



Hacettepe University

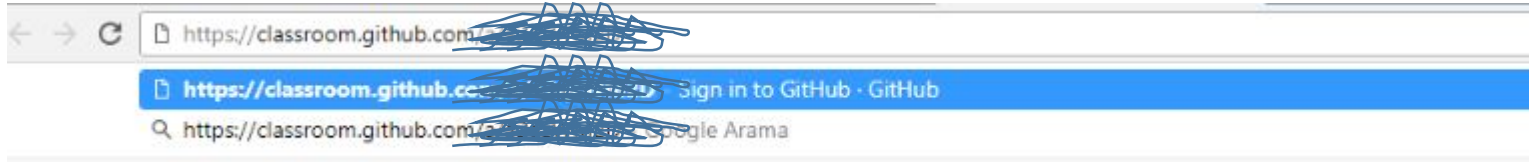
Computer Engineering Department

Using **GitHub Classroom**

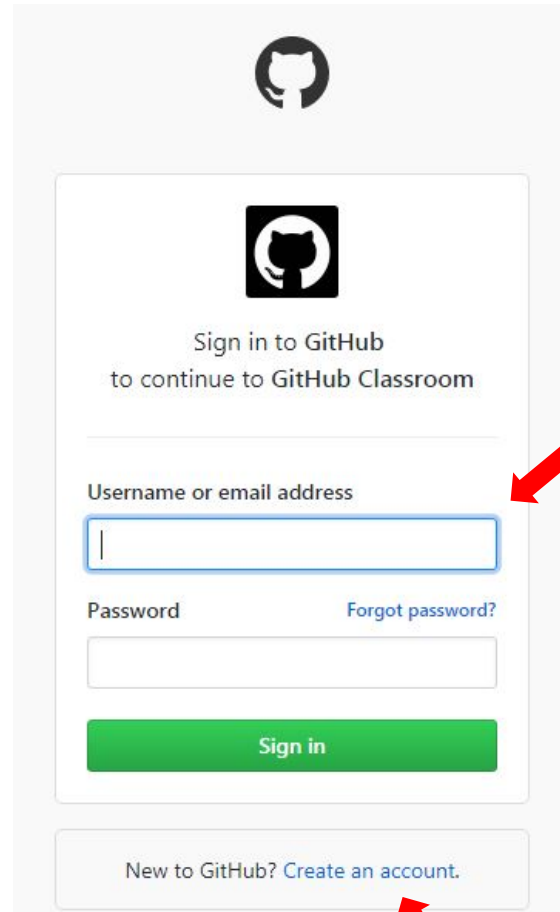
BBM103 Introduction to Programming Lab 1

Fall 2017

Signing Up to GitHub Classroom



Signing Up to GitHub Classroom




The screenshot shows the GitHub sign-in interface. At the top is the GitHub logo. Below it is a larger GitHub logo and the text "Sign in to GitHub to continue to GitHub Classroom". There are two input fields: "Username or email address" and "Password". A green "Sign in" button is positioned below the password field. At the bottom, there is a link that says "New to GitHub? Create an account.".


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](#)

[Continue](#)

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.


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  [hacettepe.edu.tr](mailto:img@hacettepe.edu.tr). This lets you access all of GitHub's features.

