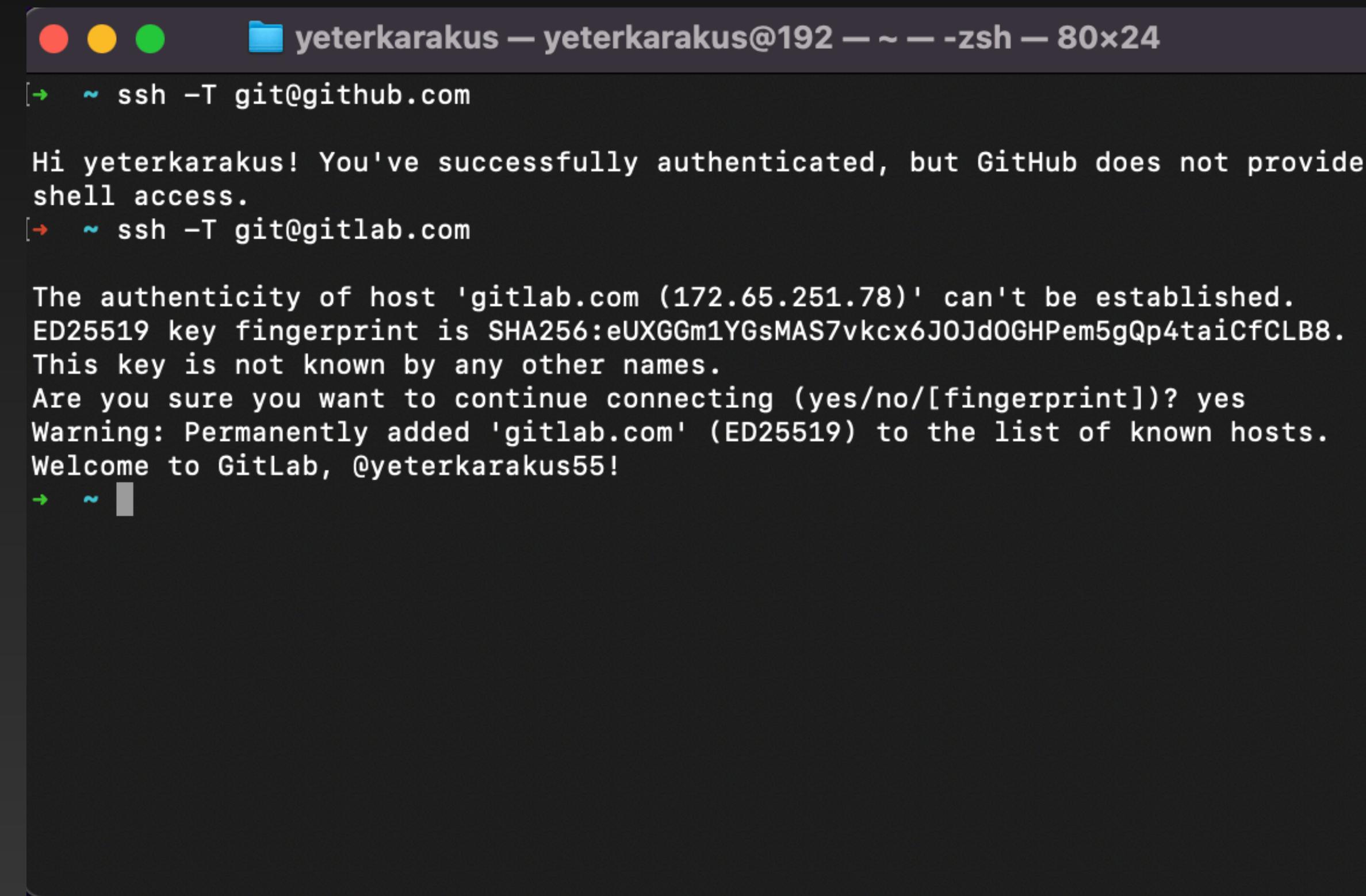
```
yeterkarakus — yeterkarakus@192 — ~ — zsh — 80x24
→ ~ ssh-keygen -t rsa -b 4096 -C "yeterkarakus55@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/Users/yeterkarakus/.ssh/id_rsa):
/Users/yeterkarakus/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /Users/yeterkarakus/.ssh/id_rsa
Your public key has been saved in /Users/yeterkarakus/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:JyoQXIO1sESQCRTGaZhamupyPBnaV0NOyjF/+oQhHZo yeterkarakus55@gmail.com
The key's randomart image is:
+---[RSA 4096]---+
|BX*o+
|**o+ o
|o++ . .
|+ .o+o.
|.. ..Eo S .
|.. ..o.=+.o
|.+ o...+
|o.* ....
|... o ...
+---[SHA256]---+
→ ~ cat ~/.ssh/id_rsa.pub
```

DevOps

GitLab ve GitHub SSH-Keygen oluşturarak bilgisayarına bağlama

GitHub ve Gitlab bağlanması ;

1. ssh -T git@github.com
2. ssh -T git@gitlab.com



```
yeterkarakus — yeterkarakus@192 — ~ — zsh — 80x24
~ ssh -T git@github.com
Hi yeterkarakus! You've successfully authenticated, but GitHub does not provide
shell access.
~ ssh -T git@gitlab.com

The authenticity of host 'gitlab.com (172.65.251.78)' can't be established.
ED25519 key fingerprint is SHA256:eUXGGm1YGsMAS7vkcx6J0JdOGHPem5gQp4taiCfCLB8.
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.
Welcome to GitLab, @yeterkarakus55!
~
```

DevOps

Prometheus Nedir ?

- Prometheus, sistem ve hizmet izleme için kullanılan bir araçtır.
- Sistem performansı, metrikler, loglar gibi verileri toplar ve analiz eder
- Prometheus, uyarılar ve alarm bildirimleri göndermek için kullanılabilir
- Grafana gibi görselleştirme araçlarıyla da entegre çalışabilir.
- Prometheus, topladığı metrikler sayesinde sistem performansını izlemek, sorunları tespit etmek ve kapasite planlaması yapmak için önemli bir araçtır.

DevOps

Jenkins Nedir ?

- Jenkins, açık kaynaklı bir CI aracıdır.
- Yazılım geliştirme süreçlerini otomatikleştirmek, testleri çalıştırmak, kod kalitesini kontrol etmek ve uygulamaları hızlı bir şekilde dağıtmak için kullanılan bir araçtır.
- Jenkins, geliştiricilerin yazdıkları kodun sürekli olarak test edilmesini ve entegre edilmesini sağlar.

DevOps

Ansible nedir ?

- Ansible, en yaygın kullanılan IT otomasyon araçlarından biridir.
- Ansible, otomasyon, yapılandırma yönetimi ve uygulama dağıtımını için kullanılan bir açık kaynaklı bir yazılım aracıdır.
- Ansible yapılacak işlemleri SSH bağlantısı ile gerçekleştirmeyi sağlar
- Ansible, sunucularınız üzerinde adım adım görevler yaparak işlemleri otomatikleştirir. Bu görevler, bir komut satırında girilir veya bir konfigürasyon dosyasında belirtilir.
- Client istemcilere herhangi bir agent kurma ihtiyacı gerektirmez

DevOps

Kubernetes nedir ?

- Kisaca k8n denir.
- Kubernetes, uygulamaların daha hızlı ve verimli bir şekilde dağıtılması, ölçeklendirilmesi ve yönetilmesine yardımcı olur.
- Kubernetes, uygulamaları, mikro hizmetleri ve konteyner tabanlı uygulamaları çalıştırırmak, yönetmek ve ölçeklendirmek için tasarlanmış bir platformdur. Bu nedenle, Kubernetes kullanmak, özellikle karmaşık ve büyük ölçekli uygulamalar için uygun bir seçenekdir.
- Kubernetes, Docker container yönetimi ve orchestration sağlar
- Kubernetes, uygulama yükünü birden fazla Docker container'a böler ve her bir containerı ayrı ayrı yöneterek daha iyi bir performans ve yüksek kullanılabilirlik sağlar.

DevOps

Datadog Monitoring nedir ?

- Datadog, uygulamaların, altyapının ve ağların performansına ilişkin kapsamlı gözlemlenebilirlik sağlayan bulut tabanlı bir izleme ve analiz platformudur.
- **Datadog Monitoring'in temel özellikleri şunlardır:**
 - **Gerçek Zamanlı İzleme:** Datadog, uygulamaların ve altyapının gerçek zamanlı olarak izlenmesini sağlar.
 - **Metrik ve Log İzleme:** Datadog, çeşitli metriklerin (CPU kullanımı, bellek kullanımı, ağ trafiği vb.) yanı sıra log verilerinin de toplanmasını ve analiz edilmesini sağlar.
 - **Özelleştirilebilir Görselleştirmeler:** Datadog, metrik verileri görsel olarak sunar ve kullanıcılara özelleştirilebilir görselleştirme seçenekleri sunar.
 - **Uyarılar ve Bildirimler:** Datadog, belirli koşulların gerçekleşmesi durumunda uyarılar ve bildirimler gönderir.
 - **Entegrasyonlar:** Datadog, birçok farklı platform ve araçla entegrasyon sağlar.

DevOps

Kanban nedir ?

- Kanban, Agile yönetim tekniğidir.
- İş akışını yönetmek ve görelleştirmek için kullanılır.
- Görselleştirme için Kanban panoları kullanılır.
- Geliştirme sürecinde, planlamada daha fazla esneklik, daha hızlı geri dönüş, net hedefler ve şeffaflık sunar
- Kanban metodunda ekipler işbirliği içinde çalışır. Çalışanların hedefe ulaşmak için sağladıkları katkı, görevi doğru bir şekilde ve zamanında tamamlamaya odaklanmalarını sağlar. Ekipler Kanban'ı kullanarak değişen önceliklere kolayca uyum sağlayabilir.

DevOps

DevOps nedir ?

- DevOps, geliştirici ve operation ekipleri arasındaki süreçleri otomatikleştiren ve entegre eden bir kültür felsefesidir.
- DevOps modeli altında, geliştirme ve operasyon ekipleri artık "izole" değildir. Bazen bu ekipler, geliştirme ve test sürecinden, dağıtım ve operasyonlara kadar tüm uygulama yaşam döngüsü boyunca çalıştığı ve çeşitli çok disiplinli becerilere sahip olduğu tek bir ekiple birleşir.

DevOps

DevOps Süreçleri nelerdir ?

Plan (Planlama): Projenin planlandığı aşamadır.

Code (Kodlama): Geliştiricilerin kodlarını yazdığı aşamadır.

Build (Derleme) : Kodun bir araya getirilip çalıştırılabilir bir yazılım ürününe dönüştürüldüğü aşamadır.

