



Hacettepe University

Computer Engineering Department

Using **GitHub Classroom**

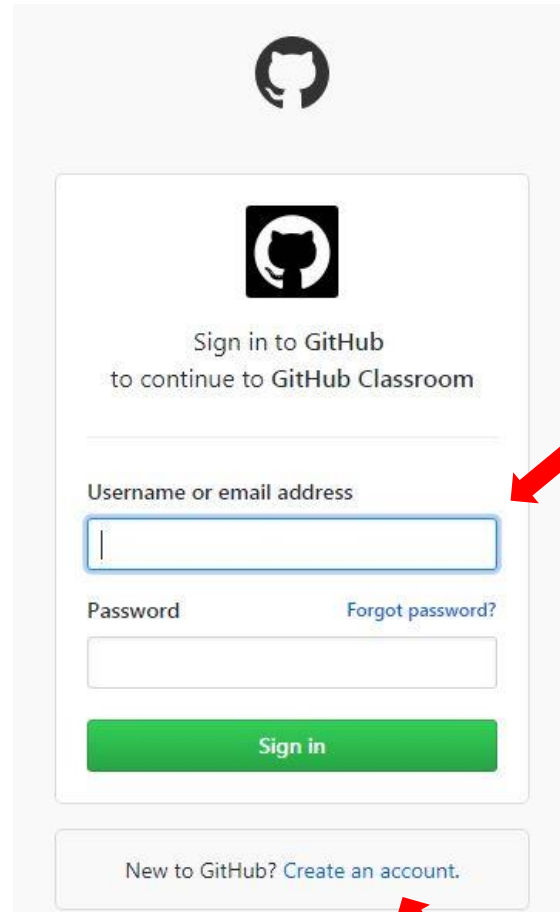
BBM103 Introduction to Programming Lab 1

Fall 2019

Signing Up to GitHub Classroom



Signing Up to GitHub Classroom




The image shows a screenshot of the GitHub sign-in page. At the top center is the GitHub logo. Below it is a larger GitHub logo icon. The text reads "Sign in to GitHub to continue to GitHub Classroom". There are two input fields: "Username or email address" and "Password". Below the password field is a "Forgot password?" link. A green "Sign in" button is positioned below the password field. At the bottom of the form area, there is a link that says "New to GitHub? Create an account." Two red arrows point to the "Username or email address" field and the "Create an account" link.


Fill textboxes and click sign in button to authorize


Click to sign up unless you have an educational account

Signing Up to GitHub Classroom

You MUST create your account with your IDs beginning with 'b'.

 **Step 1:**
Create personal account

 **Step 2:**
Choose your plan

 **Step 3:**
Tailor your experience

Create your personal account

Username

 ✓
This will be your username — you can enter your organization's username next.

Email Address

 ✓
You will occasionally receive account related emails. We promise not to share your email with anyone.

Password

 ✓
Use at least one lowercase letter, one numeral, and seven characters.

By clicking on "Create an account" below, you are agreeing to the [Terms of Service](#) and the [Privacy Policy](#).

Create an account

You'll love GitHub

- Unlimited collaborators
- Unlimited public repositories
- ✓ Great communication
- ✓ Frictionless development
- ✓ Open source community

Signing Up to GitHub Classroom

There are two options. We recommend that you choose the 1st option unless you need a private repository.



✓ Completed
Set up a personal account

🔧 Step 2:
Choose your plan

⚙️ Step 3:
Tailor your experience

Choose your personal plan

Unlimited public repositories for free.

Unlimited private repositories for \$7/month.

Don't worry, you can cancel or upgrade at any time.

Help me set up an organization next
Organizations are separate from personal accounts and are best suited for businesses who need to manage permissions for many employees. [Learn more about organizations](#)

Send me updates on GitHub news, offers, and events
Unsubscribe anytime in your email preferences. [Learn more](#)

Both plans include:

- ✓ Collaborative code review
- ✓ Issue tracking
- ✓ Open source community
- ✓ Unlimited public repositories
- ✓ Join any organization

Signing Up to GitHub Classroom

Authorizing an OAuth application requires a verified email address.



Open your mailbox to verify your github account.






