1. Create a file in a new directory using vi editor and ensure the filename doesn't exist already using shell commands.

```
keer123@DESKTOP-1K1IJEG:~$ mkdir new_dir
keer123@DESKTOP-1K1IJEG:~$ ls
a.out  c-practice  ems  go  myProject  new_dir  program1.c
keer123@DESKTOP-1K1IJEG:~$ cd new_dir
keer123@DESKTOP-1K1IJEG:~/new_dir$ ls
keer123@DESKTOP-1K1IJEG:~/new_dir$ if test -f new_file.txt; then echo "file already exists";else echo "file does not exi
st"; fi
file does not exist
keer123@DESKTOP-1K1IJEG:~/new_dir$ vi new_file.txt
keer123@DESKTOP-1K1IJEG:~/new_dir$ if test -f new_file.txt; then echo "file already exists";else echo "file does not exi
st"; fi
file already exists
keer123@DESKTOP-1K1IJEG:~/new_dir$
```

2. Get the Absolute path and relative path of the file you created in Question 1.

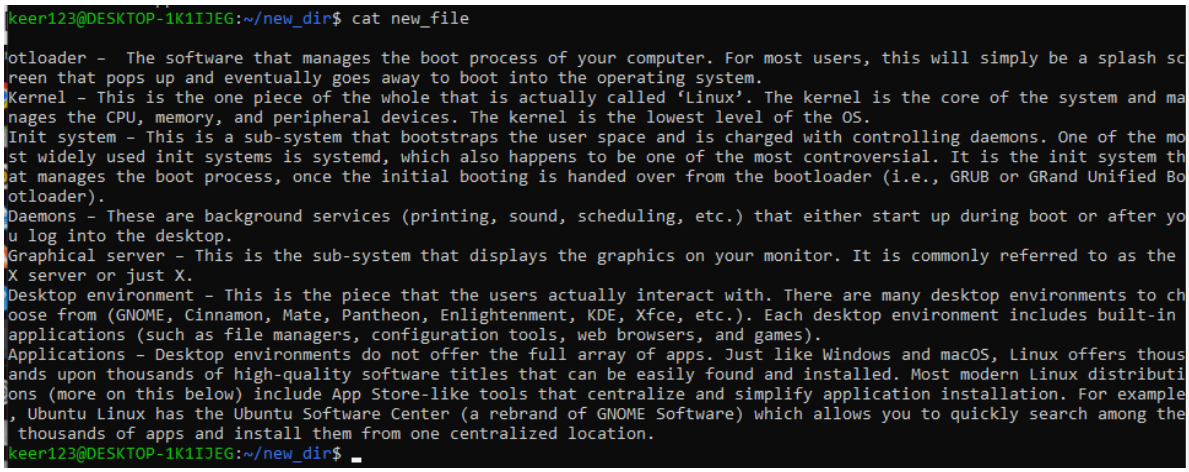
```
keer123@DESKTOP-1K1IJEG:~/new_dir$ pwd
/home/keer123/new_dir
keer123@DESKTOP-1K1IJEG:~/new_dir$ realpath new_file
/home/keer123/new_dir/new_file
keer123@DESKTOP-1K1IJEG:~/new_dir$
```

3. Select a random file and do the following:
    a. Count the no. of lines, words in the file
    b. Display the list 10 lines of a file

```
keer123@DESKTOP-1K1IJEG:~/new_dir$ ls
my_script.sh  new_file  new_file.txt
keer123@DESKTOP-1K1IJEG:~/new_dir$ wc new_file
   8  316 1952 new_file
keer123@DESKTOP-1K1IJEG:~/new_dir$ head new_file

otloader -  The software that manages the boot process of your computer. For most users, this will simply be a splash sc
reen that pops up and eventually goes away to boot into the operating system.
Kernel - This is the one piece of the whole that is actually called 'Linux'. The kernel is the core of the system and ma
nages the CPU, memory, and peripheral devices. The kernel is the lowest level of the OS.
Init system - This is a sub-system that bootstraps the user space and is charged with controlling daemons. One of the mo
st widely used init systems is systemd, which also happens to be one of the most controversial. It is the init system th
at manages the boot process, once the initial booting is handed over from the bootloader (i.e., GRUB or GRand Unified Bo
otloader).
Daemons - These are background services (printing, sound, scheduling, etc.) that either start up during boot or after yo
u log into the desktop.
Graphical server - This is the sub-system that displays the graphics on your monitor. It is commonly referred to as the
X server or just X.
Desktop environment - This is the piece that the users actually interact with. There are many desktop environments to ch
oose from (GNOME, Cinnamon, Mate, Pantheon, Enlightenment, KDE, Xfce, etc.). Each desktop environment includes built-in
applications (such as file managers, configuration tools, web browsers, and games).
Applications - Desktop environments do not offer the full array of apps. Just like Windows and macOS, Linux offers thous
ands upon thousands of high-quality software titles that can be easily found and installed. Most modern Linux distributi
ons (more on this below) include App Store-like tools that centralize and simplify application installation. For example
, Ubuntu Linux has the Ubuntu Software Center (a rebrand of GNOME Software) which allows you to quickly search among the
 thousands of apps and install them from one centralized location.
keer123@DESKTOP-1K1IJEG:~/new_dir$
```

c. Display the entire file



d. Search a word 'X' in the entire file and display the lines with it