Test: Yazılımın hataları ve sorunları tespit edildiği aşamadır.

Release (Sürüm) : Yazılımın kullanıcılar için hazır hale getirildiği ve sürüm oluşturulduğu aşamadır.

Deploy (Dağıtım): Yazılımın canlı üretim ortamına yerleştirildiği aşamadır.

Operate (İşletme): Yazılımın canlı ortamda çalıştığı ve kullanıcılar tarafından kullanıldığı aşamadır.

Monitor (İzleme): Yazılımın performansını, güvenliğini ve kullanılabilirliğini sürekli olarak gözlemlendiği aşamadır.

Orchestration

Orchestration

Docker Lab' da Docker Orchestration yapma

- 5 tane instance oluşturuyorsunuz.
- 1 tane aktif manager => docker swarm init —advertise-add 192.168.0.8

The screenshot shows a Chrome browser window titled "Docker Playground" with the URL https://labs.play-with-docker.com/p/cnmskli91nsg00dv9lr0#cnmskli9_cnmskmi91nsg00dv9lrg. The browser's status bar indicates the date as Sun Mar 10 17:59. The main content of the page is a session for node1, which has IP 192.168.0.8. The session details include:

- IP: 192.168.0.8
- Memory: 1.30% (52.01MiB / 3.906GiB)
- CPU: 1.09%
- SSH: ssh ip172-18-0-12-cnmskli91nsg00dv9lr0@direct.labs.pla

Below the session details is a terminal window showing the output of the docker swarm init command:

```
[node1] (local) root@192.168.0.8 ~
$ docker swarm init --advertise-addr 192.168.0.8
Swarm initialized: current node (ytxvhujomkd6w7v71drxoidvu) is now a manager.

To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-3e8z3rd8tsglc5i0igawt6fc81jy77yr2y48fkj0zhmy65a51f-d8a86yhn8iyaugt31wgsgef48 192.168.0.8:2377

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.

[node1] (local) root@192.168.0.8 ~
$ <<<
```

Orchestration

- docker swarm join-token manager => Pasif manager için token alma
- docker swarm join-token worker => Worker için token alma

The screenshot shows a web-based Docker playground interface. On the left, there's a sidebar with a clock (03:57:04), a 'CLOSE SESSION' button, and a list of nodes: node1 (IP 192.168.0.8), node2 (IP 192.168.0.7), node3 (IP 192.168.0.6), node4 (IP 192.168.0.5), and node5 (IP 192.168.0.4). Below the nodes is a 'GIVE FEEDBACK' button. The main area displays a terminal session for node1:

```
[node1] (local) root@192.168.0.8 ~
$ docker swarm join-token manager
To add a manager to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-3e8z3rd8tsglc5i0igawt6fc81jy77yr2y48fkj0zhmy65a51f-d1knpwbf1ypyubn07039r01lx 192.168.0.8:2377

[node1] (local) root@192.168.0.8 ~
$ docker swarm join-token worker
To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-3e8z3rd8tsglc5i0igawt6fc81jy77yr2y48fkj0zhmy65a51f-d8a86yhn8iyaugt31wgsgef48 192.168.0.8:2377

[node1] (local) root@192.168.0.8 ~
$
```

Orchestration

- docker node ls => nodeleri listeler

The screenshot shows a Chrome browser window titled "Docker Playground" with the URL "labs.play-with-docker.com/p/cnmskli91nsg00dv9lr0#cnmskli9_cnmskmi91nsg00dv9lrg". The page displays a session interface for a node with IP 192.168.0.8. It includes tabs for "CLOSE SESSION", "OPEN PORT", "Memory" (1.78% / 71.27MiB / 3.906GiB), and "CPU" (6.66%). Below these are sections for "SSH" (ssh ip172-18-0-12-cnmskli91nsg00dv9lr0@direct.labs.pla) and "DELETE" and "EDITOR" buttons. On the left, a sidebar lists nodes: node1 (IP 192.168.0.8), node2 (IP 192.168.0.7), node3 (IP 192.168.0.6), node4 (IP 192.168.0.5), and node5 (IP 192.168.0.4). At the bottom, there is a "GIVE FEEDBACK" button. The main content area shows the terminal output of the command \$ docker node ls:

```
[node1] (local) root@192.168.0.8 ~
$ docker node ls
ID          HOSTNAME  STATUS  AVAILABILITY  MANAGER STATUS   ENGINE VERSION
ytxvhujomkd6w7v71drxoidvu *  node1  Ready  Active  Leader  24.0.7
x8aaxf4r17kn39lir5cw09uo6  node2  Ready  Active  Reachable  24.0.7
9b3lxcixyv6u9wkmlylh6x8ziw  node3  Ready  Active  Reachable  24.0.7
jpzxacugw8lqjgljp7v5d0dh0  node4  Ready  Active
05ot3a8m4762fxuvcq2yjrbt3  node5  Ready  Active
[node1] (local) root@192.168.0.8 ~
$
```

Orchestration

- 2 tane pasif manager

The image displays two side-by-side screenshots of a web-based Docker management interface, likely a playground or lab environment. Both screenshots show a dashboard for a service named "cnmskli9_cnmskn291nsg00dv9ls0".

Left Screenshot:

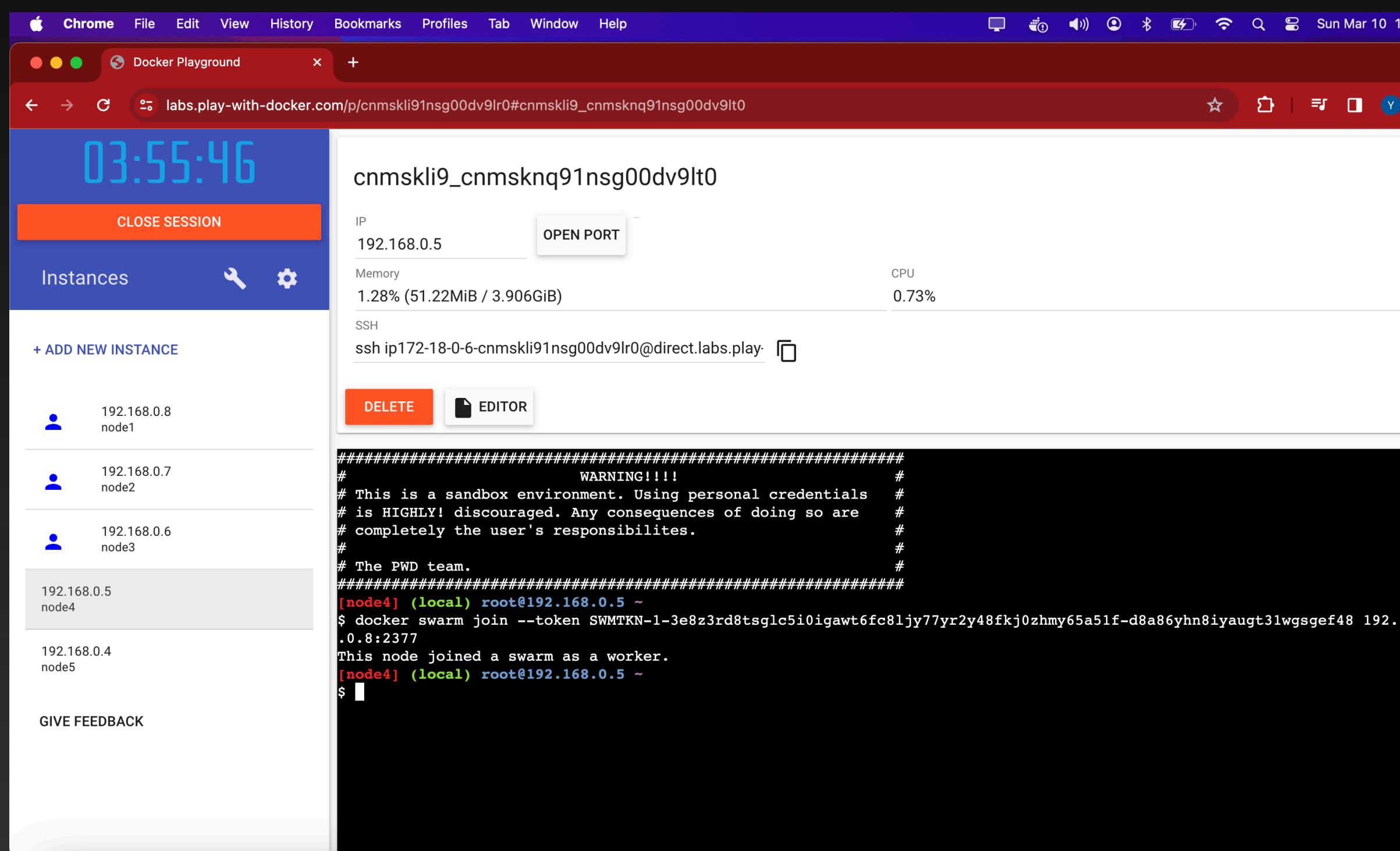
- Header:** Chrome browser window, Sun Mar 10 18:00.
- Title:** cnmskli9_cnmskn291nsg00dv9ls0
- Time:** 03:56:41
- Session Control:** CLOSE SESSION (orange button).
- Instance Details:** IP 192.168.0.7, Memory 1.35% (54.14MiB / 3.906GiB), CPU 20.75%.
- Actions:** OPEN PORT (button), Instances (link), + ADD NEW INSTANCE (button), DELETE (button), EDITOR (button).
- Log Output:** Shows a log entry for node2 joining a swarm as a manager.
- Feedback:** GIVE FEEDBACK (button).

Right Screenshot:

- Header:** Chrome browser window, Sun Mar 10 18:01.
- Title:** cnmskli9_cnmskn291nsg00dv9ls0
- Time:** 03:56:16
- Session Control:** CLOSE SESSION (orange button).
- Instance Details:** IP 192.168.0.6, Memory 1.41% (56.56MiB / 3.906GiB), CPU 1.10%.
- Actions:** OPEN PORT (button), Instances (link), + ADD NEW INSTANCE (button), DELETE (button), EDITOR (button).
- Log Output:** Shows a log entry for node3 joining a swarm as a manager.
- Feedback:** GIVE FEEDBACK (button).