Please verify your email address


Before you can contribute on GitHub, we need you to verify your email address. An email containing verification instructions was sent to ~~XXXXXXXXXX~~ [cs.hacettepe.edu.tr](mailto:XXXXXXXXXX@cs.hacettepe.edu.tr).


Didn't get the email? [Resend verification email](#) or [change your email settings](#).

Signing Up to GitHub Classroom


[GitHub] Please verify your email address. Posta: 1 / 4839


Gönderen:  GitHub 
Alıcı: 
Tarih: Bugün 13:33

Hi 

Help us secure your GitHub account by verifying your email address (@img@redacted.hacettepe.edu.tr). This lets you access all of GitHub's features.

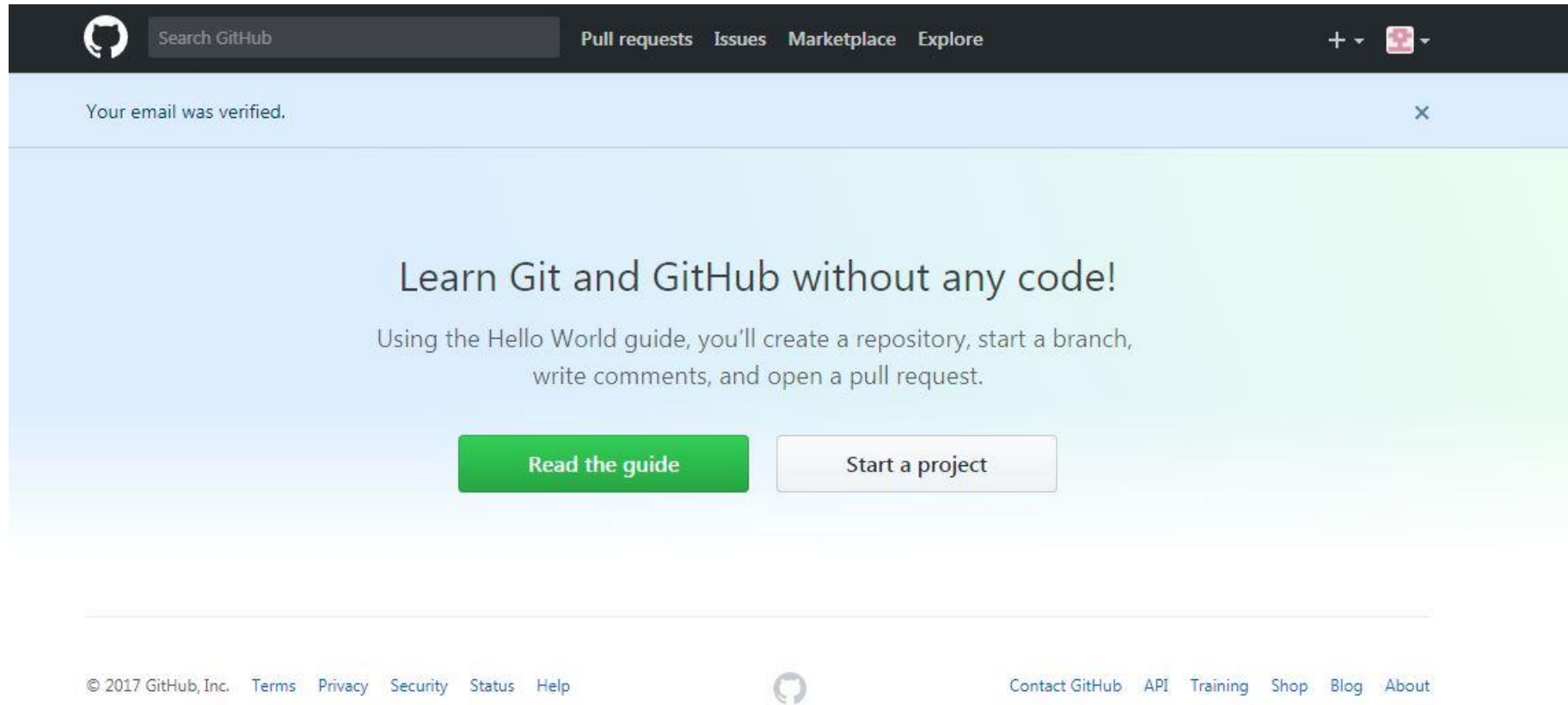
[Verify email address](#)

Button not working? Paste the following link into your browser:
/emails/37919780/confirm_verification/f4f871643650c9c66c55f63d8bb88360ce70144f">https://github.com/users/emails/37919780/confirm_verification/f4f871643650c9c66c55f63d8bb88360ce70144f

You're receiving this email because you  recently created a new GitHub account or added a new email address. If this wasn't you, please ignore this email.

