



Green
University

Green University of Bangladesh

Lab Performance

Course Title: Operation System Lab

Course Code: CSE 310

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Problem:1

1. Write a Shell program:

Input: Welcome to the Green University of Bangladesh

Output:

Green

Green University

Green University of Bangladesh

Source Code:

```
#!/bin/bash
```

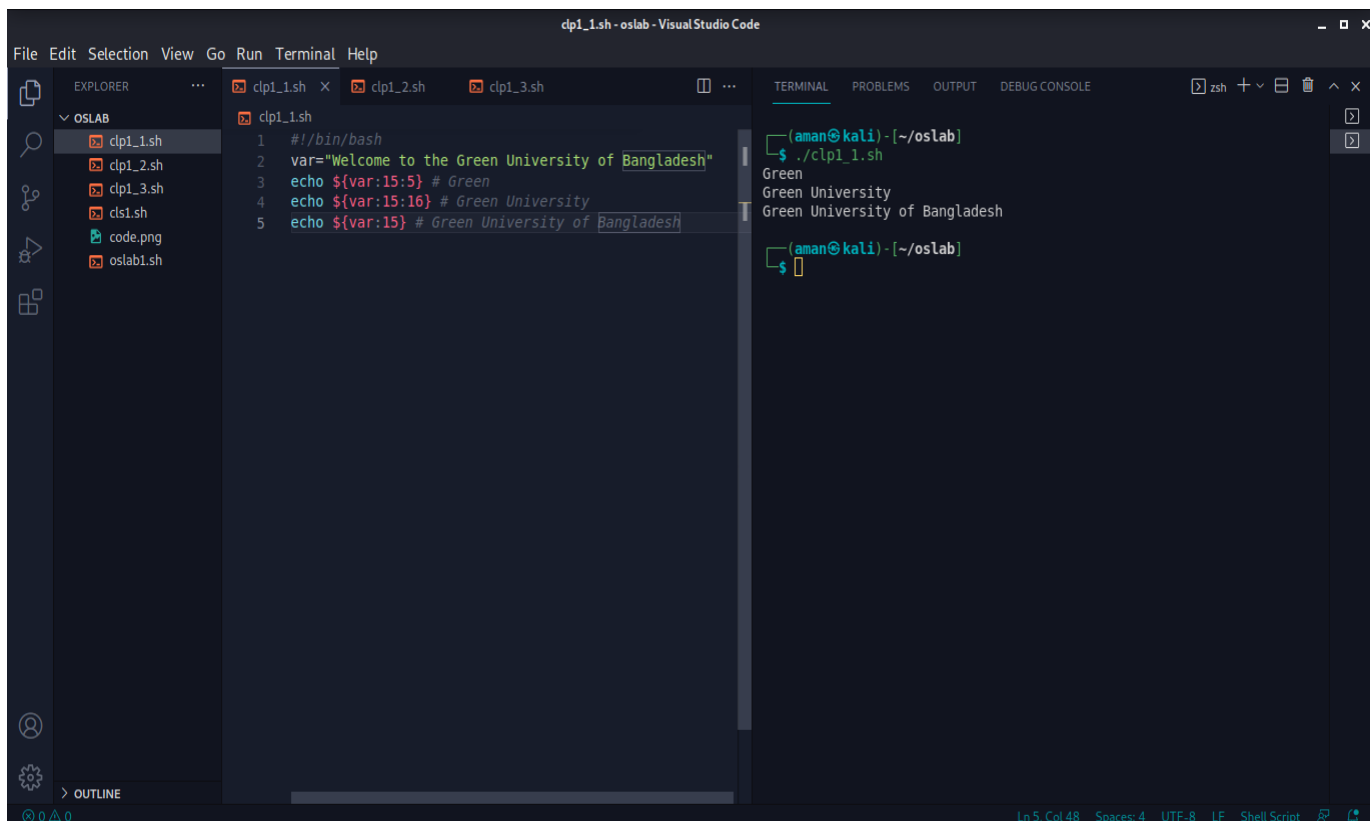
```
var="Welcome to the Green University of Bangladesh"
```

```
echo ${var:15:5} # Green
```

```
echo ${var:15:16} # Green University
```

```
echo ${var:15} # Green University of Bangladesh
```

Output:



The screenshot shows a Visual Studio Code window titled 'clp1_1.sh - oslab - Visual Studio Code'. The Explorer panel on the left shows a file named 'clp1_1.sh'. The main editor area displays the following script:

```
1 #!/bin/bash
2 var="Welcome to the Green University of Bangladesh"
3 echo ${var:15:5} # Green
4 echo ${var:15:16} # Green University
5 echo ${var:15} # Green University of Bangladesh
```

The TERMINAL panel on the right shows the output of the script:

```
(aman@kali) ~/oslab
$ ./clp1_1.sh
Green
Green University
Green University of Bangladesh
$
```