Orchestration

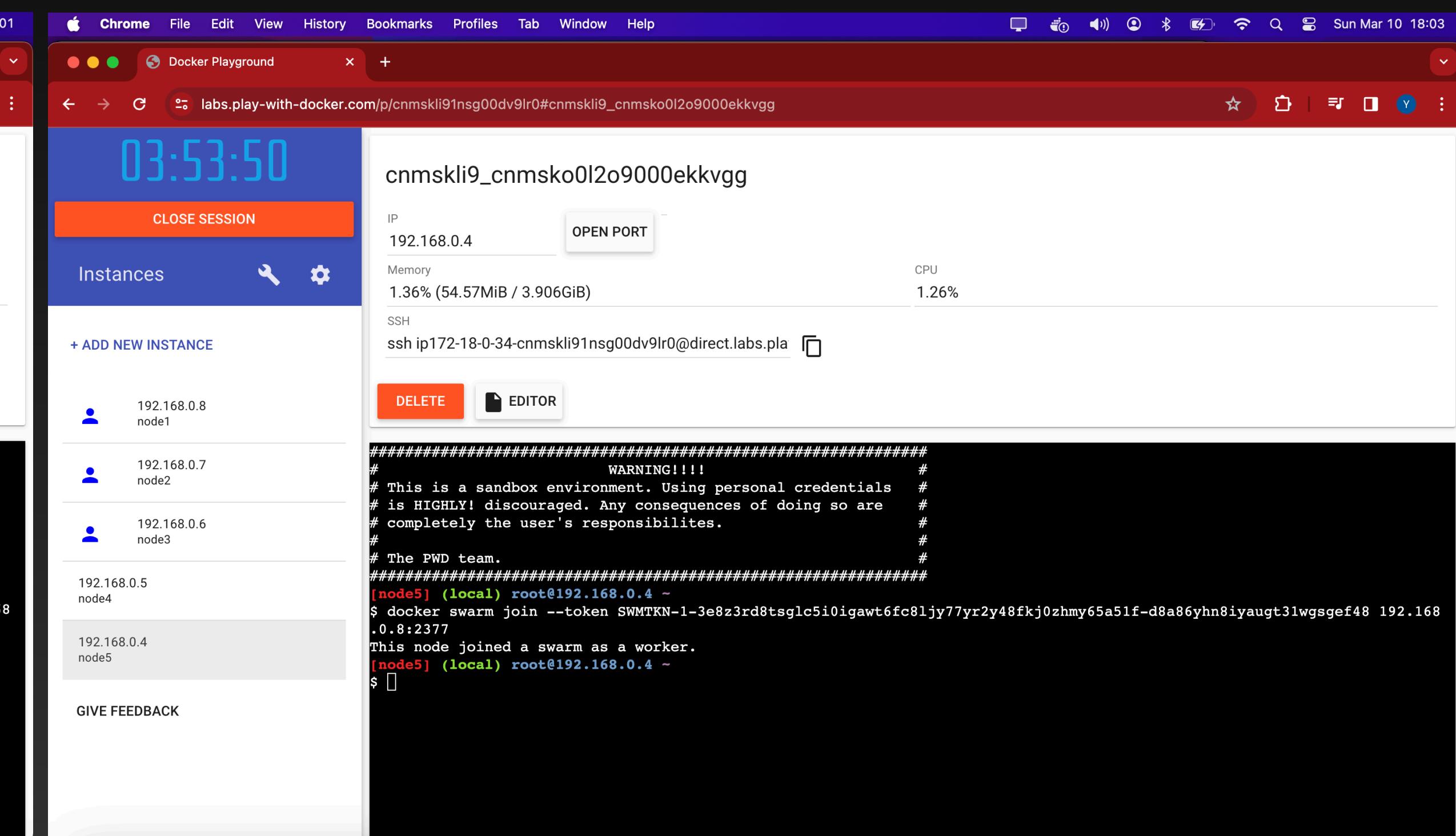
- 2 tane worker



Docker Playground session titled "cnmskli9_cnmsknq91nsg00dv9lt0". The interface shows a clock at 03:55:46, a "CLOSE SESSION" button, and a summary table for node 0. The table includes:

IP	Memory	CPU
192.168.0.5	1.28% (51.22MiB / 3.906GiB)	0.73%

The "Instances" section lists nodes 1, 2, 3, and 4. Node 4 is highlighted with a grey background. Buttons for "DELETE" and "EDITOR" are shown next to each node. Below the list is a terminal window displaying the command to join a swarm and the confirmation message: "This node joined a swarm as a worker." The terminal also shows the node's IP address (192.168.0.5) and the command used to join.



Docker Playground session titled "cnmskli9_cnmsko0l2o9000ekkvgg". The interface shows a clock at 03:53:50, a "CLOSE SESSION" button, and a summary table for node 0. The table includes:

IP	Memory	CPU
192.168.0.4	1.36% (54.57MiB / 3.906GiB)	1.26%

The "Instances" section lists nodes 1, 2, 3, and 5. Node 5 is highlighted with a grey background. Buttons for "DELETE" and "EDITOR" are shown next to each node. Below the list is a terminal window displaying the command to join a swarm and the confirmation message: "This node joined a swarm as a worker." The terminal also shows the node's IP address (192.168.0.4) and the command used to join.

Orchestration

- docker service create --name web_server -p 1111:80 --replicas=9 nginx => 9 tane nginx replicas oluşturma

The screenshot shows a Chrome browser window titled "Docker Playground" at the URL https://labs.play-with-docker.com/p/cnmskli91nsg00dv9lr0#cnmskli9_cnmskmi91nsg00dv9lrg. The page displays a session interface with a blue header bar showing the time as 03:51:36. Below the header, there's a "CLOSE SESSION" button and an "Instances" section. The "Instances" section lists five nodes: node1 (IP 192.168.0.8), node2 (IP 192.168.0.7), node3 (IP 192.168.0.6), node4 (IP 192.168.0.5), and node5 (IP 192.168.0.4). To the right of the instances, there's a configuration panel for a new instance: IP 192.168.0.8, OPEN PORT 1111, Memory 7.86% (314.3MiB / 3.906GiB), CPU 2.28%, and an SSH link. Below the configuration is a terminal window showing the command output for creating a service:

```
[node1] (local) root@192.168.0.8 ~
$ docker service create --name web_server -p 1111:80 --replicas=9 nginx
asol9bu85p2rmt0uok0irs1i
overall progress: 9 out of 9 tasks
1/9: running [=====>]
2/9: running [=====>]
3/9: running [=====>]
4/9: running [=====>]
5/9: running [=====>]
6/9: running [=====>]
7/9: running [=====>]
8/9: running [=====>]
9/9: running [=====>]
verify: Service converged
[node1] (local) root@192.168.0.8 ~
$
```

Orchestration

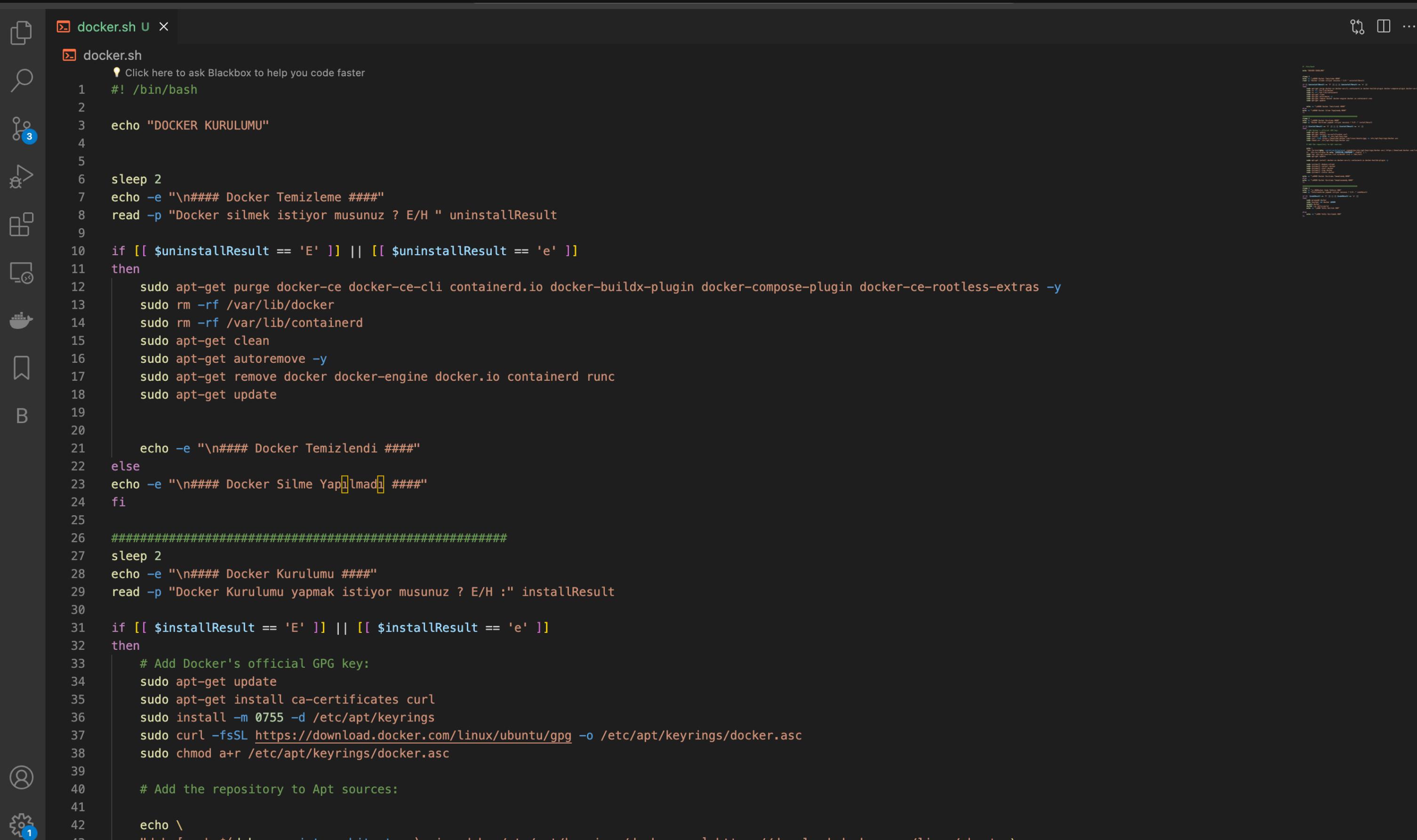
- docker service ps web_server => Çalışan servislerin durumunu gösterir