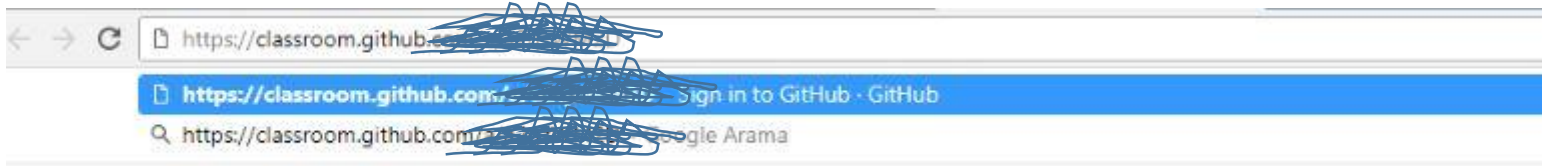
Click the link provided within the mail content

Signing Up to GitHub Classroom

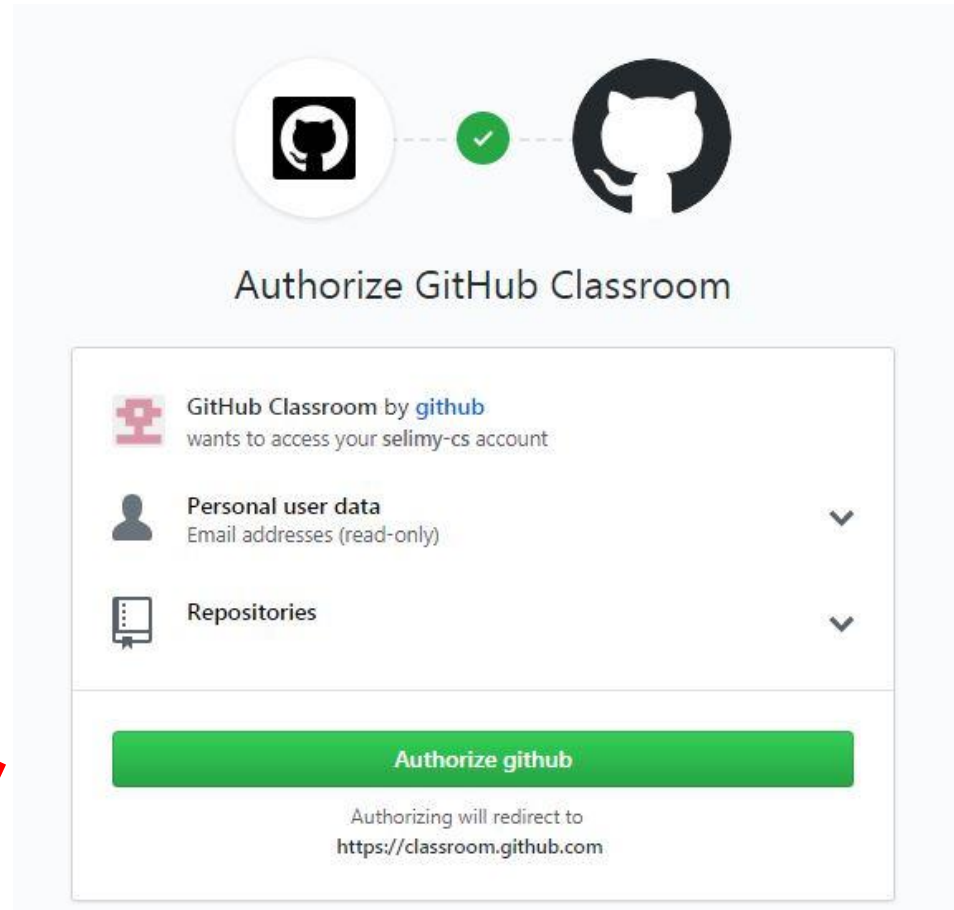


The screenshot shows the GitHub Classroom landing page. At the top, there is a dark navigation bar with the GitHub logo, a search bar labeled "Search GitHub", and links for "Pull requests", "Issues", "Marketplace", and "Explore". On the right side of the navigation bar, there are icons for a plus sign and a profile picture. Below the navigation bar, a light blue banner displays the message "Your email was verified." with a close button (X) on the right. The main content area has a light blue and green gradient background. It features