Computer Science Assignment 04 report

CS2001F

Tendai K Nyevedzanai

NYVTEN001

14/04/2023

INTRODUCTION

Created a database using object oriented programming that uses Binary Search Tree technics to operate the database. A menu option is first shown which opts the user to pick an option thereafter the system acts according to the option chosen. The system allows the user to add posts and likes.

CLASSES

1.Account Class

This class takes in the account Name(accName) a string which is the key and the description(description) of the account which is also a string.

An array list of the datatype Posts is also created with the variable name of postFields, this is made an array because in the class Posts multiple values are taken which will be stored within the account class. The constructor of account is instantiated and uses the this Method to refer to the values of account. A comparable method is used to compare the accounts is they are similar in any way. A to string method is used to convert the account name and description into a string. The variables are set using set Methods and retrieved using get Methods.

This class interacts with the Binary Tree Node class as each account is a node containing all the other characters. The Binary Search Tree Class is used to retrieve accounts using the account name as the key

2.Posts Class

This class has instance variables of title a string , video Name a string and number of likes an integer. The constructor is instantiated and the arguments equated to the instance variables. Get methods are used to retrieve the data using the Binary Search Tree class

3.Menu

This is the main class that takes in the user inputs uses Account objects (account) , Binary Search Tree object (tree) of the data type Account class, Binary Tree Node object(bintree) and Posts object (post) to complete the requested actions.

While the user input is not yet 8(quit) the menu will continue iterating through the actions. A total of 8 options are present all using if statements to carry out the action using objects of the corresponding class

Test Values

Prompt 3:

Account name: tendai

Account Description: hi there tendai

Account name: steve

Account Description: big boy

Account name: mike

Account Description: slow

Prompt 2:

mike

steve

tendai

Prompt 1:

Account name :tendai

Account decription: hi there tendai

CREATIVITY

1. For prompt 2 if the user inputs an account name that does not exist I the data base, they are asked either to continue creating an account or to type the account name again.
2. If the user puts a value that's out of range they are prompted to put the correct value

Git Log

First ten lines

0: commit 91c8cbeb5fbc0f437965e398cdee4e9c197648bb

1: Author: Tendai Nyevedzanai <nyvten001@nightmare.cs.uct.ac.za>

2: Date: Wed Apr 19 15:47:15 2023 +0000

3:

4: the TokTik account was editted

5:

6: commit d75aeb9bf4ead9da0435508a5c892f90e27df6d0

7: Author: Tendai Nyevedzanai <nyvten001@sl-dual-278.cs.uct.ac.za>

8: Date: Fri Apr 14 18:12:33 2023 +0200

9:

Last ten lines

103: Author: Tendai Nyevedzanai <nyvten001@nightmare.cs.uct.ac.za>

104: Date: Tue Apr 4 14:21:40 2023 +0000

105:

106: added comment

107:

108: commit 8ccb5b5acdf20de4ca83819e79095268321efddd

109: Author: Tendai Nyevedzanai <nyvten001@nightmare.cs.uct.ac.za>

110: Date: Tue Apr 4 14:19:28 2023 +0000

111:

112: initialised the Account class

nyvten001@nightmare:~/Downloads$ git log

commit 91c8cbeb5fbc0f437965e398cdee4e9c197648bb (HEAD -> main)