The screenshot shows a Docker Playground session titled "cnmskli9_cnmskmi91nsg00dv9lrg". The session interface includes a clock (03:50:51), a "CLOSE SESSION" button, and tabs for "Instances", "SSH", and "EDITOR". On the left, a sidebar lists instances: node1 (IP 192.168.0.8), node2 (IP 192.168.0.7), node3 (IP 192.168.0.6), node4 (IP 192.168.0.5), and node5 (IP 192.168.0.4). The main area displays resource usage (IP 192.168.0.8, Memory 7.85%, CPU 3.13%) and an SSH terminal window containing the command:

```
[node1] (local) root@192.168.0.8 ~
$ docker service ps web_server
ID          NAME      IMAGE      NODE      DESIRED STATE  CURRENT STATE      ERROR      PORTS
lcekjqrd9r5s  web_server.1  nginx:latest  node2      Running   Running  42 seconds ago
sj9zvlp000zr  web_server.2  nginx:latest  node1      Running   Running  41 seconds ago
s2u6nj8wdetd  web_server.3  nginx:latest  node5      Running   Running  41 seconds ago
ltf6ttsdys92  web_server.4  nginx:latest  node5      Running   Running  41 seconds ago
rha9txyj15pz  web_server.5  nginx:latest  node4      Running   Running  41 seconds ago
9tcw94818nyy  web_server.6  nginx:latest  node3      Running   Running  41 seconds ago
i77qctz8rbg3  web_server.7  nginx:latest  node3      Running   Running  41 seconds ago
aksfokb5x051  web_server.8  nginx:latest  node1      Running   Running  41 seconds ago
kuefxjjdepox4 web_server.9  nginx:latest  node4      Running   Running  41 seconds ago
[node1] (local) root@192.168.0.8 ~
$
```

Docker Bash Script

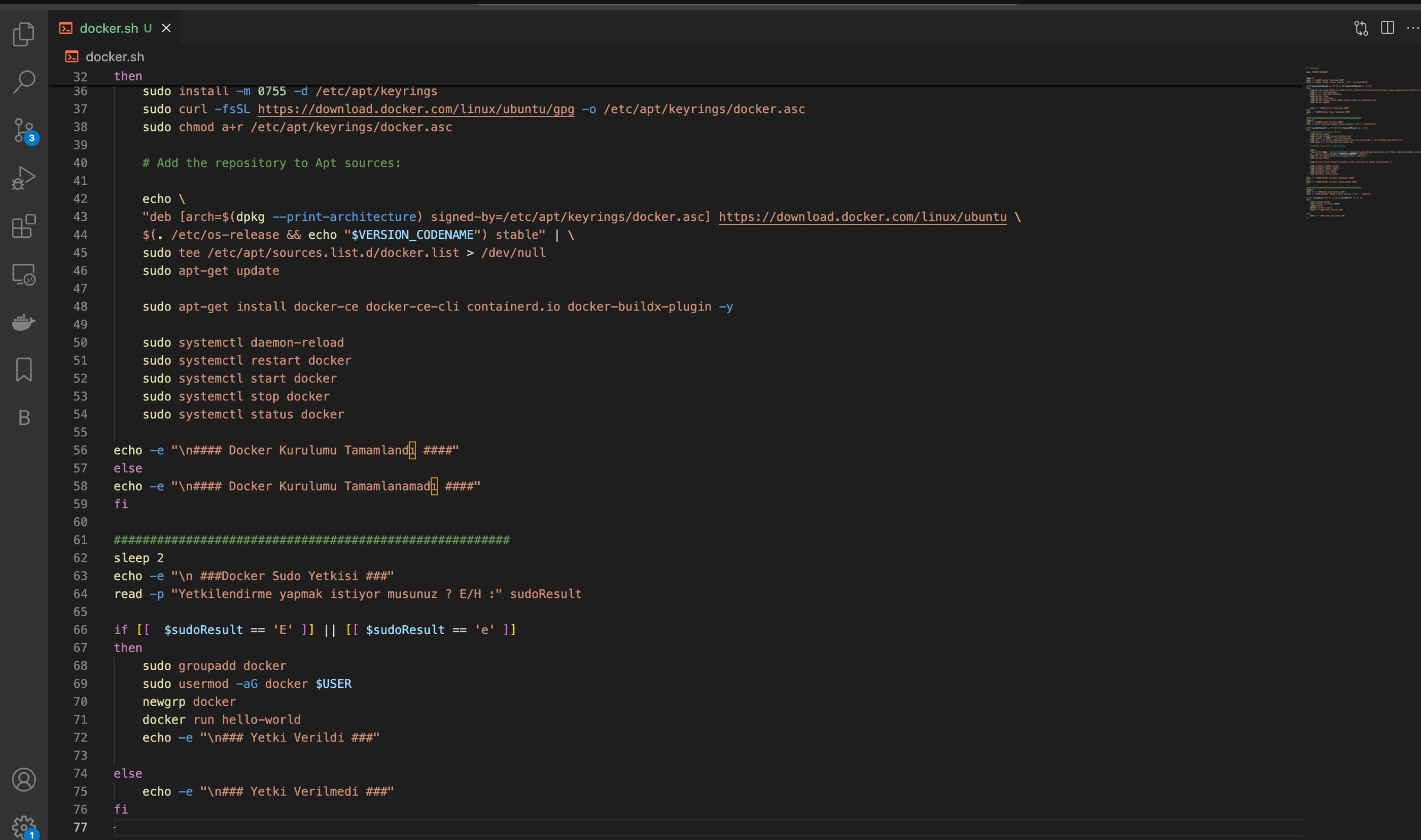
Linux'ta çalıştırmak üzere docker.sh yazma



```
docker.sh U ×
docker.sh
    Click here to ask Blackbox to help you code faster
1  #! /bin/bash
2
3  echo "DOCKER KURULUMU"
4
5
6  sleep 2
7  echo -e "\n#### Docker Temizleme ####"
8  read -p "Docker silmek istiyor musunuz ? E/H " uninstallResult
9
10 if [[ $uninstallResult == 'E' ]] || [[ $uninstallResult == 'e' ]]
11 then
12     sudo apt-get purge docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin docker-ce-rootless-extras -
13     sudo rm -rf /var/lib/docker
14     sudo rm -rf /var/lib/containerd
15     sudo apt-get clean
16     sudo apt-get autoremove -y
17     sudo apt-get remove docker docker-engine docker.io containerd runc
18     sudo apt-get update
19
20
21     echo -e "\n#### Docker Temizlendi ####"
22 else
23     echo -e "\n#### Docker Silme Yapılmadı ####"
24 fi
25
26 #####
27 sleep 2
28 echo -e "\n#### Docker Kurulumu ####"
29 read -p "Docker Kurulumu yapmak istiyor musunuz ? E/H :" installResult
30
31 if [[ $installResult == 'E' ]] || [[ $installResult == 'e' ]]
32 then
33     # Add Docker's official GPG key:
34     sudo apt-get update
35     sudo apt-get install ca-certificates curl
36     sudo install -m 0755 -d /etc/apt/keyrings
37     sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
38     sudo chmod a+r /etc/apt/keyrings/docker.asc
39
40     # Add the repository to Apt sources:
41
42     echo \
"deb [arch=$(dpkg --print-architecture)] signed by /etc/apt/keyrings/docker.gpg https://download.docker.com/linux/ubuntu/"
```

Docker Bash Script

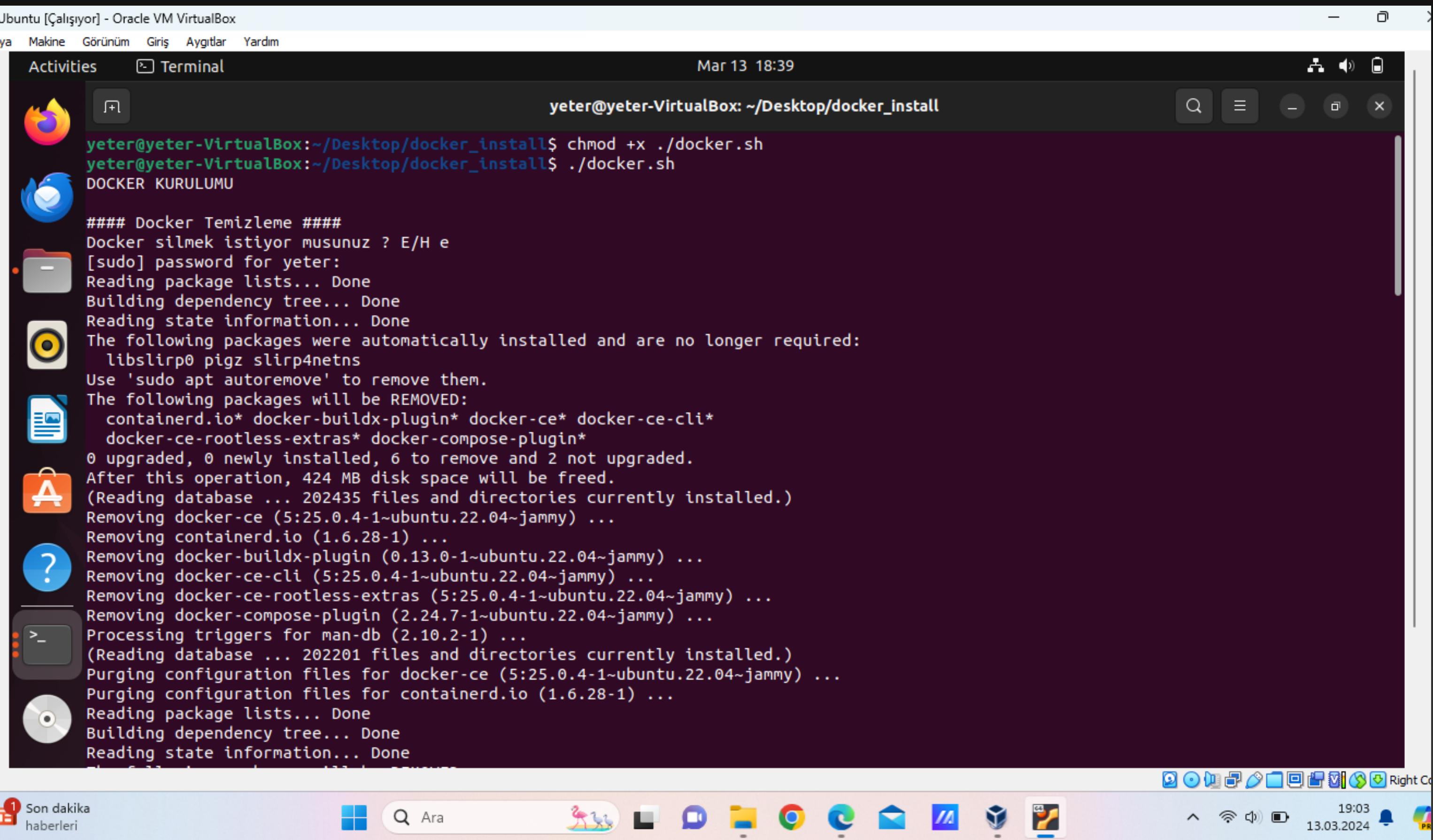
Linux'ta çalıştırmak üzere docker.sh yazma



```
32 then
33     sudo install -m 0755 -d /etc/apt/keyrings
34     sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
35     sudo chmod a+r /etc/apt/keyrings/docker.asc
36
37     # Add the repository to Apt sources:
38
39     echo \
40         "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
41             $(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \
42     sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
43     sudo apt-get update
44
45     sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin -y
46
47     sudo systemctl daemon-reload
48     sudo systemctl restart docker
49     sudo systemctl start docker
50     sudo systemctl stop docker
51     sudo systemctl status docker
52
53     echo -e "\n#### Docker Kurulumu Tamamlandı ####"
54     else
55     echo -e "\n#### Docker Kurulumu Tamamlanmadı ####"
56     fi
57
58 ######
59 sleep 2
60 echo -e "\n##Docker Sudo Yetkisi ##"
61 read -p "Yetkilendirme yapmak istiyor musunuz ? E/H :" sudoResult
62
63 if [[ $sudoResult == 'E' ]] || [[ $sudoResult == 'e' ]]
64 then
65     sudo groupadd docker
66     sudo usermod -aG docker $USER
67     newgrp docker
68     docker run hello-world
69     echo -e "\n## Yetki Verildi ##"
70
71 else
72     echo -e "\n## Yetki Verilmedi ##"
73 fi
74
75
76
77
```

