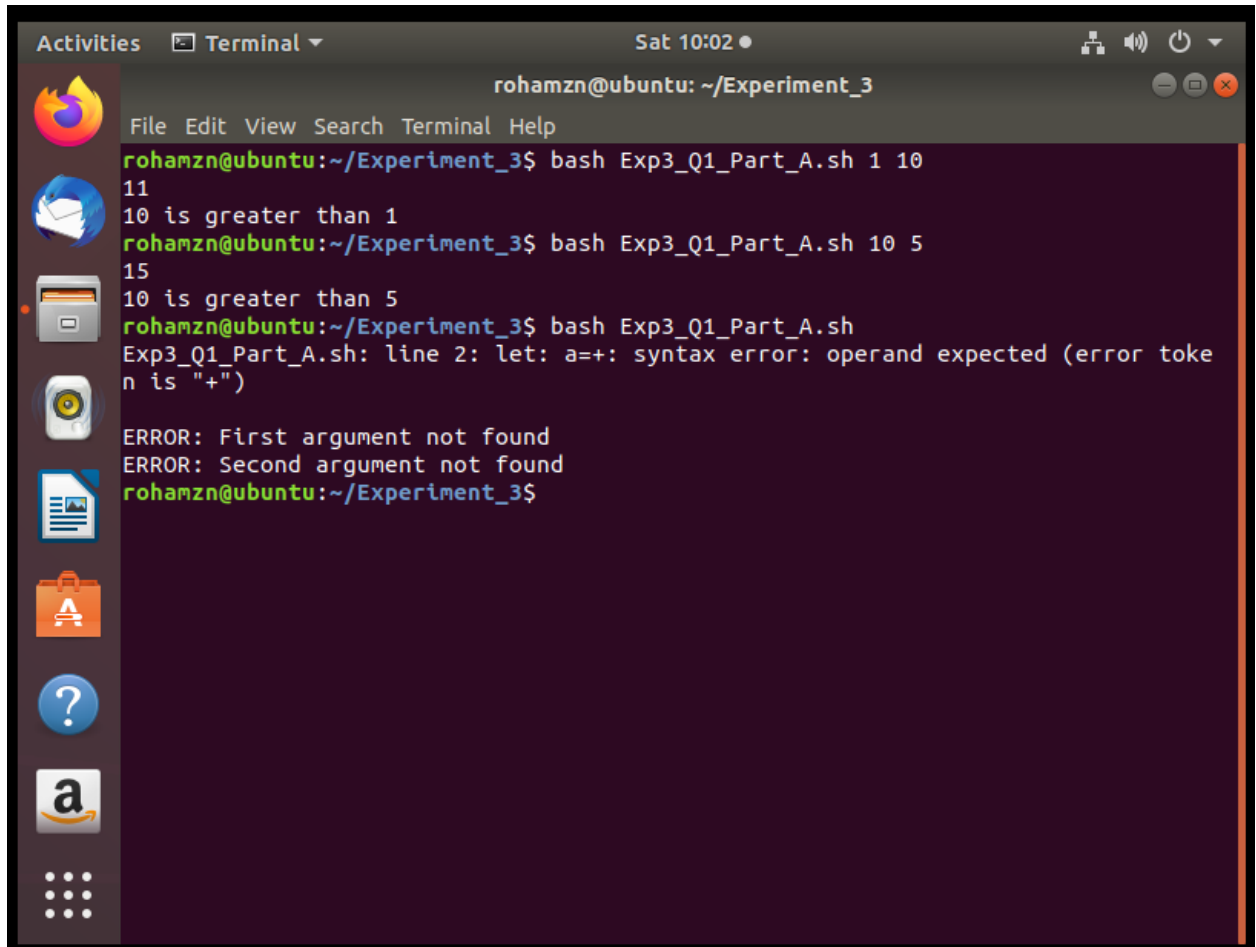


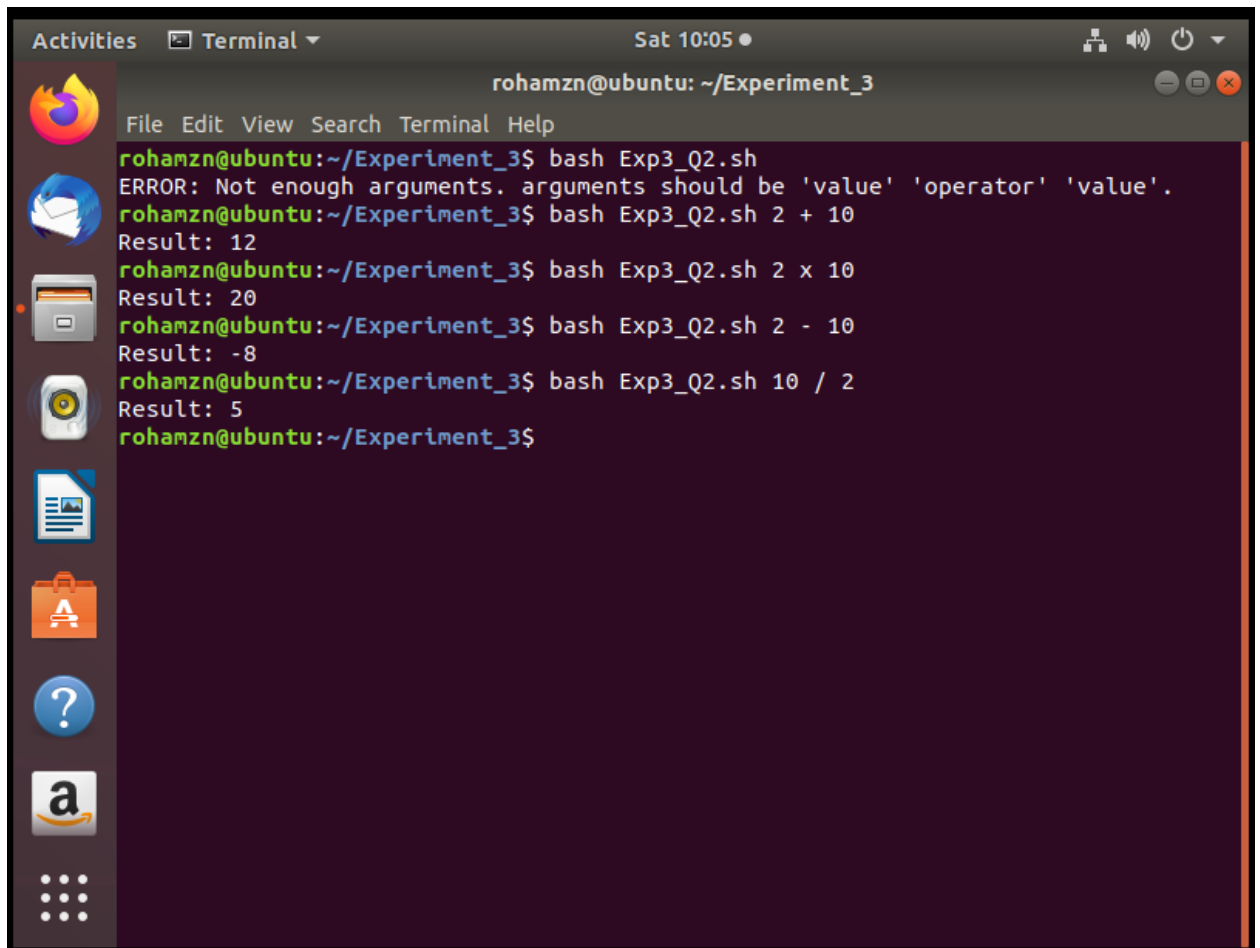
تمرین سوم سیستم عامل

رهام زنده دل نوبری 9731088



```
rohamzn@ubuntu: ~/Experiment_3
File Edit View Search Terminal Help
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q1_Part_A.sh 1 10
11
10 is greater than 1
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q1_Part_A.sh 10 5
15
10 is greater than 5
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q1_Part_A.sh
Exp3_Q1_Part_A.sh: line 2: let: a=+: syntax error: operand expected (error token
n is "+")
ERROR: First argument not found
ERROR: Second argument not found
rohamzn@ubuntu:~/Experiment_3$
```

نمونه ی اجرایی از سوال اول. موقعی که آرگمان ها وارد نشوند، برنامه ERROR: First argument not found می نویسد.