the heading "Learn Git and GitHub without any code!" followed by the text "Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request." Below this text are two buttons: a green "Read the guide" button and a white "Start a project" button with a grey border. At the bottom of the page, there is a footer with copyright information "© 2017 GitHub, Inc." and links for "Terms", "Privacy", "Security", "Status", and "Help". On the right side of the footer, there is the GitHub logo and links for "Contact GitHub", "API", "Training", "Shop", "Blog", and "About".

Signing Up to GitHub Classroom



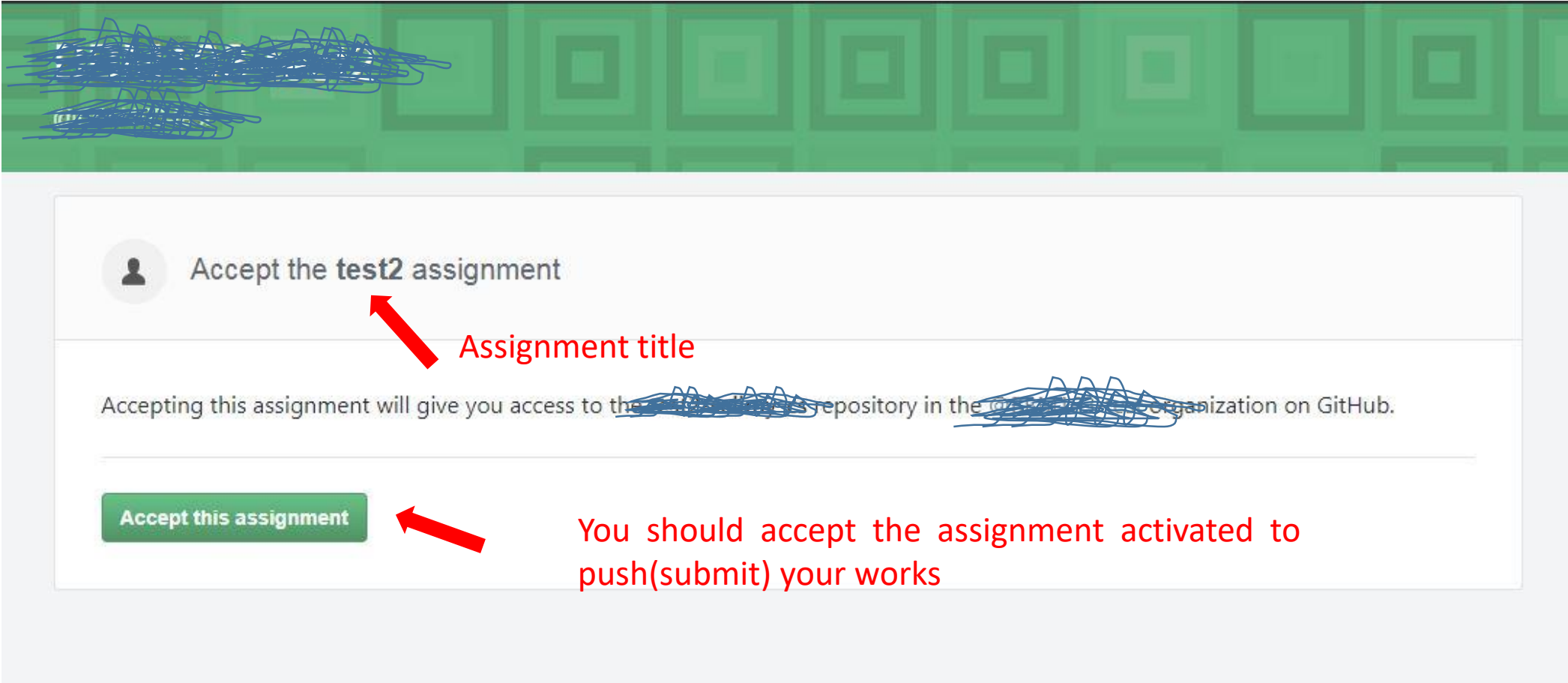
Joining BBM103 Classroom



Now authorize github account.