Docker Bash Script

Docker.sh dosyasını çalıştırma



The screenshot shows a terminal window titled "Ubuntu [Çalışıyor] - Oracle VM VirtualBox" running on an Ubuntu desktop environment. The terminal window has a dark theme and displays the following command-line session:

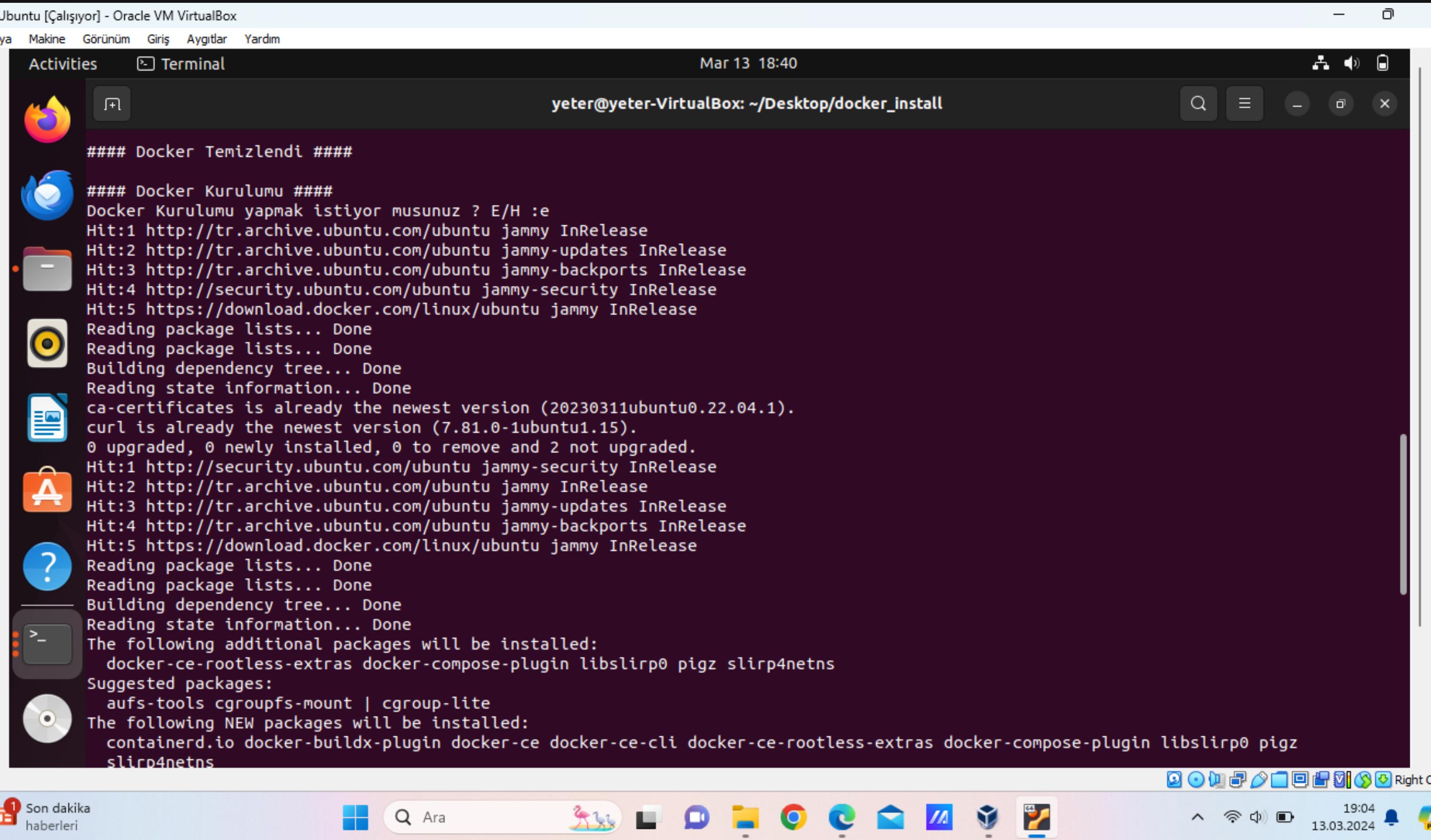
```
yeter@yeter-VirtualBox: ~/Desktop/docker_install$ chmod +x ./docker.sh
yeter@yeter-VirtualBox: ~/Desktop/docker_install$ ./docker.sh
DOCKER KURULUMU

#### Docker Temizleme ####
Docker silmek istiyor musunuz ? E/H e
[sudo] password for yeter:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libslirp0 pigz slirp4netns
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
  containerd.io* docker-buildx-plugin* docker-ce* docker-ce-cli*
  docker-ce-rootless-extras* docker-compose-plugin*
0 upgraded, 0 newly installed, 6 to remove and 2 not upgraded.
After this operation, 424 MB disk space will be freed.
(Reading database ... 202435 files and directories currently installed.)
Removing docker-ce (5:25.0.4-1~ubuntu.22.04~jammy) ...
Removing containerd.io (1.6.28-1) ...
Removing docker-buildx-plugin (0.13.0-1~ubuntu.22.04~jammy) ...
Removing docker-ce-cli (5:25.0.4-1~ubuntu.22.04~jammy) ...
Removing docker-ce-rootless-extras (5:25.0.4-1~ubuntu.22.04~jammy) ...
Removing docker-compose-plugin (2.24.7-1~ubuntu.22.04~jammy) ...
Processing triggers for man-db (2.10.2-1) ...
(Reading database ... 202201 files and directories currently installed.)
Purging configuration files for docker-ce (5:25.0.4-1~ubuntu.22.04~jammy) ...
Purging configuration files for containerd.io (1.6.28-1) ...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages will be REMOVED:
  containerd.io* docker-buildx-plugin* docker-ce* docker-ce-cli*
```

The terminal window also shows a sidebar with various application icons and a system tray at the bottom.

Docker Bash Script

Docker.sh dosyasını çalıştırma

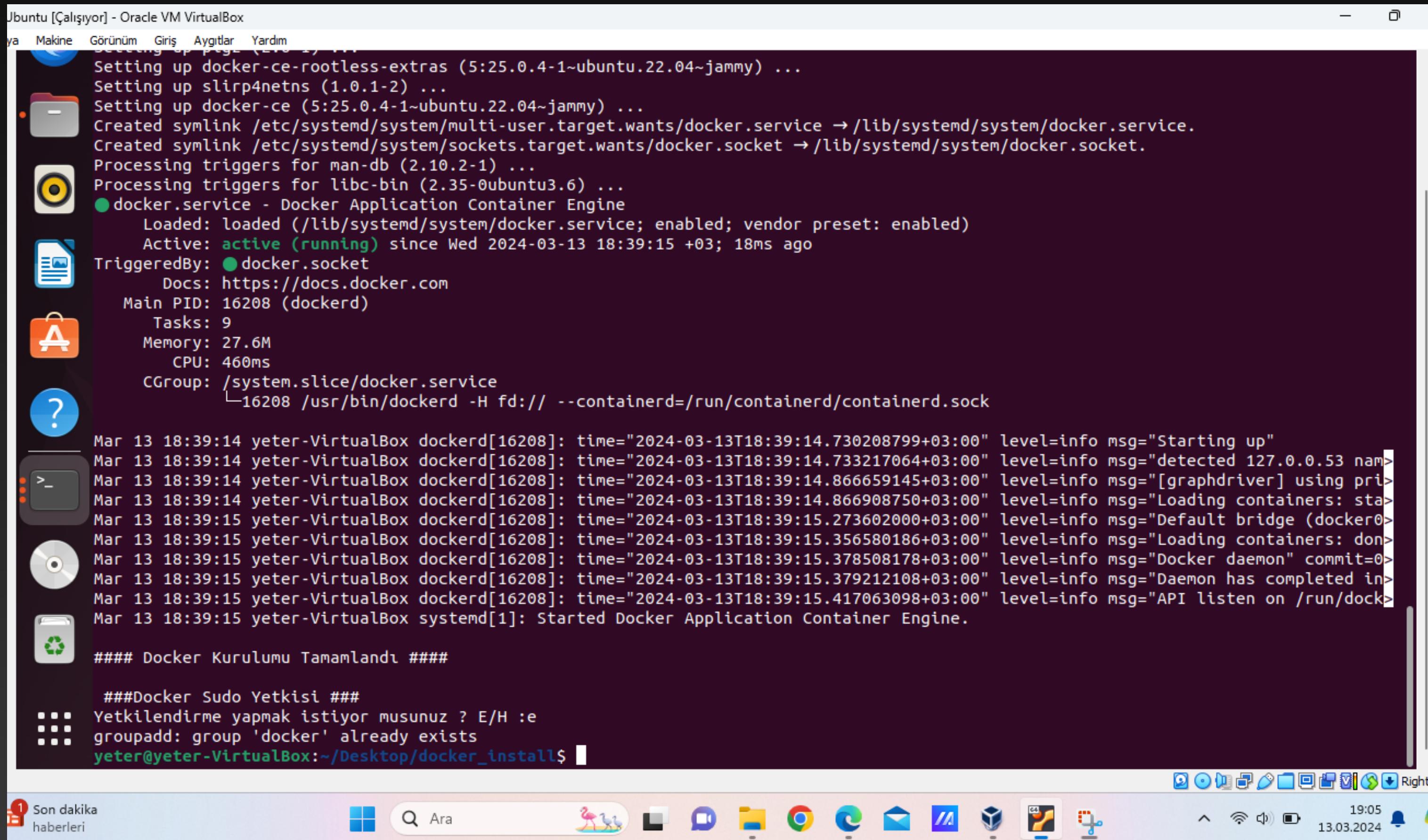


The screenshot shows a terminal window titled "yeter@yeter-VirtualBox: ~/Desktop/docker_install" running on an Ubuntu desktop. The terminal displays the output of a Docker installation script. The output includes:

```
#### Docker Temizlendi ####
#### Docker Kurulumu ####
Docker Kurulumu yapmak istiyor musunuz ? E/H :e
Hit:1 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:5 https://download.docker.com/linux/ubuntu jammy InRelease
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
ca-certificates is already the newest version (20230311ubuntu0.22.04.1).
curl is already the newest version (7.81.0-1ubuntu1.15).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
Hit:1 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:2 http://tr.archive.ubuntu.com/ubuntu jammy InRelease
Hit:3 http://tr.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:4 http://tr.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:5 https://download.docker.com/linux/ubuntu jammy InRelease
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  docker-ce-rootless-extras docker-compose-plugin libslirp0 pigz slirp4netns
Suggested packages:
  aufs-tools cgroupfs-mount | cgroup-lite
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-rootless-extras docker-compose-plugin libslirp0 pigz
  slirp4netns
```