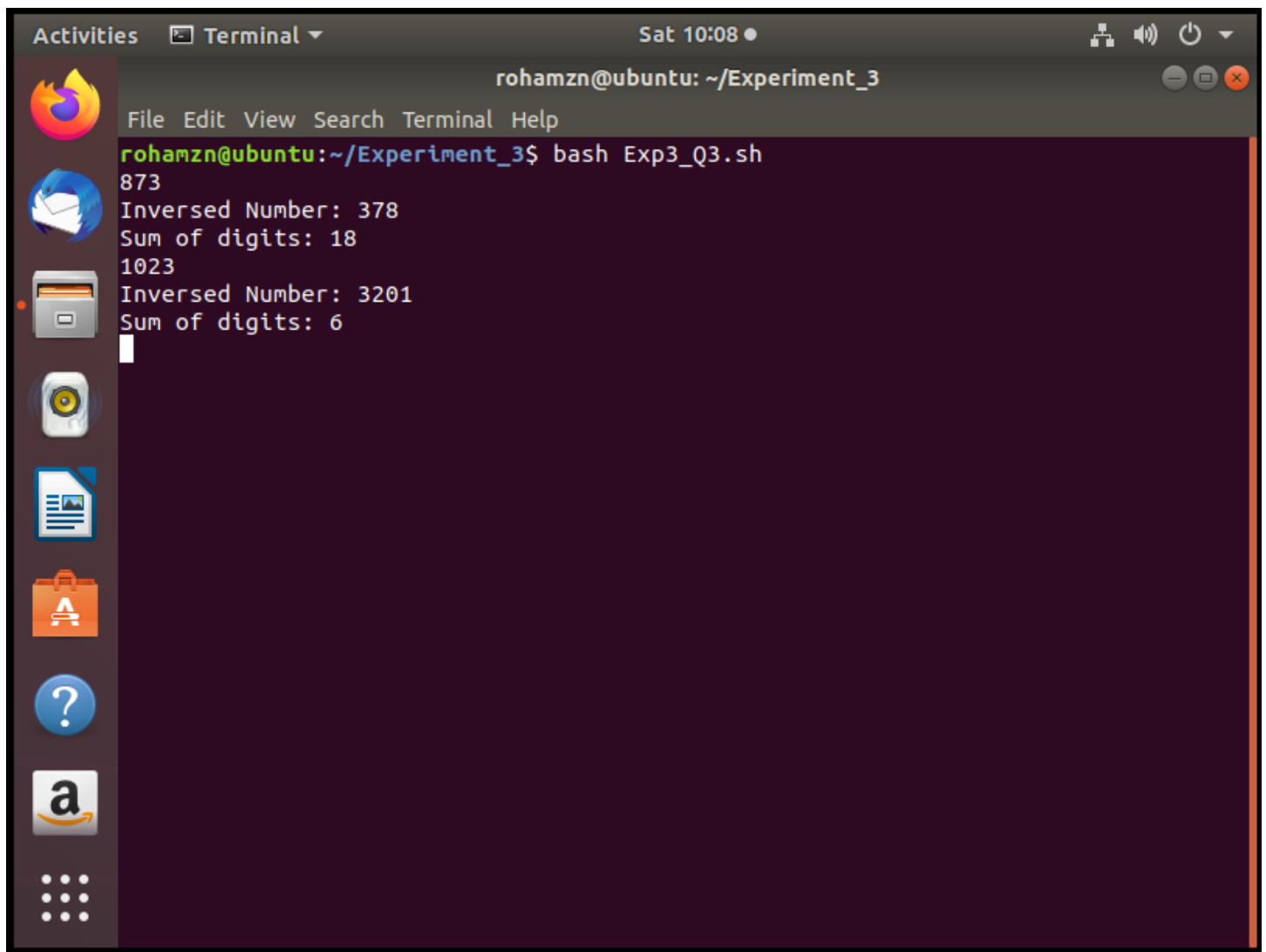


The screenshot shows a terminal window titled "Terminal" with the user "rohamzn@ubuntu" in the directory "~/Experiment_3". The terminal displays the following sequence of commands and outputs:

```
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q2.sh
ERROR: Not enough arguments. arguments should be 'value' 'operator' 'value'.
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q2.sh 2 + 10
Result: 12
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q2.sh 2 x 10
