

Problem 1 - Create a new directory called "assignment1" in your home directory. Inside "assignment1", create a new file called "file1.txt". Append the text "Hello World" to "file1.txt".

```
ubuntu@ip-172-31-82-133:~$ mkdir assignment1
ubuntu@ip-172-31-82-133:~$ touch assignment1/file1.txt
ubuntu@ip-172-31-82-133:~$ echo "Hello World" >> assignment1/file1.txt
ubuntu@ip-172-31-82-133:~$ cd assignment1/
ubuntu@ip-172-31-82-133:~/assignment1$ ls -lrt
total 4
-rw-rw-r-- 1 ubuntu ubuntu 12 May 18 21:20 file1.txt
ubuntu@ip-172-31-82-133:~/assignment1$ cat file1.txt
Hello World
ubuntu@ip-172-31-82-133:~/assignment1$
```

Problem 2 - Figure out how can you use nslookup to find name and IP address of SMTP server of gmail.com

```
ubuntu@ip-172-31-82-133:~$ nslookup -type=mx gmail.com
Server:      127.0.0.53
Address:     127.0.0.53#53
```

Non-authoritative answer:

```
gmail.com    mail exchanger = 5 gmail-smtp-in.l.google.com.
gmail.com    mail exchanger = 40 alt4.gmail-smtp-in.l.google.com.
gmail.com    mail exchanger = 10 alt1.gmail-smtp-in.l.google.com.
gmail.com    mail exchanger = 30 alt3.gmail-smtp-in.l.google.com.
gmail.com    mail exchanger = 20 alt2.gmail-smtp-in.l.google.com.
```

Authoritative answers can be found from:

ubuntu@ip-172-31-82-133:~\$ nslookup gmail-smtp-in.l.google.com

Server: 127.0.0.53

Address: 127.0.0.53#53

Non-authoritative answer:

Name: gmail-smtp-in.l.google.com

Address: 142.251.163.27

Name: gmail-smtp-in.l.google.com

Address: 2607:f8b0:4004:c1b::1a

Verified this from <https://mxtoolbox.com/SuperTool.aspx?action=mx%3agmail.com&run=toolpage>.

The screenshot shows the MXToolbox SuperTool interface. At the top, there's a navigation bar with links like Pricing, Tools, Delivery Center, and Monitor. Below that, a dark navigation bar contains links for SuperTool, MX Lookup, Blacklists, DMARC, Diagnostics, Email Health, DNS Lookup, and Analyze Headers. The main content area shows the SuperTool Beta7 interface with a search bar containing 'gmail.com' and an 'MX Lookup' button. Below the search bar, there's a section for 'mx:gmail.com' with buttons for 'Find Problems' and 'Solve Email Delivery Problems'. A large blue banner with a red 'X' icon says 'EMAILS BOUNCING? MxToolbox has your email delivery solutions'. Below the banner is a table of MX records for gmail.com.

Pref	Hostname	IP Address	TTL	Blacklist Check	SMTP Test
5	gmail-smtp-in.l.google.com	142.251.163.27 Google LLC (AS15169)	60 min	Blacklist Check	SMTP Test
5	gmail-smtp-in.l.google.com	2607:f8b0:4004:c1b::1a	60 min	Blacklist Check	
10	alt1.gmail-smtp-in.l.google.com	209.85.202.27 Google LLC (AS15169)	60 min	Blacklist Check	SMTP Test
10	alt1.gmail-smtp-in.l.google.com	2a00:1450:400b:c00::1b	60 min	Blacklist Check	
20	alt2.gmail-smtp-in.l.google.com	64.233.184.27 Google LLC (AS15169)	60 min	Blacklist Check	SMTP Test
20	alt2.gmail-smtp-in.l.google.com	2a00:1450:400c:c0b::1a	60 min	Blacklist Check	
30	alt3.gmail-smtp-in.l.google.com	142.250.27.27 Google LLC (AS15169)	60 min	Blacklist Check	SMTP Test
30	alt3.gmail-smtp-in.l.google.com	2a00:1450:4025:401::1b	60 min	Blacklist Check	

Name for SMTP server of gmail.com - gmail-smtp-in.l.google.com

IP for SMTP server of gmail.com - 142.251.163.27

Problem 3 - Create a compressed archive of the "assignment1" directory in your home directory. Save the archive as "assignment1.tar.gz". Delete the "assignment1" directory.

```
ubuntu@ip-172-31-82-133:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-82-133:~$ ls -lrt
total 4
drwxrwxr-x 2 ubuntu ubuntu 4096 May 18 21:20 assignment1
ubuntu@ip-172-31-82-133:~$ tar -cvzf assignment1.tar.gz assignment1/
assignment1/
assignment1/file1.txt
ubuntu@ip-172-31-82-133:~$ ls -lrt
total 8
drwxrwxr-x 2 ubuntu ubuntu 4096 May 18 21:20 assignment1
-rw-rw-r-- 1 ubuntu ubuntu 179 May 18 21:26 assignment1.tar.gz
ubuntu@ip-172-31-82-133:~$ rm -rf assignment1
ubuntu@ip-172-31-82-133:~$ ls -lrt
total 4
-rw-rw-r-- 1 ubuntu ubuntu 179 May 18 21:26 assignment1.tar.gz
ubuntu@ip-172-31-82-133:~$
```

Problem 4 - Try to play this game to refresh your knowledge om VIM: <https://vim-adventures.com/>

Problem 5 - Create a new file called "assignment1.txt" using Vim. Type the text "This is my first Vim file" on the first line. Move to the second line and type "I am learning Vim". Save and exit Vim.

```
ubuntu@ip-172-31-82-133:~$ vim assignment1.txt
ubuntu@ip-172-31-82-133:~$ cat assignment1.txt
This is my first Vim file
```

I am learning Vim

Thank You