Joining BBM103 Classroom



The screenshot shows a notification card with a green header and a white body. The header contains a blue scribble and a grid of green squares. The body contains a notification for an assignment titled 'test2'. A red arrow points from the text 'Assignment title' to the word 'test2'. Below the notification text, a green button labeled 'Accept this assignment' is shown. A second red arrow points from the text 'You should accept the assignment activated to push(submit) your works' to this button. The notification text includes a blue scribble over the repository name and another blue scribble over the organization name.

Accept the **test2** assignment

Accepting this assignment will give you access to the ~~test2~~ repository in the ~~test2~~ organization on GitHub.

Accept this assignment

Assignment title

You should accept the assignment activated to push(submit) your works

Joining BBM103 Classroom



Accepted the **test2** assignment

You are ready to go!

You may receive an invitation to join ~~the test~~ via email invitation on your behalf. No further action is necessary.

Your assignment has been created here: <https://github.com/> ~~the test~~

Joining BBM103 Classroom

The screenshot shows the top navigation bar of a GitHub repository. The repository name is redacted with blue scribbles, and it is marked as 'Private'. On the right, there are buttons for 'Watch' (0), 'Star' (0), and 'Fork' (0). Below the navigation bar, there are tabs for 'Code', 'Issues' (0), 'Pull requests' (0), 'Projects' (0), 'Wiki', 'Settings', and 'Insights'. The main content area has a light blue background and contains the following text:

Quick setup — if you've done this kind of thing before

Set up in Desktop or **HTTPS** **SSH** `https://github.com/[redacted]`

We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# [redacted] README.md" > README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/[redacted]
git push -u origin master
```



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How to Use the Linux Command Line

BBM103 Introduction to Programming Lab I

Fall 2019

The Shell & Terminal

- **The Shell** is a program that takes commands from the keyboard and gives them to the operating system to perform.
- **Terminal Emulator** is a program that opens a window and lets you interact with the shell.

Basic Commands

- When you open a terminal emulator, by default you are in the home directory of the logged in user.
- You will see the name of the logged in user followed by the hostname.

- **\$** means you are logged in as a regular user

```
[bahargezici@rdev ~]$
```

- **#** means you are logged in as root.

```
root@DESKTOP-5HD0AAS:/home/selim#
```


pwd

- **pwd** prints the full path of your current working directory.

```
[bahargezici@rdev ~]$ pwd  
/home/akd/bahargezici  
[bahargezici@rdev ~]$ █
```

ls, ll

- You can list all directories and files inside the current directory by using the **ls** (or **ls -l; ll** for listings including information such as the owner, size, date last modified and permissions) command.

```
[bahargezici@rdev ~]$ ls
204  cloud  cloud.old  Maildir  public_html
[bahargezici@rdev ~]$ ll
total 20
drwxr-xr-x. 5 bahargezici akd 4096 Oct 18 13:49 204
drwxr-xr-x+ 2 bahargezici akd 4096 Mar 10 2016 cloud
drwxr-xr-x. 2 root      root 4096 Oct 9 2016 cloud.old
drwxr-xr-x+ 9 bahargezici akd 4096 Nov 17 2016 Maildir
drwxr-xr-x+ 2 bahargezici akd 4096 Mar 10 2016 public_html
[bahargezici@rdev ~]$ █
```

cd

- The **cd** command is used to change the current directory.