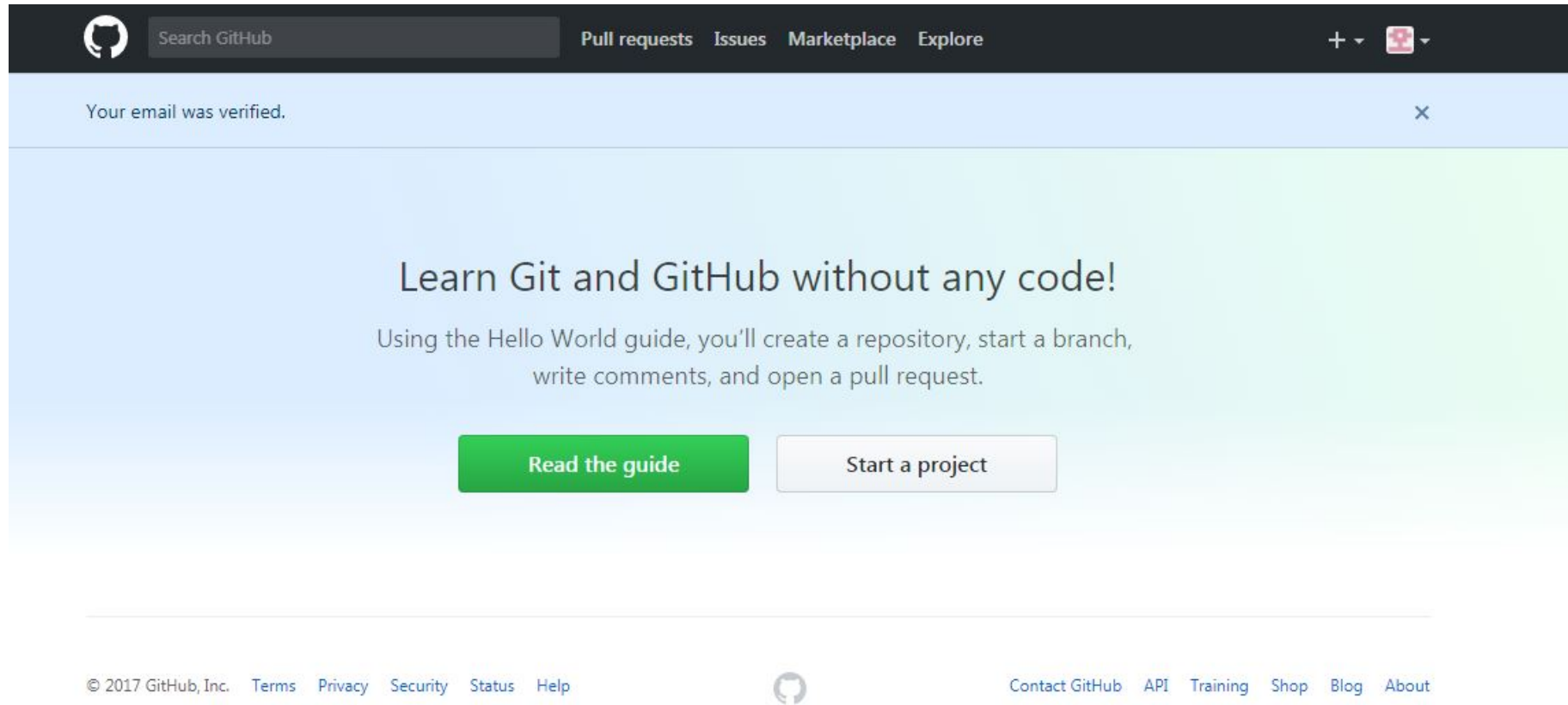
[Verify email address](#)

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. 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".

Search GitHub

Pull requests Issues Marketplace Explore

Your email was verified. X

Learn Git and GitHub without any code!

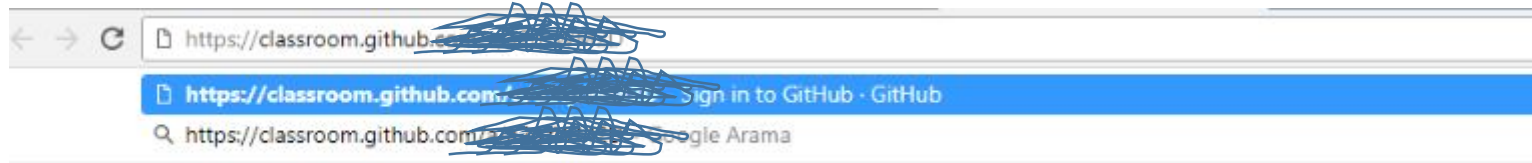
Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.

[Read the guide](#) [Start a project](#)

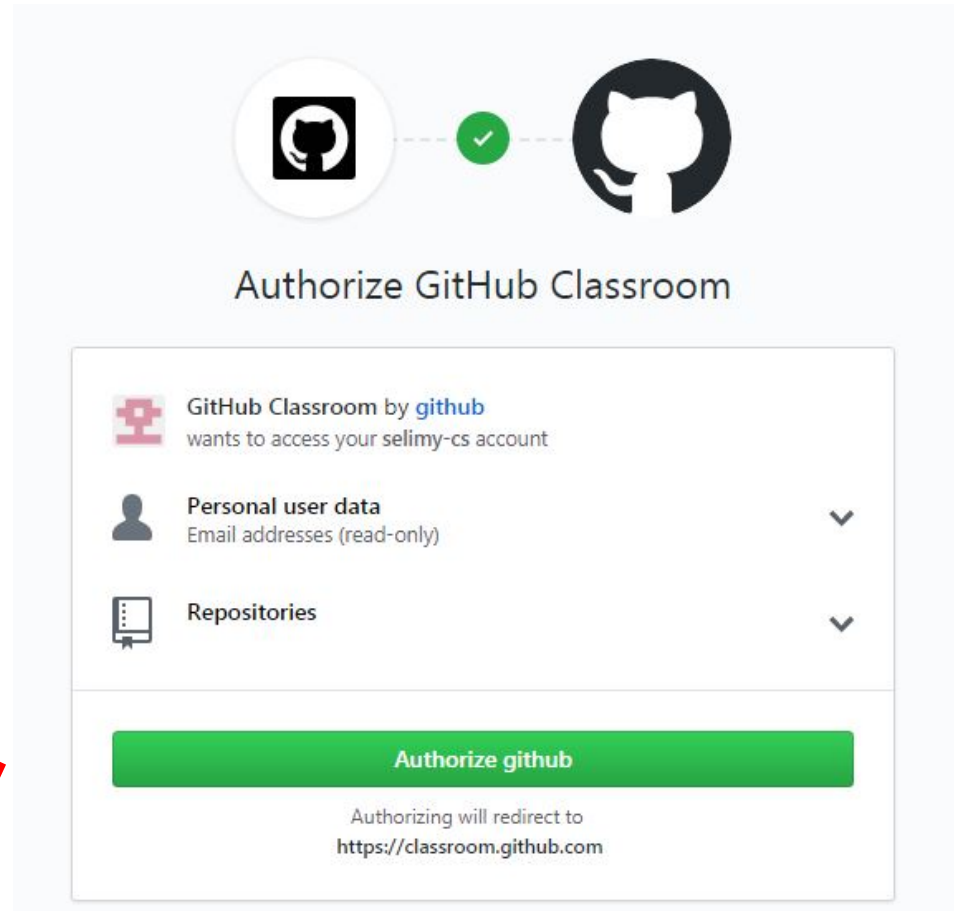
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Contact GitHub [API](#) [Training](#) [Shop](#) [Blog](#) [About](#)

