1.1 Создал файл с собаками, котами и хомяками.

```
sleem@sleem:~$ cat > pets
| type | name | burthday |
+------+------+----------+
|dog    |butch |29.01.2020|
|dog    |sam   |02.03.2021|
|cat    |vaska |12.05.2020|
|cat    |murka |23.02.2022|
|humster| loh |12.08.2020|
|humster| leo |22.12.2019|
sleem@sleem:~$
```

1.2 Создал файл с вьючными животными

```
sleem@sleem:~$ cat > pack_animals
|horse |leya  |12.05.2015|
|horse |sivka |15.03.2013|
|camel |zud   |02.02.2022|
|camel |mud   |01.08.2020|
|donkey|osel1 |25.12.2016|
|donkey|osel2 |12.10.2017|
sleem@sleem:~$
```

1.3 Склеил файлы и просмотрел содержимое

```
sleem@sleem:~$ cat pets pack_animals > union_animals
sleem@sleem:~$ cat union_animals
| type | name | burthday |
+------+------+----------+
|dog    |butch |29.01.2020|
|dog    |sam   |02.03.2021|
|cat    |vaska |12.05.2020|
|cat    |murka |23.02.2022|
|humster| loh |12.08.2020|
|humster| leo |22.12.2019|
|horse |leya  |12.05.2015|
|horse |sivka |15.03.2013|
|camel |zud   |02.02.2022|
|camel |mud   |01.08.2020|
|вщтdonkey|osel1 |25.12.2016|
|donkey|osel2 |12.10.2017|
sleem@sleem:~$
```

1.4 Переименовал файл в «Друзья человека».

```
sleem@sleem:~$ mv union_animals human_friends
sleem@sleem:~$ ll
total 44
drwxr-x--- 4 sleem sleem 4096 Feb 19 16:50 ./
drwxr-xr-x 3 root  root  4096 Feb 13 09:59 ../
-rw------- 1 sleem sleem  163 Feb 13 14:13 .bash_history
-rw-r--r-- 1 sleem sleem  220 Jan  6  2022 .bash_logout
-rw-r--r-- 1 sleem sleem 3771 Jan  6  2022 .bashrc
drwx------ 2 sleem sleem 4096 Feb 13 10:04 .cache/
-rw-rw-r-- 1 sleem sleem  384 Feb 19 16:46 human_friends
-rw-rw-r-- 1 sleem sleem  168 Feb 19 16:44 pack_animals
-rw-rw-r-- 1 sleem sleem  216 Feb 19 16:38 pets
-rw-r--r-- 1 sleem sleem  807 Jan  6  2022 .profile
drwx------ 2 sleem sleem 4096 Feb 13 10:00 .ssh/
-rw-r--r-- 1 sleem sleem    0 Feb 13 10:15 .sudo_as_admin_successful
sleem@sleem:~$ cat human_friends
| type | name | burthday |
+------+------+----------+
|dog     |butch |29.01.2020|
|dog     |sam   |02.03.2021|
|cat     |vaska |12.05.2020|
|cat     |murka |23.02.2022|
|humster| loh  |12.08.2020|
|humster| leo  |22.12.2019|
|horse  |leya  |12.05.2015|
|horse  |sivka |15.03.2013|
|camel  |zud   |02.02.2022|
|camel  |mud   |01.08.2020|
|вщтdonkey|osel1 |25.12.2016|
|donkey|osel2 |12.10.2017|
```

2. Создал директорию и переместил файл туда.

```
sleem@sleem:~$ mkdir -p newdir
sleem@sleem:~$ ls
human_friends  newdir  pack_animals  pets
sleem@sleem:~$ mv human_friends newdir/
sleem@sleem:~$ ls
newdir  pack_animals  pets
sleem@sleem:~$ cd newdir/
sleem@sleem:~/newdir$ ls
human_friends
sleem@sleem:~/newdir$ |
```

3. Подключить дополнительный репозиторий MySQL. Установить любой пакет из этого репозитория.

Всю работу делаем по официальной документации от сюда
https://dev.mysql.com/doc/mysql-apt-repo-quick-guide/en/#repo-qp-apt-install-from-source .

3.1 Зайдем в папку с ключами и добавим файл с ключом от сюда
https://dev.mysql.com/doc/refman/8.0/en/checking-gpg-signature.html

```
root@sleem:/etc/apt/keyrings# nano mysql_pubkey.asc
```

3.2 Добавим ключ в систему
```
root@sleem:/etc/apt/keyrings# sudo apt-key add mysql_pubkey.asc
```

3.3 Зайдем в каталог source.list.d и добавим файл mysql.list. В него добавим ссылку на репозиторий с сервисами mysql.
```
deb http://repo.mysql.com/apt/ubuntu/ jammy mysql-8.0
```

```
root@sleem:/etc/apt/sources.list.d# nano mysql.list
```

3.4 К установке доступны множество пакетов.