Docker Bash Script

Docker.sh dosyasını çalıştırma



```
JUbuntu [Çalışıyor] - Oracle VM VirtualBox
ya Makine Görünüm Giriş Aygıtlar Yardım
Setting up docker-ce-rootless-extras (5:25.0.4-1~ubuntu.22.04~jammy) ...
Setting up slirp4netns (1.0.1-2) ...
Setting up docker-ce (5:25.0.4-1~ubuntu.22.04~jammy) ...
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/systemd/system/docker.socket.
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.6) ...
● docker.service - Docker Application Container Engine
  Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
  Active: active (running) since Wed 2024-03-13 18:39:15 +03; 18ms ago
    TriggeredBy: ● docker.socket
      Docs: https://docs.docker.com
    Main PID: 16208 (dockerd)
      Tasks: 9
        Memory: 27.6M
          CPU: 460ms
        CGroup: /system.slice/docker.service
                  └─16208 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

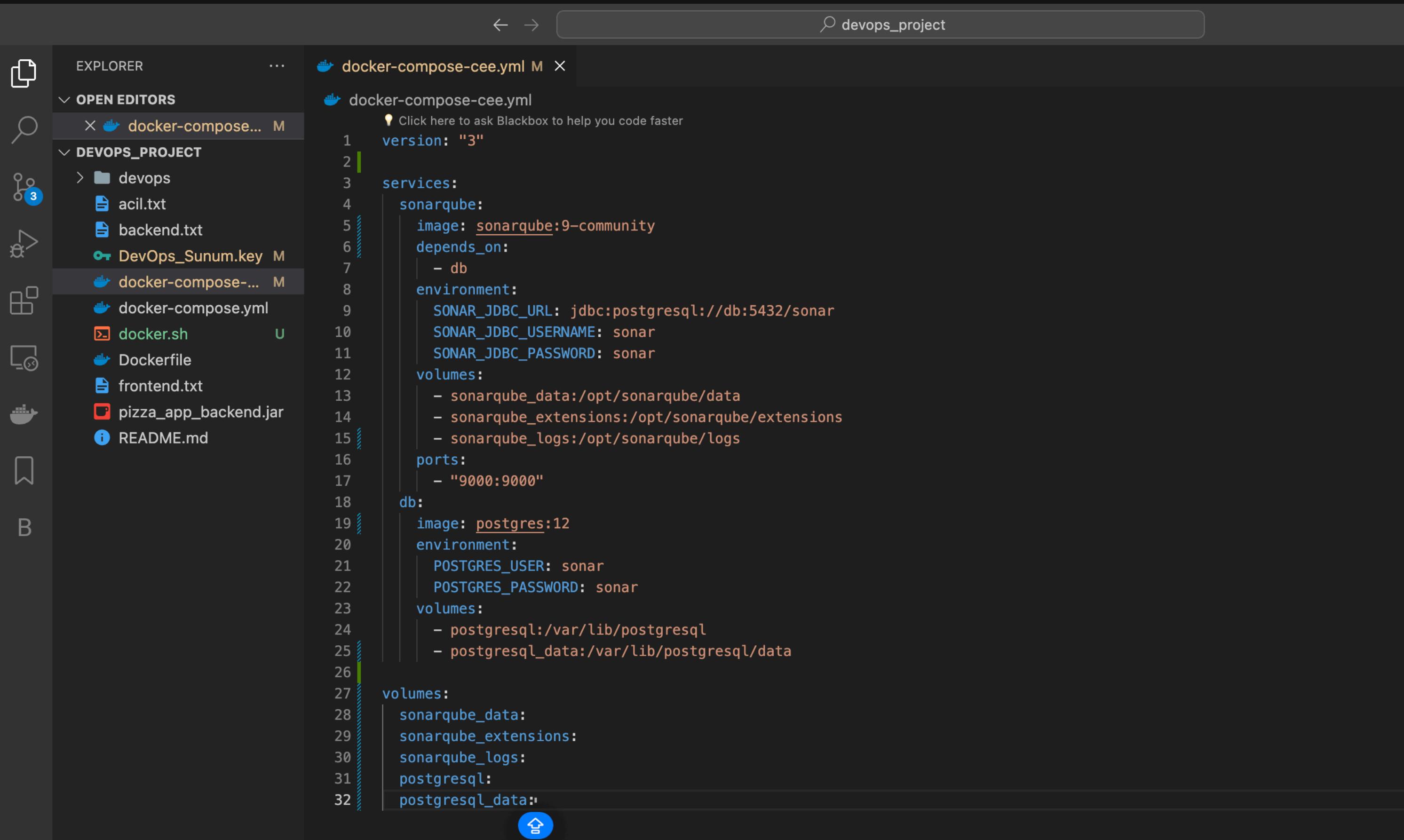
Mar 13 18:39:14 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:14.730208799+03:00" level=info msg="Starting up"
Mar 13 18:39:14 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:14.733217064+03:00" level=info msg="detected 127.0.0.53 name"
Mar 13 18:39:14 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:14.866659145+03:00" level=info msg="[graphdriver] using pri
Mar 13 18:39:14 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:14.866908750+03:00" level=info msg="Loading containers: sta
Mar 13 18:39:15 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:15.273602000+03:00" level=info msg="Default bridge (docker0)
Mar 13 18:39:15 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:15.356580186+03:00" level=info msg="Loading containers: don
Mar 13 18:39:15 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:15.378508178+03:00" level=info msg="Docker daemon" commit=0
Mar 13 18:39:15 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:15.379212108+03:00" level=info msg="Daemon has completed in
Mar 13 18:39:15 yeter-VirtualBox dockerd[16208]: time="2024-03-13T18:39:15.417063098+03:00" level=info msg="API listen on /run/dock
Mar 13 18:39:15 yeter-VirtualBox systemd[1]: Started Docker Application Container Engine.

#### Docker Kurulumu Tamamlandı ####

### Docker Sudo Yetkisi ###
Yetkilendirme yapmak istiyor musunuz ? E/H :e
groupadd: group 'docker' already exists
yeter@yeter-VirtualBox:~/Desktop/docker_install$
```

Docker compose & SonarQube

- Docker compose üzerinden Postgresql, Sonarqube kurulumu

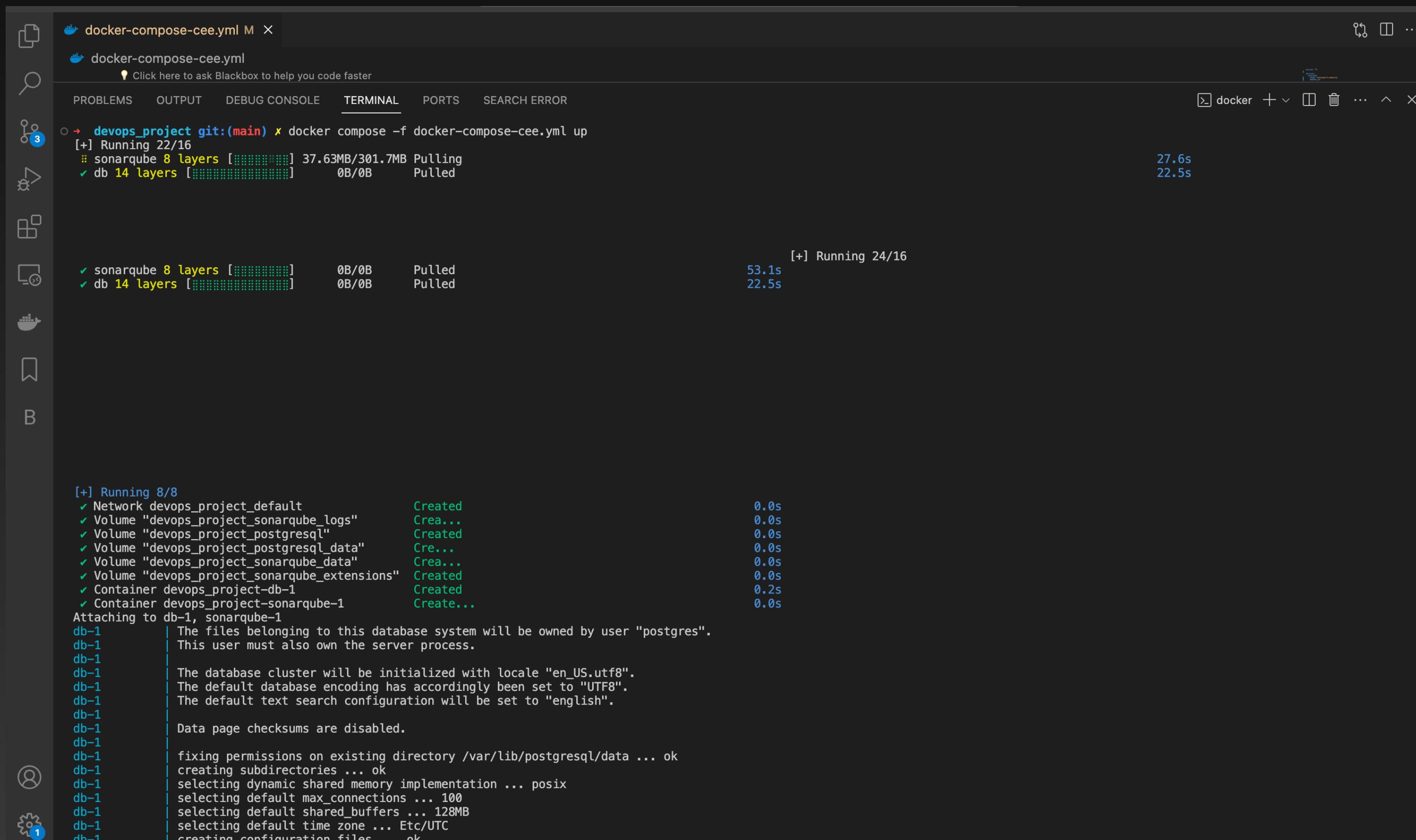


The screenshot shows a code editor interface with a dark theme. On the left is the Explorer sidebar, which lists files and folders. In the center is the main editor area displaying a Docker Compose file named `docker-compose.yml`. The file defines two services: `sonarqube` and `db`.

```
version: "3"
services:
  sonarqube:
    image: sonarqube:9-community
    depends_on:
      - db
    environment:
      SONAR_JDBC_URL: jdbc:postgresql://db:5432/sonar
      SONAR_JDBC_USERNAME: sonar
      SONAR_JDBC_PASSWORD: sonar
    volumes:
      - sonarqube_data:/opt/sonarqube/data
      - sonarqube_extensions:/opt/sonarqube/extensions
      - sonarqube_logs:/opt/sonarqube/logs
    ports:
      - "9000:9000"
  db:
    image: postgres:12
    environment:
      POSTGRES_USER: sonar
      POSTGRES_PASSWORD: sonar
    volumes:
      - postgresql:/var/lib/postgresql
      - postgresql_data:/var/lib/postgresql/data
volumes:
  sonarqube_data:
  sonarqube_extensions:
  sonarqube_logs:
  postgresql:
  postgresql_data:
```