Result: 20
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q2.sh 2 - 10
Result: -8
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q2.sh 10 / 2
Result: 5
rohamzn@ubuntu:~/Experiment_3$
```

The left sidebar of the terminal window shows several application icons: Firefox, a mail icon, a file manager icon, a disk icon, a question mark icon, and an Amazon logo icon.

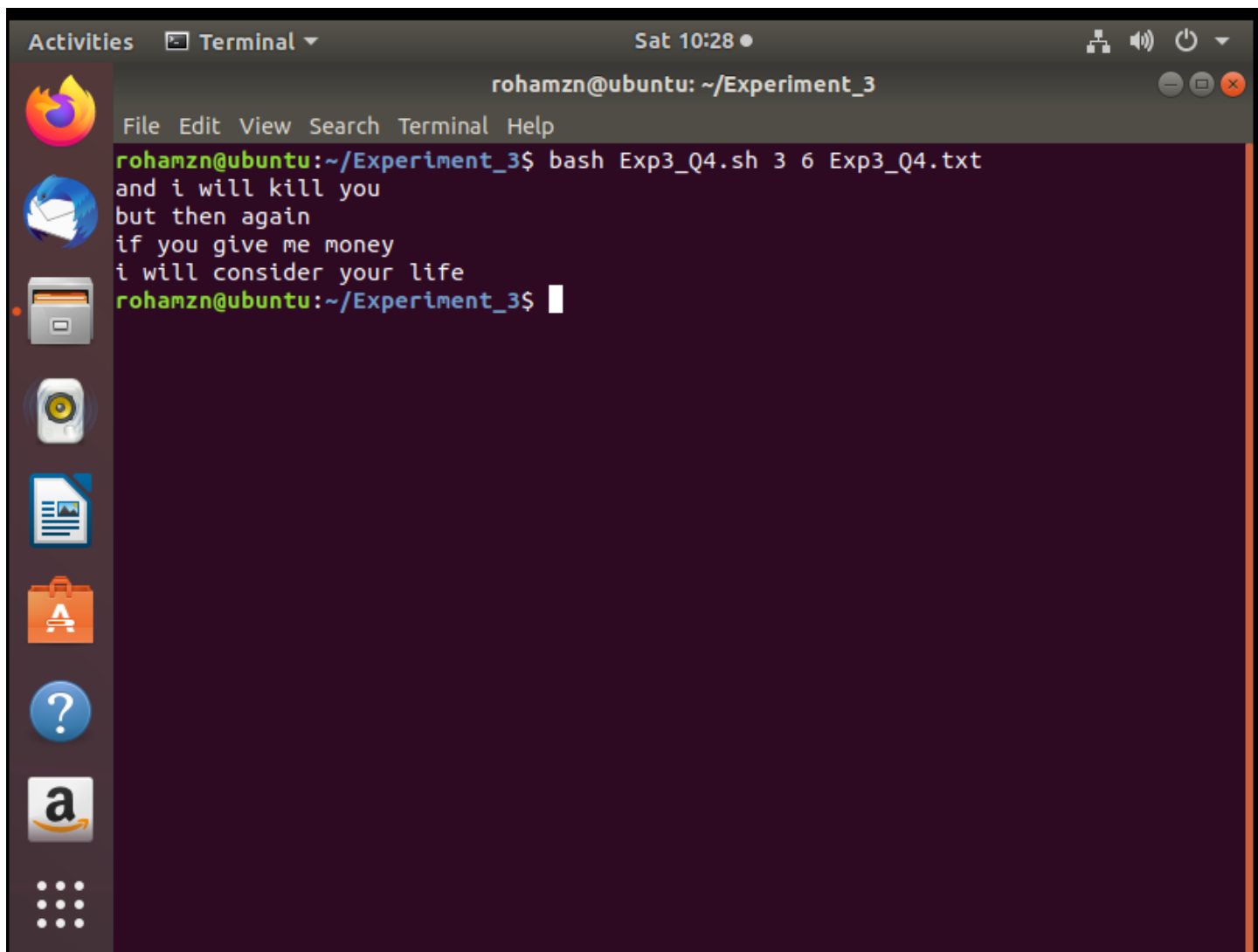
نمونه اجرایی از سوال دوم. اگر کاربر آرگومان وارد نکند ERROR می دهد.