Signing Up to GitHub Classroom



Joining BBM103 Classroom



Now authorize github account.



Joining BBM103 Classroom



Accept the **test2** assignment



Assignment title

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

Accept this assignment



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 classroom~~ via email invitation on your behalf. No further action is necessary.

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

Joining BBM103 Classroom

The screenshot shows the GitHub interface for a repository. At the top, the repository name is redacted with blue scribbles, and it is marked as 'Private'. To the right, there are buttons for 'Watch' (0), 'Star' (0), and 'Fork' (0). Below this is a navigation bar with links for 'Code', 'Issues' (0), 'Pull requests' (0), 'Projects' (0), 'Wiki', 'Settings', and 'Insights'. The main content area has a heading 'Quick setup — if you've done this kind of thing before'. Below the heading are two options: 'Set up in Desktop' and 'HTTPS SSH'. The SSH URL is redacted with blue scribbles. A note below says 'We recommend every repository include a README, LICENSE, and .gitignore.' The second section is titled '...or create a new repository on the command line' and contains a code block with the following commands:

```
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
```



Hacettepe University

Computer Engineering Department

How to Use the Linux Command Line

BBM103 Introduction to Programming Lab I

Fall 2017

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

```
[selimy@rdev akd]$
```

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

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


pwd

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

```
[selimy@rdev ~]$ pwd  
/home/akd/selimy  
[selimy@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.

```
[selimy@rdev ~]$ ls
2016Assignment4  bashsc.sh          BBM104_Assignment1  BBM203-17-Y-03      cloud      commandline.sh
App              BBM104-17-B-Assignment3  BBM104PA2          BBM203-17-Y-03_ext1  cloud.old  Maildir
[selimy@rdev ~]$ ll
toplam 76
drwxr-xr-x. 133 selimy akd   4096 Ara 24  2016 2016Assignment4
drwxr-xr-x.  7 selimy akd   4096 Mar 16  2017 App
-rw-r--r--.  1 selimy akd    99 Kas 26  2016 bashsc.sh
drwxr-xr-x.  6 selimy akd   4096 May  4 10:50 BBM104-17-B-Assignment3
drwxrwxr-x. 107 selimy akd   4096 Mar 10  2017 BBM104_Assignment1
drwxr-xr-x.  6 selimy akd   4096 Nis 18 21:43 BBM104PA2
drwxrwxrwx. 28 selimy akd   4096 Ağu 12 13:42 BBM203-17-Y-03
drwxrwxrwx.  6 selimy akd   4096 Ağu 12 13:42 BBM203-17-Y-03_ext1
drwxrwxr-x+  6 selimy akd   4096 Eki  9  2016 cloud
drwxr-xr-x.  4 root  root   4096 Eki  9  2016 cloud.old
-rw-r--r--.  1 selimy akd    86 Kas 26  2016 commandline.sh
drwxr-xrwx+  9 selimy akd   4096 Ağu 31 12:42 Maildir
```

cd

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

```
[selma@rdev test]$ ls
some_directory_1  some_directory_2
[selma@rdev test]$ cd some_directory_1
[selma@rdev some_directory_1]$
```

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

```
[selma@rdev some_directory_1]$ cd ..
[selma@rdev test]$
```

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

```
[selma@rdev test]$ cd ~
[selma@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:

```
[necva@rdev ~]$ ls
bbm103  but          error          Maildir          output
bm104   cloud        Graph-Cluster  monopoly          public_html
bm3     cloud.old    HelloWorld.py  Morpheme-Graphcluster  Word2VecJava-master
[necva@rdev ~]$ cp HelloWorld.py Hello.py
[necva@rdev ~]$ ls
bbm103  cloud        Hello.py        Morpheme-Graphcluster
bm104   cloud.old    HelloWorld.py    output
bm3     error        Maildir          public_html
but     Graph-Cluster  monopoly          Word2VecJava-master
[necva@rdev ~]$ █
```

cp (cont.)