Docker compose & SonarQube

- Yazılan compose dosyası çalışma
- docker compose -f docker-compose-cee.yml up



The screenshot shows the Docker Compose terminal output in the VS Code interface. The terminal window title is "docker-compose-cee.yml". The output shows the command "docker compose -f docker-compose-cee.yml up" being run, followed by the status of the "sonarqube" and "db" services. The "sonarqube" service has 8 layers and is pulling, while the "db" service has 14 layers and is pulled. The total time for the operation is 53.1s, with 22.5s taken for pulling.

```
[+] Running 24/16
  ✓ sonarqube 8 layers [██████] 37.63MB/301.7MB Pulling
  ✓ db 14 layers [██████████] 0B/0B Pulled
[+] Running 24/16
  ✓ sonarqube 8 layers [██████] 0B/0B Pulled
  ✓ db 14 layers [██████████] 0B/0B Pulled
[+] Running 8/8
  ✓ Network devops_project_default Created 0.0s
  ✓ Volume "devops_project_sonarqube_logs" Created 0.0s
  ✓ Volume "devops_project_postgresql" Created 0.0s
  ✓ Volume "devops_project_postgresql_data" Created 0.0s
  ✓ Volume "devops_project_sonarqube_data" Created 0.0s
  ✓ Volume "devops_project_sonarqube_extensions" Created 0.0s
  ✓ Container devops_project-db-1 Created 0.2s
  ✓ Container devops_project-sonarqube-1 Create... 0.0s
Attaching to db-1, sonarqube-1
db-1 | The files belonging to this database system will be owned by user "postgres".
db-1 | This user must also own the server process.
db-1 | The database cluster will be initialized with locale "en_US.utf8".
db-1 | The default database encoding has accordingly been set to "UTF8".
db-1 | The default text search configuration will be set to "english".
db-1 | Data page checksums are disabled.
db-1 | fixing permissions on existing directory /var/lib/postgresql/data ... ok
db-1 | creating subdirectories ... ok
db-1 | selecting dynamic shared memory implementation ... posix
db-1 | selecting default max_connections ... 100
db-1 | selecting default shared_buffers ... 128MB
db-1 | selecting default time zone ... Etc/UTC
db-1 | creating configuration files ... ok
```

Docker compose & SonarQube

- Maven kodu

```
mvn clean verify sonar:sonar \
-Dsonar.projectKey=my_backend \
-Dsonar.host.url=http://localhost:9000 \
-Dsonar.login=sq..._7696be57c80a13d27c6
84f4e7c5ce148ba720bb3
```

The screenshot shows a dark-themed IDE interface with a terminal window open. The terminal tab is selected, and the content is a command-line session:

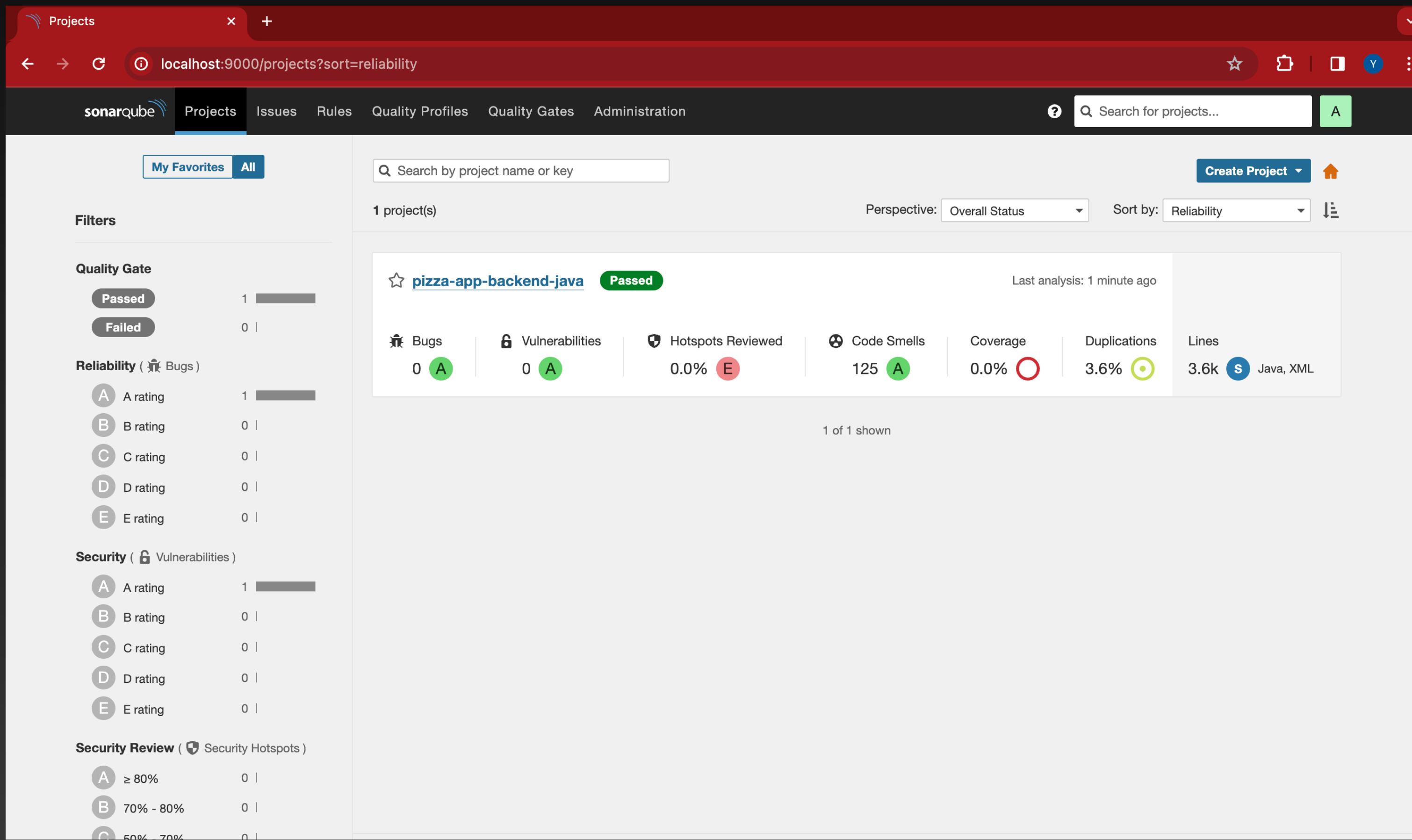
```
mvn clean verify sonar:sonar \
-Dsonar.projectKey=my_backend \
-Dsonar.host.url=http://localhost:9000 \
-Dsonar.login=sq..._7696be57c80a13d27c6
84f4e7c5ce148ba720bb3
```

Below the command, the output of the Maven build is displayed, showing the process of cleaning, verifying, and running the SonarQube analysis on the project.

```
[INFO] Scanning for projects...
[INFO]
[INFO] -----< dev.mohibullah:pizza-app-backend-java >-----
[INFO] Building pizza-app-backend-java 0.0.1-SNAPSHOT
[INFO]   from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- clean:3.2.0:clean (default-clean) @ pizza-app-backend-java ---
[INFO] Deleting /Users/yeterkarakus/pizza-app-backend-java/target
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ pizza-app-backend-java ---
[INFO] Copying 1 resource from src/main/resources to target/classes
[INFO] Copying 4 resources from src/main/resources to target/classes
[INFO]
[INFO] --- compiler:3.11.0:compile (default-compile) @ pizza-app-backend-java ---
[INFO] Changes detected - recompiling the module! :source
[INFO] Compiling 105 source files with javac [debug release 17] to target/classes
[INFO] Annotation processing is enabled because one or more processors were found
  on the class path. A future release of javac may disable annotation processing
  unless at least one processor is specified by name (-processor), or a search
  path is specified (--processor-path, --processor-module-path), or annotation
  processing is enabled explicitly (-proc:only, -proc:full).
  Use -Xlint:-options to suppress this message.
  Use -proc:none to disable annotation processing.
```