The image shows a terminal window titled "Terminal" with a dark background. The user is logged in as "rohamzn@ubuntu" and is in the directory "~/Experiment_3". The terminal displays the output of a script named "Exp3_Q3.sh". The script processes two numbers: 873 and 1023. For each number, it calculates the inverted number and the sum of its digits. The output for 873 is "Inversed Number: 378" and "Sum of digits: 18". The output for 1023 is "Inversed Number: 3201" and "Sum of digits: 6". The terminal window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The left sidebar shows various application icons including Firefox, Mail, Files, and a question mark icon.

```
rohamzn@ubuntu: ~/Experiment_3
File Edit View Search Terminal Help
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q3.sh
873
Inversed Number: 378
Sum of digits: 18
1023
Inversed Number: 3201
Sum of digits: 6
```

نمونه اجرایی از سوال سوم

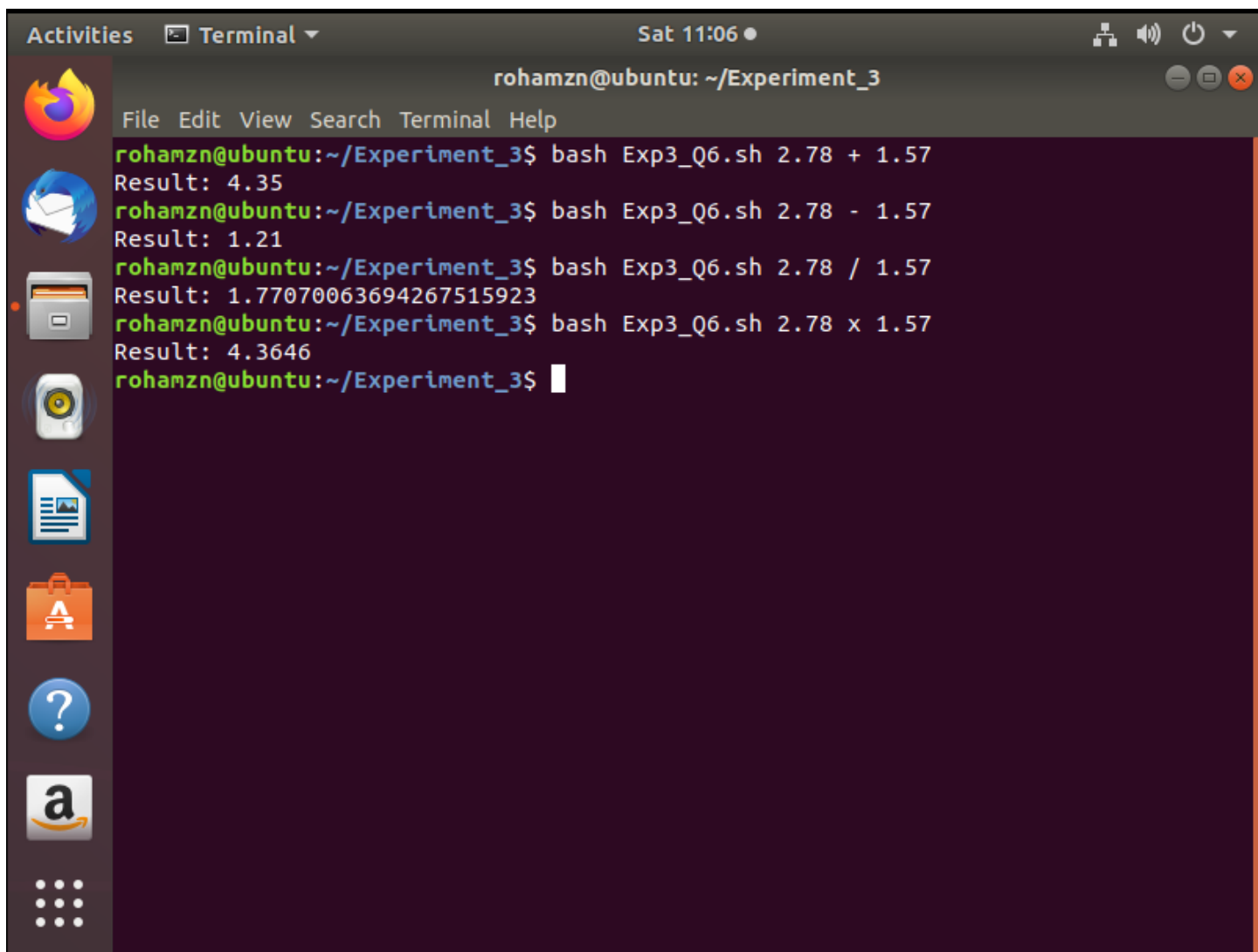
A screenshot of a Linux terminal window. The title bar shows 'Activities', 'Terminal', and the time 'Sat 10:28'. The terminal content shows a user 'rohamzn@ubuntu' in the directory '~/Experiment_3' running a script 'Exp3_Q4.sh' with arguments '3 6 Exp3_Q4.txt'. The script outputs a poem. The terminal interface includes a menu bar (File, Edit, View, Search, Terminal, Help) and a sidebar with application icons (Firefox, Mail, Files, Music, Documents, Applications, Help, Amazon, and a grid icon).

```
rohamzn@ubuntu: ~/Experiment_3
File Edit View Search Terminal Help
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q4.sh 3 6 Exp3_Q4.txt
and i will kill you
but then again
if you give me money
i will consider your life
rohamzn@ubuntu:~/Experiment_3$
```