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

```
[necva@rdev ~]$ ls
bbm103  but          error        Maildir      output
bm104   cloud       Graph-Cluster  monopoly    public_html
bm3     cloud.old  HelloWorld.py  Morpheme-Graphcluster  Word2VecJava-master
[necva@rdev ~]$ cp HelloWorld.py Hello.py
[necva@rdev ~]$ ls
bbm103  cloud      Hello.py      Morpheme-Graphcluster
bm104   cloud.old  HelloWorld.py  output
bm3     error     Maildir       public_html
but     Graph-Cluster  monopoly      Word2VecJava-master
[necva@rdev ~]$ cp HelloWorld.py bbm103/HelloWorld.py
[necva@rdev ~]$ cd bbm103
[necva@rdev bbm103]$ ls
HelloWorld.py
[necva@rdev bbm103]$
```

rm

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

```
[necva@rdev ~]$ ls
bbm103  but      error      Maildir      output
bm104   cloud    Graph-Cluster  monopoly      public_html
bm3     cloud.old HelloWorld.py  Morpheme-Graphcluster  Word2VecJava-master
[necva@rdev ~]$ rm -r bbm103
[necva@rdev ~]$ ls
bm104   cloud    Graph-Cluster  monopoly      public_html
bm3     cloud.old HelloWorld.py  Morpheme-Graphcluster  Word2VecJava-master
but     error    Maildir        output
[necva@rdev ~]$ █
```

mv

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

```
[necva@rdev ~]$ mv Hello.py bbm103
[necva@rdev ~]$ ls
bbm103  but          error        monopoly     public_html
bm104   cloud       Graph-Cluster  Morpheme-Graphcluster  Word2VecJava-master
bm3     cloud.old  Maildir      output
[necva@rdev ~]$ cd bbm103
[necva@rdev bbm103]$ ls
Hello.py
[necva@rdev bbm103]$
```


mkdir

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

```
[necva@rdev ~]$ mkdir bbm103
[necva@rdev ~]$ ls
bbm103  but      error    Maildir   output
bm104    cloud    Graph-Cluster  monopoly  public_html
bm3      cloud.old  HelloWorld.py  Morpheme-Graphcluster  Word2VecJava-master
[necva@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**.

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

```
[necva@rdev ~]$ ls
bbm103  cloud          Graph-Cluster          newFile.txt
bm104   cloud.old      Maildir                 output
bm3     #deneme.txt#  monopoly               public_html
but     error         Morpheme-Graphcluster  Word2VecJava-master
[necva@rdev ~]$ cat <newFile.txt
This file is created to show how we can create file.
You must type Ctrl+D to quit
[necva@rdev ~]$ █
```

zip & unzip

- **zip** and **unzip** commands create and extract zip archive files respectively.

```
[necva@rdev ~]$ cd bbm103
[necva@rdev bbm103]$ ls
bbm103.txt  file1  file2
[necva@rdev bbm103]$ zip necva.zip *
  adding: bbm103.txt (stored 0%)
  adding: file1/ (stored 0%)
  adding: file2/ (stored 0%)
[necva@rdev bbm103]$ ls
bbm103.txt  file1  file2  necva.zip
[necva@rdev bbm103]$ █
```

```
[selimy@rdev BBM103Linux]$ unzip test.zip -d testDir
Archive:  test.zip
  inflating: testDir/bashsc.sh
  inflating: testDir/bashsc.sh.bak
[selimy@rdev BBM103Linux]$ ls
bashsc.sh  bashsc.sh.bak  testDir  test.zip
[selimy@rdev BBM103Linux]$ cd testDir/
[selimy@rdev testDir]$ ls
bashsc.sh  bashsc.sh.bak
[selimy@rdev testDir]$
```

*

- The * character serves as a "wild card" for filename expansion. By itself, it matches every filename in a given directory.

```
[necva@rdev ~]$ cd bbm103
[necva@rdev bbm103]$ ls
bbm103.txt  file1  file2
[necva@rdev bbm103]$ zip necva.zip *
  adding: bbm103.txt (stored 0%)
  adding: file1/ (stored 0%)
  adding: file2/ (stored 0%)
[necva@rdev bbm103]$ ls
bbm103.txt  file1  file2  necva.zip
[necva@rdev bbm103]$
```

- 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.

```
[necva@rdev bbm103]$ clear
[necva@rdev bbm103]$ 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`