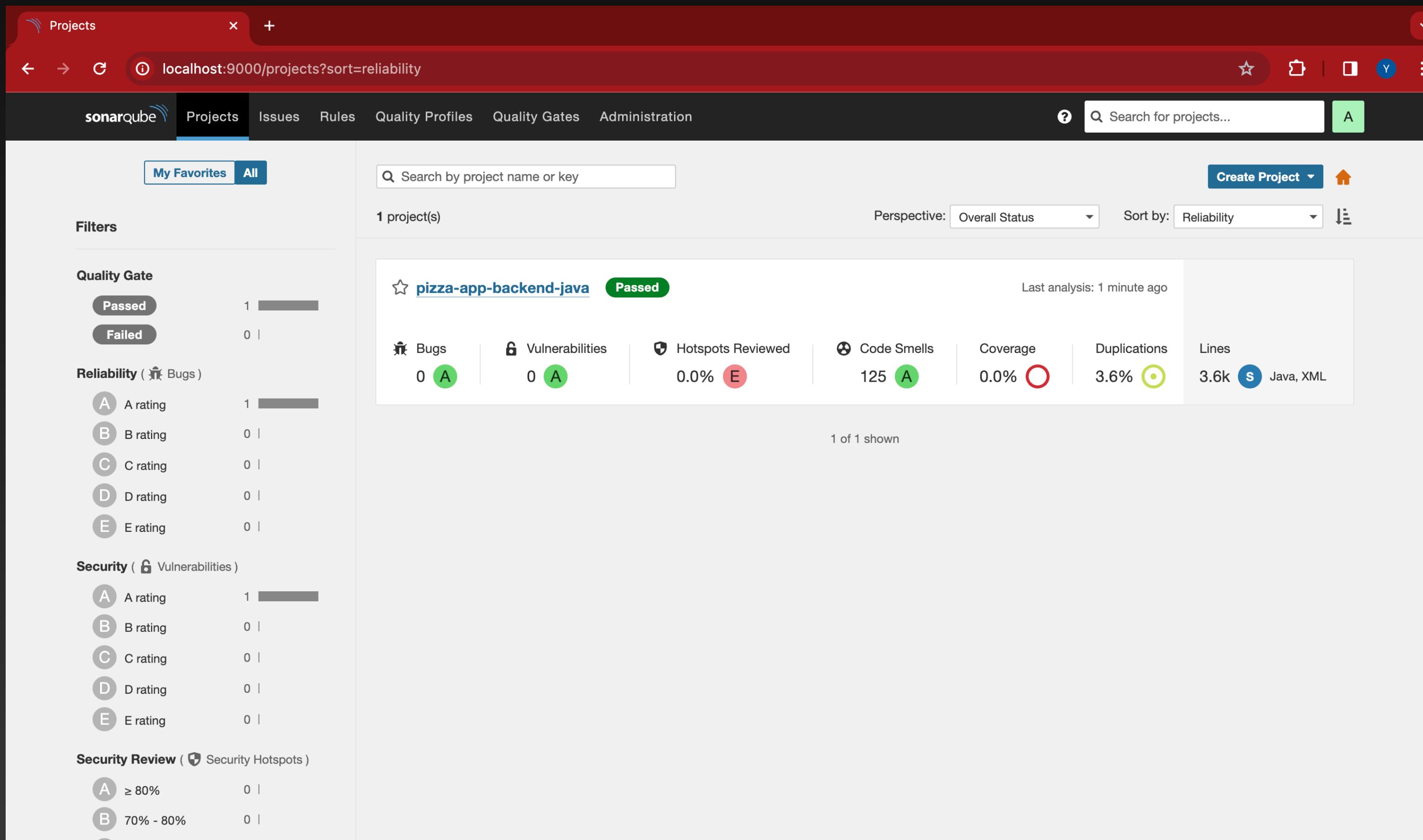
Docker compose & SonarQube

- Kod analizi
- 125 code smell bulundu.
- Bug ve Vulnerabilities bulunmadı.



Docker compose & SonarQube

- Kod analizi
- 125 code smell bulundu.
- Bug ve Vulnerabilities bulunmadı.



Docker compose & SonarQube

- Issue

The screenshot shows the SonarQube interface for managing issues. The top navigation bar includes links for sonarqube, Projects, Issues (which is selected), Rules, Quality Profiles, Quality Gates, and Administration. A search bar at the top right allows for searching projects. The main content area displays a list of issues under the heading "My Issues".

Filters:

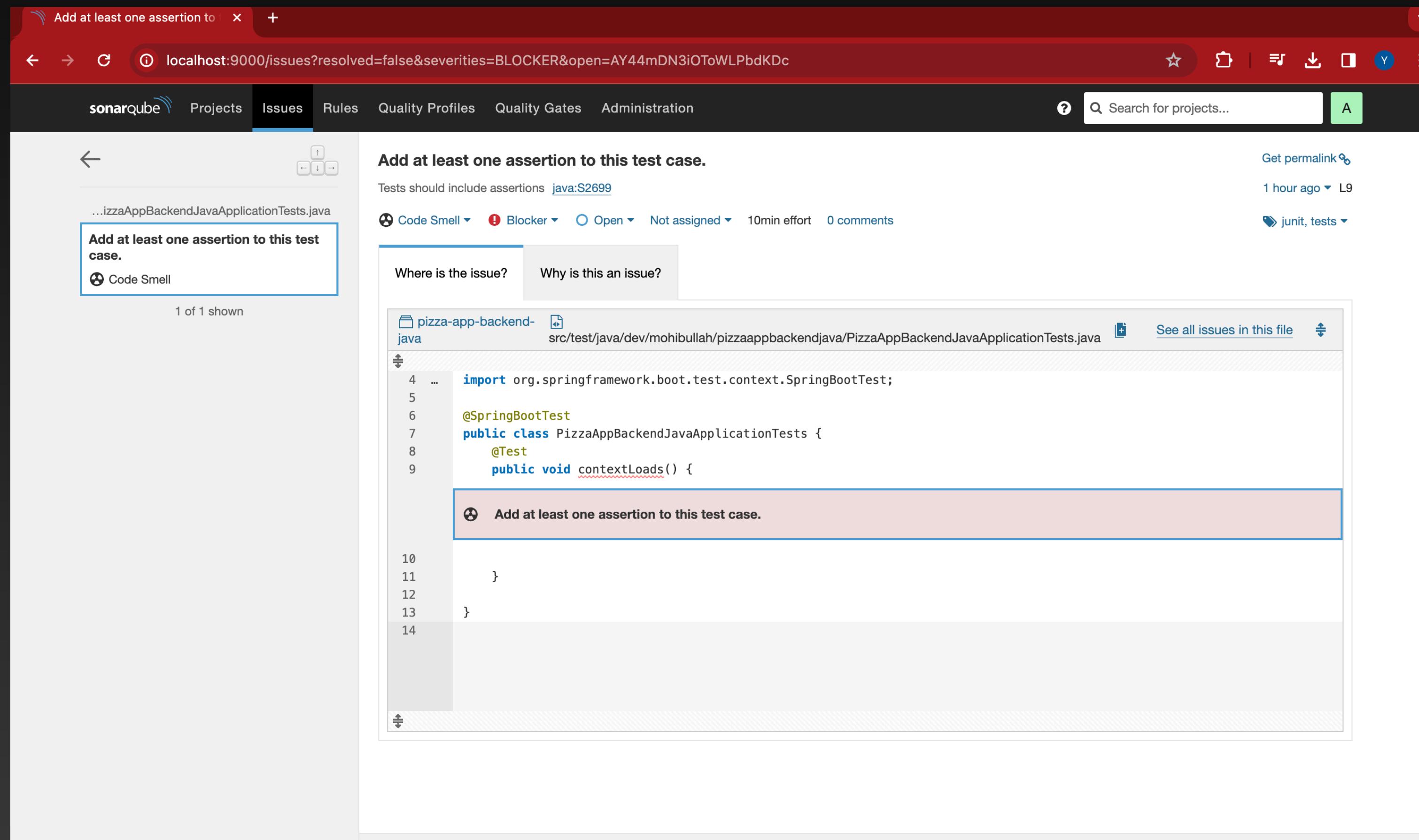
- Type: Bug (0), Vulnerability (0), Code Smell (125)
- Severity: Blocker (1), Critical (11), Info (0), Major (25)
- Scope, Resolution, Status, Security Category, Creation Date, Language, Rule, Tag, Project, Assignee, Author are all expanded.

Issues List:

- pizza-app-backend-java / src/.../mohibullah/pizzaappbackendjava/ApplicationStartupInitializer.java**
 - Rename this local variable to match the regular expression '^[a-zA-Z][a-zA-Z0-9]*\$'.** (5 months ago, L31, Minor, Open, Not assigned, 2min effort, Comment, convention)
 - Rename this local variable to match the regular expression '^[a-zA-Z][a-zA-Z0-9]*\$'.** (5 months ago, L36, Minor, Open, Not assigned, 2min effort, Comment, convention)
 - Replace this use of System.out or System.err by a logger.** (5 months ago, L45, Major, Open, Not assigned, 10min effort, Comment, bad-practice, cert, owasp-a3)
 - Define a constant instead of duplicating this literal "admin" 3 times.** (5 months ago, L48, Critical, Open, Not assigned, 8min effort, Comment, design)
 - Replace this use of System.out or System.err by a logger.** (5 months ago, L57, Major, Open, Not assigned, 10min effort, Comment, bad-practice, cert, owasp-a3)
 - Replace this use of System.out or System.err by a logger.** (5 months ago, L80, Major, Open, Not assigned, 10min effort, Comment, bad-practice, cert, owasp-a3)
 - Replace this use of System.out or System.err by a logger.** (5 months ago, L85, Major, Open, Not assigned, 10min effort, Comment, bad-practice, cert, owasp-a3)
 - Replace this use of System.out or System.err by a logger.** (5 months ago, L87, Major, Open, Not assigned, 10min effort, Comment, bad-practice, cert, owasp-a3)
- pizza-app-backend-java / src/.../mohibullah/pizzaappbackendjava/PizzaAppBackendJavaApplication.java**
 - Replace this use of System.out or System.err by a logger.** (5 months ago, L25, Major, Open, Not assigned, 10min effort, Comment, bad-practice, cert, owasp-a3)

Docker compose & SonarQube

- Blocker code



Docker compose & SonarQube

- Critical Code

The screenshot shows the SonarQube interface with the URL `localhost:9000/issues?resolved=false&severities=CRITICAL&open=AY44mDLtiOToWLPbdKCi`. The main content is a list of critical issues:

- Define a constant instead of duplicating this literal "admin" 3 times.**
String literals should not be duplicated `java:S1192`
5 months ago L48
- Code Smell** Critical Open Not assigned 8min effort 0 comments
Where is the issue? Why is this an issue?
- Code Smell** +3
1 Duplication
2 Duplication
3 Duplication
- Define a constant instead of duplicating this literal "customer" 3 times.**
Code Smell +3
- Add a nested comment explaining why this method is empty, throw an UnsupportedOperationException or complete the implementation.**
Code Smell
- Add a nested comment explaining why this method is empty, throw an UnsupportedOperationException or complete the implementation.**
Code Smell
- Code Smell**

The right side of the screen displays the Java code for `ApplicationStartupInitializer.java` with the following snippet highlighted:

```
43 mohi...  
44 if (doesAdminExist == null) {  
45     System.out.println("Creating default admin user");  
46     User newUser = new User();  
47     newUser.setEmail("admin@pizzaapp.com");  
48     newUser.setRole(1 "admin");  
49  
50     newUser.setPassword("ABC123as$");  
51     newUser.setFirstName(2 "admin");  
52     newUser.setLastName(3 "admin");  
53     newUser.setMobileNo("0000000");  
54     newUser.setAddress("nill");  
55  
56     userRepository.save(newUser);  
57     doesAdminExist = newUser;  
      System.out.println("Admin user created");
```

A red vertical bar highlights the line `newUser.setRole(1 "admin");`, which corresponds to the first of the three duplication issues listed on the left.

Docker compose & SonarQube

- Major Code