```
[bahargezici@rdev 204]$ ls
BBM204-17-B-2  BBM204-17-B-4  deneme4.sh  input1  test
[bahargezici@rdev 204]$ cd test
[bahargezici@rdev test]$
```

- To change to the parent of the current directory use **cd ..**

```
[bahargezici@rdev test]$ cd ..
[bahargezici@rdev 204]$ █
```

- To return directly to the home directory use a tilde as the argument:

```
[bahargezici@rdev 204]$ cd ~
[bahargezici@rdev ~]$ █
```

Manipulating Files

- [cp](#) - copy files and directories
- [rm](#) - remove files and directories
- [mv](#) - move or rename files and directories
- [mkdir](#) - create directories
- [cat](#) - create new file, concatenate files

cp

- **cp** copies files and directories. In its simplest form, it copies a single file:

```
[bahargezici@rdev ~]$ ls
204 cloud cloud.old Maildir public_html pythondersleri.py
[bahargezici@rdev ~]$ cp pythondersleri.py python.py
[bahargezici@rdev ~]$ ls
204 cloud cloud.old Maildir public_html pythondersleri.py python.py
[bahargezici@rdev ~]$
```

cp (cont.)

- You can specify the full path to where you want to copy your file:

```
[bahargezici@rdev ~]$ cp pythondersleri.py 204/pythondersler.py
[bahargezici@rdev ~]$ cd 204
[bahargezici@rdev 204]$ ls
BBM204-17-B-2  BBM204-17-B-4  deneme4.sh  input1  pythondersler.py  test
[bahargezici@rdev 204]$
```

rm

If you want to delete any file or directory the command is '**rm**' (for files) and '**rm -r**' (for directories).

```
[bahargezici@rdev ~]$ ls
204 cloud cloud.old Maildir public_html pythondersleri.py python.py
[bahargezici@rdev ~]$ rm python.py
[bahargezici@rdev ~]$ ls
204 cloud cloud.old Maildir public_html pythondersleri.py
[bahargezici@rdev ~]$
```

mv

- **mv** command moves or renames files and directories depending on how it is used.

```
[bahargezici@rdev ~]$ mv pythondersleri.py 204
[bahargezici@rdev ~]$ ls
204  cloud  cloud.old  Maildir  public_html
[bahargezici@rdev ~]$ cd 204
[bahargezici@rdev 204]$ ls
BBM204-17-B-2  deneme4.sh  pythondersleri.py  test
BBM204-17-B-4  input1     pythondersler.py
```

```
[bahargezici@rdev 204]$ ls
BBM204-17-B-2  deneme4.sh  pythondersleri.py  test
BBM204-17-B-4  input1     pythondersler.py
[bahargezici@rdev 204]$ mv pythondersleri.py python.py
[bahargezici@rdev 204]$ ls
BBM204-17-B-2  deneme4.sh  pythondersler.py  test
BBM204-17-B-4  input1     python.py
```


mkdir

- If you want to create new directories the command is **mkdir**.

```
[bahargezici@rdev ~]$ ls
204 cloud cloud.old Maildir public_html
[bahargezici@rdev ~]$ mkdir bbml03
[bahargezici@rdev ~]$ ls
204 bbml03 cloud cloud.old Maildir public_html
[bahargezici@rdev ~]$
```

cat

cat stands for **Concatenate (birleştirmek)**. It is used to **create new file** (with or without content), **concatenate files** and **display the output of files on the standard output**.

```
[bahargezici@rdev ~]$ cat >newFile.txt
This file is created to show how we can create file.
You must type Ctrl+D to quit
[bahargezici@rdev ~]$ █
```

```
[bahargezici@rdev ~]$ ls
204  bahar  bbml03  cloud  cloud.old  Maildir  newFile.txt  public_html
[bahargezici@rdev ~]$ cat <newFile.txt
This file is created to show how we can create file.
You must type Ctrl+D to quit
[bahargezici@rdev ~]$ █
```

```
[bahargezici@rdev ~]$ cat newFile.txt text1.txt <final.txt
This file is created to show how we can create file.
You must type Ctrl+D to quit.
Content2 is here.
[bahargezici@rdev ~]$ █
```

zip & unzip

- **zip** and **unzip** commands create and extract zip archive files respectively.
- The ***** character serves as a "wild card" for filename expansion. By itself, it matches every filename in a given directory.