Fig: Problem 1 output

Problem:2

2. Write shell script to display even position numbers (using Until loop).

Sample Input:

Enter 7-digit number: 5867458

Output:

8

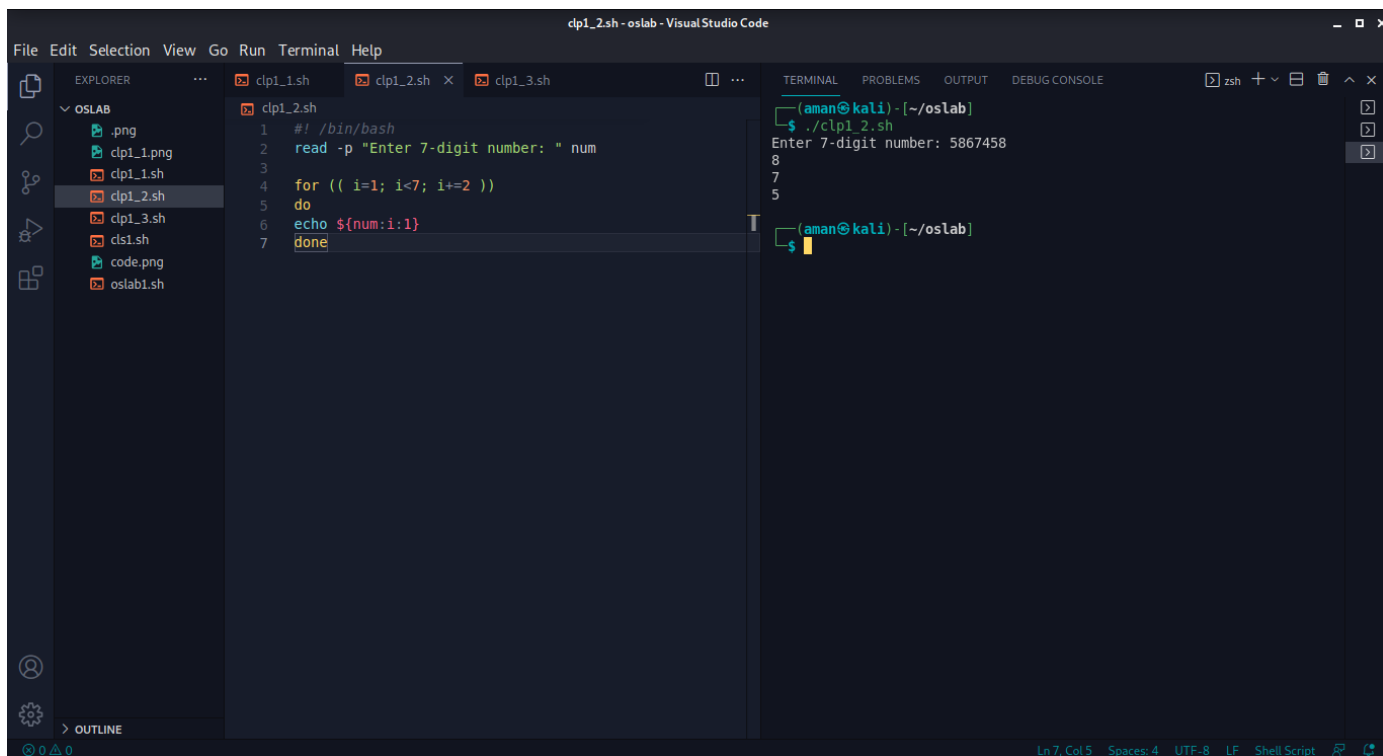
7

5

Source Code:

```
#!/bin/bash
read -p "Enter 7-digit number: " num
for (( i=1; i<7; i+=2 ))
do
echo ${num:i:1}
done
```

Output:

A screenshot of the Visual Studio Code editor interface. The Explorer panel on the left shows a file named 'clp1_2.sh' selected. The main editor area displays the shell script code. The TERMINAL panel on the right shows the execution of the script, with the input '5867458' and the output '8', '7', and '5' displayed on separate lines.

```
clp1_2.sh - oslab - Visual Studio Code
File Edit Selection View Go Run Terminal Help
EXPLORER
OSLAB
  .png
  clp1_1.png
  clp1_1.sh
  clp1_2.sh
  clp1_3.sh
  clsl.sh
  code.png
  oslab1.sh
clp1_2.sh
1  #!/bin/bash
2  read -p "Enter 7-digit number: " num
3
4  for (( i=1; i<7; i+=2 ))
5  do
6  echo ${num:i:1}
7  done
TERMINAL
(aman@kali) - [~/oslab]
$ ./clp1_2.sh
Enter 7-digit number: 5867458
8
7
5
(aman@kali) - [~/oslab]
$
```

Fig: Problem 2 output

Problem:3

3. Write a Shell program using While loop from a set of numbers.

Sample Input:

Enter the number: 562526565256

Output:

