

Problem1: Try commands on linux shell:

```
jbisht@JATIN: /mnt/c/Users/jb$ cat > Assignment1.txt
This is our first Assignment.
jbisht@JATIN: /mnt/c/Users/jb$ cat >> Assignment1.txt
This is line 2.
jbisht@JATIN: /mnt/c/Users/jb$ cat >> Assignment1.txt
This is line 3.
This is line 4.
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
jbisht@JATIN: /mnt/c/Users/jb$ cat -n Assignment1.txt
 1 This is our first Assignment.
 2 This is line 2.
 3 This is line 3.
 4 This is line 4.
jbisht@JATIN: /mnt/c/Users/jb$ cat > Assignment2.txt
This is our second Assignment
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment1.txt Assignment2.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is our second Assignment
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment1.txt > copyOfAssignment1.txt
jbisht@JATIN: /mnt/c/Users/jb$ cat copyOfAssignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment2.txt > copyOfAssignment1.txt
jbisht@JATIN: /mnt/c/Users/jb$ cat copyOfAssignment1.txt
This is our second Assignment
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment1.txt > copyOfAssignment1.txt
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment2.txt >> copyOfAssignment1.txt
cat: Assignment2.txt: No such file or directory
jbisht@JATIN: /mnt/c/Users/jb$ cat Assignment2.txt >> copyOfAssignment1.txt
jbisht@JATIN: /mnt/c/Users/jb$ cat copyOfAssignment1.txt
This is our first Assignment.
This is line 2.
```

```
jbisht@JATIN: /mnt/c/Users/jb$ cat copyOfAssignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is our second Assignment
jbisht@JATIN: /mnt/c/Users/jb$ cat "Assignment1" "Assignment2" > "mergedAssignment1&2"
cat: Assignment1: No such file or directory
cat: Assignment2: No such file or directory
jbisht@JATIN: /mnt/c/Users/jb$ cat "Assignment1.txt" "Assignment2.txt" > "mergedAssignment1&2.txt"
jbisht@JATIN: /mnt/c/Users/jb$ cat mergedAssignment1&2.txt
[1] 510
cat: mergedAssignment1: No such file or directory
2.txt: command not found
[1]+  Exit 1          cat mergedAssignment1
jbisht@JATIN: /mnt/c/Users/jb$ cat "mergedAssignment1&2.txt"
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is our second Assignment
jbisht@JATIN: /mnt/c/Users/jb$ tac "mergedAssignment1&2.txt"
This is our second Assignment
This is line 4.
This is line 3.
This is line 2.
This is our first Assignment.
jbisht@JATIN: /mnt/c/Users/jb$ tac Assignment1.txt
This is line 4.
This is line 3.
This is line 2.
This is our first Assignment.
jbisht@JATIN: /mnt/c/Users/jb$ cat *.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is our second Assignment
This is our first Assignment.
This is line 2.
This is line 3.
```

```
jbisht@JATIN: /mnt/c/Users/jb + v
Terminal JBISHT@JATIN
jbisht@JATIN:/mnt/c/Users/jbish$ cp Assignment1.txt file1/
jbisht@JATIN:/mnt/c/Users/jbish$ mv Assignment2.txt file1/
jbisht@JATIN:/mnt/c/Users/jbish$ cd file1
jbisht@JATIN:/mnt/c/Users/jbish/file1$ ls
Assignment1.txt Assignment2.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ date
Fri Jan 17 06:50:39 UTC 2025
jbisht@JATIN:/mnt/c/Users/jbish/file1$ chmod u-rw Assignment1.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ cat Assignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ echo 5+23
5+23
jbisht@JATIN:/mnt/c/Users/jbish/file1$ echo hello world
hello world
jbisht@JATIN:/mnt/c/Users/jbish/file1$ ftp
Command 'ftp' not found, but can be installed with:
sudo apt install tnftp
jbisht@JATIN:/mnt/c/Users/jbish/file1$ mkdir file2
jbisht@JATIN:/mnt/c/Users/jbish/file1$ rmdir file2
jbisht@JATIN:/mnt/c/Users/jbish/file1$ ls
Assignment1.txt Assignment2.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ grep "line" Assignment1.txt
This is line 2.
This is line 3.
This is line 4.
This is line 5.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ head Assignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is line 5.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ tail Assignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is line 5.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ |
```

```
jbisht@JATIN: /mnt/c/Users/jb + v
This is line 5.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ lpr Assignment1.txt
Command 'lpr' not found, but can be installed with:
sudo apt install cups-bsd
jbisht@JATIN:/mnt/c/Users/jbish/file1$ more Assignment1.txt
This is our first Assignment.
This is line 2.
This is line 3.
This is line 4.
This is line 5.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ print Assignment2.txt
Command 'print' not found, but can be installed with:
sudo apt install mailcap
jbisht@JATIN:/mnt/c/Users/jbish/file1$ pwd
/mnt/c/Users/jbish/file1
jbisht@JATIN:/mnt/c/Users/jbish/file1$ rm Assignment1.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ ls
Assignment2.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ sort Assignment2.txt
This is our second Assignment
jbisht@JATIN:/mnt/c/Users/jbish/file1$ cat >> Assignment2.txt
This is line 2.
Line 3.
This is End.
jbisht@JATIN:/mnt/c/Users/jbish/file1$ sort Assignment2.txt
Line 3.
This is End.
This is line 2.
This is our second Assignment
jbisht@JATIN:/mnt/c/Users/jbish/file1$ wc Assignment2.txt
 4 14 67 Assignment2.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ tar -cvf archive.tar Assignment2.txt
Assignment2.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ tar -xvf archive.tar
Assignment2.txt
jbisht@JATIN:/mnt/c/Users/jbish/file1$ rsh
Command 'rsh' not found, did you mean:
command 'zsh' from deb zsh (5.9-Subuntul)
command 'sh' from deb dash (0.5.12-6ubuntul)
command 'rssh' from deb zsh (5.9-Subuntul)
command 'ssh' from deb openssh-client (1:9.6p1-3ubuntu13.5)
Try: sudo apt install <deb name>
```