Available Packages from the MySQL APT Repository

Table 1 Available Packages from the MySQL APT Repository

Package Name	Description
mysql-server	Metapackage for installing the MySQL server
mysql-community-server	MySQL server
mysql-client	Metapackage for installing the MySQL client
mysql-cluster-community-auto-installer *	Auto installer for NDB Cluster
mysql-cluster-community-client	MySQL client for NDB Cluster
mysql-cluster-community-data-node	NDB Cluster data node
mysql-cluster-community-java	NDB Cluster Java drivers
mysql-cluster-community-management-server	NDB Cluster management node
mysql-cluster-community-memcached	NDB Cluster memcached server
mysql-cluster-community-nodejs	NDB Cluster Node.js adapters
mysql-cluster-community-server	MySQL server for NDB Cluster
mysql-cluster-community-source	Source package for NDB Cluster
mysql-cluster-community-test	NDB Cluster testsuite

Обновим apt и установим mysql-server

```
root@sleem:/etc/apt/sources.list.d# apt update
Hit:1 http://by.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://by.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://by.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://by.archive.ubuntu.com/ubuntu jammy-security InRelease
Get:5 http://repo.mysql.com/apt/ubuntu jammy InRelease [15.2 kB]
Get:6 http://repo.mysql.com/apt/ubuntu jammy/mysql-8.0 amd64 Packages [8,555 B]
Fetched 23.8 kB in 2s (13.3 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
71 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: http://repo.mysql.com/apt/ubuntu/dists/jammy/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted
.gpg), see the DEPRECATION section in apt-key(8) for details.
root@sleem:/etc/apt/sources.list.d# apt install mysql
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Package mysql is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source
However the following packages replace it:
  mysql-community-server mysql-community-client-core mysql-community-client mysql-common
```

Все работает.

4. Установить и удалить deb-пакет с помощью dpkg.

Сделаем то же для mysql по инструкции.

1. Adding the MySQL APT Repository

First, add the MySQL APT repository to your system's software repository list. Follow these steps:

a. Go to the download page for the MySQL APT repository at https://dev.mysql.com/downloads/repo/apt/.

b. Select and download the release package for your Linux distribution.

c. Install the downloaded release package with the following command, replacing *version-specific-package-name* with the name of the downloaded package (preceded by its path, if you are not running the command inside the folder where the package is):

```
$> sudo dpkg -i /PATH/version-specific-package-name.deb
```

For example, for version *w.x.y-z* of the package, the command is:

```
$> sudo dpkg -i mysql-apt-config_w.x.y-z_all.deb
```

Note that the same package works on all supported Debian and Ubuntu platforms.

d. During the installation of the package, you will be asked to choose the versions of the MySQL server and other components (for example, the MySQL Workbench) that you want to install. If you are not sure which version to choose, do not change the default options selected for you. You can also choose **none** if you do not want a particular component to be installed. After making the choices for all components, choose **Ok** to finish the configuration and installation of the release package.

You can always change your choices for the versions later; see Selecting a Major Release Version for instructions.

e. Update package information from the MySQL APT repository with the following command (*this step is mandatory*):

```
$> sudo apt-get update
```

4.1 Скачаем deb файл из репозитория в созданную директорию.

```
root@sleem:~/tmp# wget https://dev.mysql.com/get/mysql-apt-config_0.8.24-1_all.deb
--2023-02-19 19:27:04--  https://dev.mysql.com/get/mysql-apt-config_0.8.24-1_all.deb
Resolving dev.mysql.com (dev.mysql.com)... 104.81.63.42, 2a02:2d8:3:9a9::2e31, 2a02:2d8:3:9a5::2e31
Connecting to dev.mysql.com (dev.mysql.com)|104.81.63.42|:443... connected.
HTTP request sent, awaiting response... 302 Moved Temporarily
Location: https://repo.mysql.com//mysql-apt-config_0.8.24-1_all.deb [following]
--2023-02-19 19:27:04--  https://repo.mysql.com//mysql-apt-config_0.8.24-1_all.deb
Resolving repo.mysql.com (repo.mysql.com)... 104.91.48.238
Connecting to repo.mysql.com (repo.mysql.com)|104.91.48.238|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 18048 (18K) [application/x-debian-package]
Saving to: 'mysql-apt-config_0.8.24-1_all.deb'

mysql-apt-config_0.8.24-1_all 100%[===============================================>]  17.62K  --.-KB/s    in 0s

2023-02-19 19:27:05 (67.5 MB/s) - 'mysql-apt-config_0.8.24-1_all.deb' saved [18048/18048]

root@sleem:~/tmp#
```

4.2 Установим пакет

```
root@sleem:~/tmp# dpkg -i mysql-apt-config_0.8.24-1_all.deb
Selecting previously unselected package mysql-apt-config.
(Reading database ... 74515 files and directories currently installed.)
Preparing to unpack mysql-apt-config_0.8.24-1_all.deb ...
Unpacking mysql-apt-config (0.8.24-1) ...
Setting up mysql-apt-config (0.8.24-1) ...
Warning: apt-key should not be used in scripts (called from postinst maintainerscript of the package mysql-apt-config)
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
root@sleem:~/tmp#
```

4.3 Удалим пакет

```
root@sleem:~/tmp# dpkg -r mysql-client
```