5 = 5 times

6 = 4 times

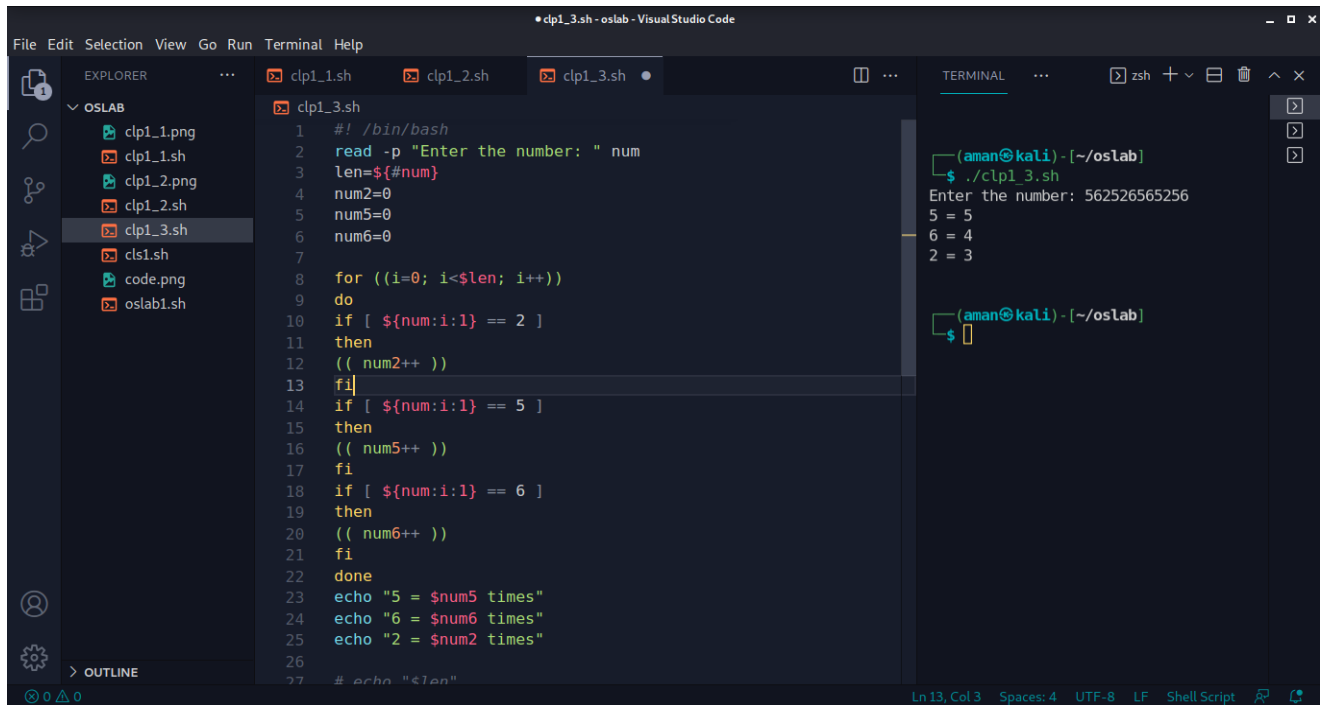
2 = 3 times

Source Code:

```
#!/bin/bash
read -p "Enter the number: " num
len=${#num}
num2=0
num5=0
num6=0

for ((i=0; i<$len; i++))
do
if [ ${num:i:1} == 2 ]
then
(( num2++ ))
fi
if [ ${num:i:1} == 5 ]
then
(( num5++ ))
fi
if [ ${num:i:1} == 6 ]
then
(( num6++ ))
fi
done
echo "5 = $num5 times"
echo "6 = $num6 times"
echo "2 = $num2 times"
```

Output:



The screenshot shows a Visual Studio Code editor window titled "clp1_3.sh - oslab - Visual Studio Code". The Explorer panel on the left shows a file named "clp1_3.sh" selected. The main editor area displays the following shell script:

```
1  #!/bin/bash
2  read -p "Enter the number: " num
3  len=${#num}
4  num2=0
5  num5=0
6  num6=0
7
8  for ((i=0; i<$len; i++))
9  do
10 if [ ${num:i:1} == 2 ]
11 then
12 (( num2++ ))
13 fi
14 if [ ${num:i:1} == 5 ]
15 then
16 (( num5++ ))
17 fi
18 if [ ${num:i:1} == 6 ]
19 then
20 (( num6++ ))
21 fi
22 done
23 echo "5 = $num5 times"
24 echo "6 = $num6 times"
25 echo "2 = $num2 times"
26
27 # echo "$len"
```

The TERMINAL panel on the right shows the output of the script. The prompt is "(aman@kali) - [~/oslab]". The user enters the command "\$./clp1_3.sh". The output is:

```
Enter the number: 562526565256
5 = 5
6 = 4
2 = 3
```

The terminal prompt is now "\$ ".

Fig: Problem 3 output