```
[bahargezici@rdev ~]$ ls
204  bbml03  cloud.old  Maildir    public_html
bahar cloud  final.txt  newFile.txt  text1.txt
[bahargezici@rdev ~]$ zip bahar.zip *
  adding: 204/ (stored 0%)
  adding: bahar/ (stored 0%)
  adding: bbml03/ (stored 0%)
  adding: cloud/ (stored 0%)
  adding: cloud.old/ (stored 0%)
  adding: final.txt (deflated 13%)
  adding: Maildir/ (stored 0%)
  adding: newFile.txt (deflated 14%)
  adding: public_html/ (stored 0%)
  adding: text1.txt (stored 0%)
[bahargezici@rdev ~]$ ls
204  bahar.zip  cloud  final.txt  newFile.txt  text1.txt
bahar bbml03  cloud.old  Maildir    public_html
[bahargezici@rdev ~]$
```

```
[bahargezici@rdev ~]$ unzip bahar.zip -d baharg
Archive:  bahar.zip
  creating: baharg/204/
  creating: baharg/bahar/
  creating: baharg/bbml03/
  creating: baharg/cloud/
  creating: baharg/cloud.old/
  inflating: baharg/final.txt
  creating: baharg/Maildir/
  inflating: baharg/newFile.txt
  creating: baharg/public_html/
  extracting: baharg/text1.txt
[bahargezici@rdev ~]$ cd baharg
[bahargezici@rdev baharg]$ ls
204  bbml03  cloud.old  Maildir    public_html
bahar cloud  final.txt  newFile.txt  text1.txt
[bahargezici@rdev baharg]$
```

- Most executable programs intended for command line use provide a formal piece of documentation called a *manual* or *man page*. A special paging program called **man** is used to view them.

```
[bahargezici@rdev ~]$ clear
[bahargezici@rdev ~]$ man ls
LS(1)                                User Commands                                LS(1)

NAME
    ls - list directory contents

SYNOPSIS
    ls [OPTION]... [FILE]...

DESCRIPTION
    List information about the FILES (the current directory by default).
    Sort entries alphabetically if none of -cftuvSUX nor --sort is speci-
    fied.

    Mandatory arguments to long options are mandatory for short options
    too.

    -a, --all
           do not ignore entries starting with .

    -A, --almost-all
           do not list implied . and ..
```

ssh

- **ssh** (Secure Shell client) is a program for logging into a remote machine and for executing commands on a remote machine.

```
selim@DESKTOP-5HD0AAS:~$ ssh cemil@dev.cs.hacettepe.edu.tr  
cemil@dev.cs.hacettepe.edu.tr's password:
```

scp

- **scp** allows files to be copied to, from, or between different hosts. It uses **ssh** for data transfer and provides the same authentication and same level of security as **ssh**.

A simple example that illustrates how to send a file to dev space.

```
scp <localfile> <username>@dev.cs.hacettepe.edu.tr:/home/ogr/b****/<directory>
```

```
selim@selim-PC:~$ scp DPSO.pdf selimy@dev.cs.hacettepe.edu.tr:/home/akd/selimy/  
selimy@dev.cs.hacettepe.edu.tr's password:
```

About chmod

- **chmod** is used to change the permissions of files or directories.
- Example: `chmod 777 myFile`

#	Permission	rwX
7	read, write and execute	rwX
6	read and write	rw-
5	read and execute	r-x
4	read only	r--
3	write and execute	-wX
2	write only	-w-
1	execute only	--X
0	none	---

Exercise

- All tasks must be performed using linux commands:
 - 1) Make a new directory named `playing_with_linux_cmd`
 - 2) Change your current working directory to the newly created one.
 - 3) List the contents of this directory to see that it is empty.
 - 4) Create a new text file `jibberish.txt` and write something funny in it before closing it.
 - 5) Create another new text file `README.txt` and write your life motto in it.
 - 6) Copy `jibberish.txt` into a text file named `wise_sayings.txt`
 - 7) Delete `jibberish.txt`
 - 8) Print out the content of `wise_sayings.txt`
 - 9) Create a new directory named `my_precious` and move `wise_sayings.txt` into that newly created directory. List the content of the current working directory to make sure that you have successfully moved the file.
 - 10) Change the permission of the file `wise_sayings.txt` to read, write and execute.
 - 11) Change your working directory to the parent directory of `playing_with_linux_cmd`
 - 12) Zip `playing_with_linux_cmd` as `gameover.zip`
 - 13) Use `scp` command to copy this zipped folder from your local computer to your home directory on our remote server `dev.cs.hacettepe.edu.tr`