Problem2: script for checking a number is even or odd.

```

Microsoft Windows [Version 10.0.26100.2894]
(c) Microsoft Corporation. All rights reserved.

D:\>wsl
jbisht@JATIN:/mnt/d$ ls
total 12
drwxr-xr-x 1 jbisht jbisht 4096 Nov 19 12:54 operating-sys
drwxr-xr-x 1 jbisht jbisht 4096 Nov 19 12:54 problem1
drwxr-xr-x 1 jbisht jbisht 4096 Nov 19 12:54 problem2
jbisht@JATIN:/mnt/d$ cd operating-sys
-bash: cd: too many arguments
jbisht@JATIN:/mnt/d$ mkdir operating-sys
jbisht@JATIN:/mnt/d$ cd operating-sys
jbisht@JATIN:/mnt/d/operating-sys$ mkdir Assg1
jbisht@JATIN:/mnt/d/operating-sys$ touch problem2
jbisht@JATIN:/mnt/d/operating-sys$ cat >> problem2
echo "Enter a number:"
read num

if [ $((num%2)) -eq 0 ]; then
    echo "$num is even"
else
    echo "$num is odd"
fi
jbisht@JATIN:/mnt/d/operating-sys$ chmod +x problem2.sh
jbisht@JATIN:/mnt/d/operating-sys$ bash problem2.sh
Enter a number:
25
25 is odd
jbisht@JATIN:/mnt/d/operating-sys$ bash problem2.sh
Enter a number:
12
12 is even
jbisht@JATIN:/mnt/d/operating-sys$ |

```

Problem3: script for checking given year is a leap year or not.

```

jbisht@JATIN: /mnt/d/operating-sys$ cat > problem3.sh
echo "Enter a year: "
read year

if [ $$((year % 400)) -eq 0 ]; then
    echo "$year is a leap year"
elif [ $$((year % 100)) -eq 0 ]; then
    echo "$year is not a leap year"
elif [ $$((year % 4)) -eq 0 ]; then
    echo "$year is a leap year"
else
    echo "$year is not a leap year"
fi

jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2025
2025 is not a leap year
jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2024
2024 is a leap year
jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2028
2028 is a leap year
jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2000
2000 is a leap year
jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2048
2048 is a leap year
jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2062
2062 is not a leap year
jbisht@JATIN: /mnt/d/operating-sys$ bash problem3.sh
Enter a year:
2086
2086 is not a leap year

```

Problem4: script to swap two integers.

```
jbisht@JATIN:/mnt/d/operating-sys$ cat > problem4.sh
echo "Enter the first number: "
read a
echo "Enter the second number: "
read b

echo "Before swappong a = $a, b = $b"

temp=$a
a=$b
b=$temp

echo "After swapping a = $a, b = $b"

jbisht@JATIN:/mnt/d/operating-sys$ bash problem4.sh
Enter the first number:
12
Enter the second number:
23
Before swappong a = 12, b = 23
After swapping a = 23, b = 12
jbisht@JATIN:/mnt/d/operating-sys$
```

Problem5: script to calculate sum of all digits of a number.

```
jbisht@JATIN:/mnt/d/operati x + v
jbisht@JATIN:/mnt/d/operating-sys$ cat > problem5.sh
echo "Enter a number: "
read num

sum=0

while [ $num -gt 0 ]; do
    digit=$((num % 10))
    sum=$((sum + digit))
    num=$((num / 10))
done

echo "The sum of the digits is: $sum"
jbisht@JATIN:/mnt/d/operating-sys$ bash problem5.sh
Enter a number:
235
The sum of the digits is: 10
jbisht@JATIN:/mnt/d/operating-sys$ bash problem5.sh
Enter a number:
3241253468195
The sum of the digits is: 53
jbisht@JATIN:/mnt/d/operating-sys$
```