نمونه اجرایی از سوال چهارم

```
Activities  Terminal  Sat 10:29
rohamzn@ubuntu: ~/Experiment_3
File Edit View Search Terminal Help
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q5.sh 1
Please enter line count:
5
|_
|_|
|_|_| | |
|_|_|_|
|_|_|_|_|
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q5.sh 2
Please enter line count:
5
      *
     * *
    * * *
   * * * *
  * * * * *
 * * * * *
* * * * *
 * * * *
  * * *
   * *
    *
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q5.sh 3
Please enter line count:
5
1
22
333
4444
55555
```

نمونه اجرایی از سوال پنجم



The image shows a terminal window titled "rohamzn@ubuntu: ~/Experiment_3". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal output shows four arithmetic operations performed using the `bc` command. Each operation is preceded by `rohamzn@ubuntu:~/Experiment_3$` and followed by `Result:` . The operations are: addition (`2.78 + 1.57`), subtraction (`2.78 - 1.57`), division (`2.78 / 1.57`), and multiplication (`2.78 x 1.57`). The terminal has a dark purple background and a light blue cursor. On the left side of the terminal window, there is a vertical dock with several application icons: Firefox, a mail icon, a file manager icon, a disk icon, a document icon, a shopping bag icon, a question mark icon, and an Amazon logo icon.

```
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q6.sh 2.78 + 1.57
Result: 4.35
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q6.sh 2.78 - 1.57
Result: 1.21
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q6.sh 2.78 / 1.57
Result: 1.77070063694267515923
rohamzn@ubuntu:~/Experiment_3$ bash Exp3_Q6.sh 2.78 x 1.57
Result: 4.3646
rohamzn@ubuntu:~/Experiment_3$
```

نمونه اجرایی از سوال امتیازی. در این سوال بایستی از `bc -l` | echo "var operand var" x=` استفاده کرد.`