Author: Tendai Nyevedzanai <nyvten001@nightmare.cs.uct.ac.za>

Date: Wed Apr 19 15:47:15 2023 +0000

    the TokTik account was editted

commit d75aeb9bf4ead9da0435508a5c892f90e27df6d0

Author: Tendai Nyevedzanai <nyvten001@sl-dual-278.cs.uct.ac.za>

Date: Fri Apr 14 18:12:33 2023 +0200

    added a method add

commit 5d671fc19d4c6a47f9180250bd1d08d62b89bb4d

Author: Tendai Nyevedzanai <nyvten001@sl-dual-278.cs.uct.ac.za>

Date: Fri Apr 14 18:09:43 2023 +0200

  changed opt 6

commit b0ae46b9cd507c5a03777b056645f55623f8035c

Author: Tendai Nyevedzanai <nyvten001@sl-dual-278.cs.uct.ac.za>

Date: Fri Apr 14 17:20:35 2023 +0200

  created array list value

commit 8ef7334d1beb803b3a36984316ac7adc7fffaa42

Author: Tendai Nyevedzanai <nyvten001@sl-dual-278.cs.uct.ac.za>

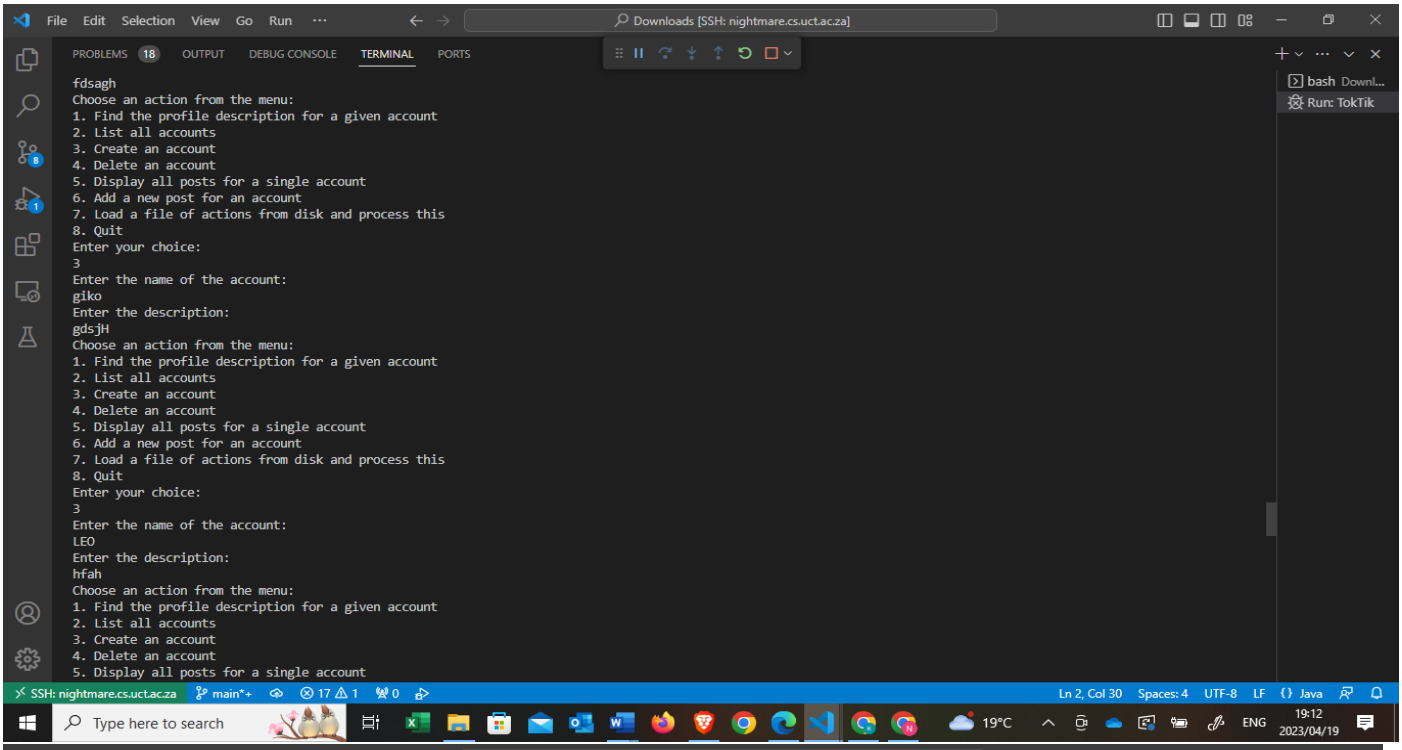
Date: Fri Apr 14 17:08:11 2023 +0200

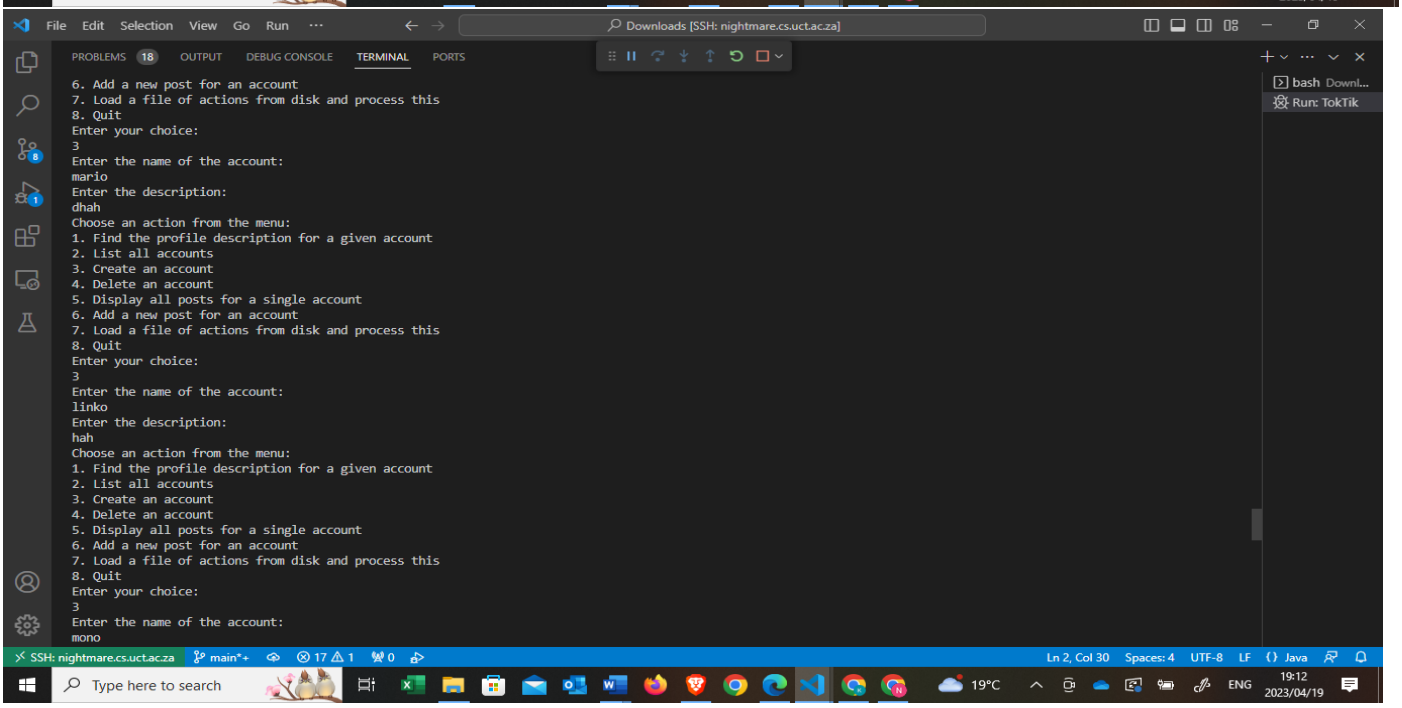
  modified the return type of postFields

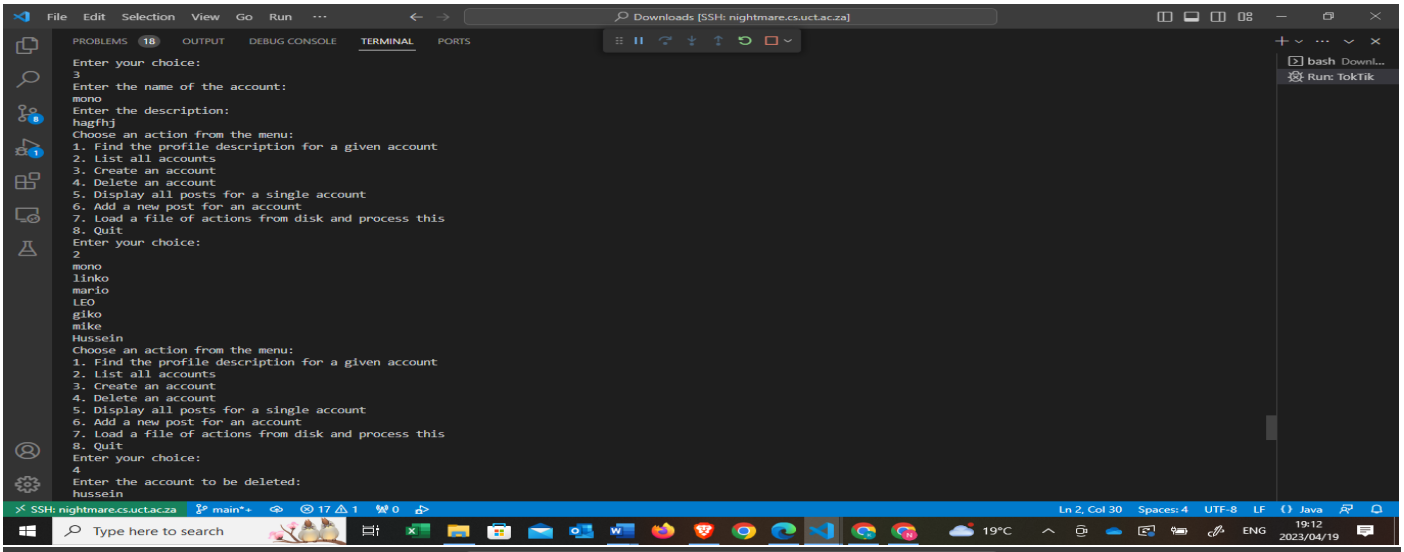
commit 0aa2aa20a2bcc4afa0798acfc3b82de0608042fc

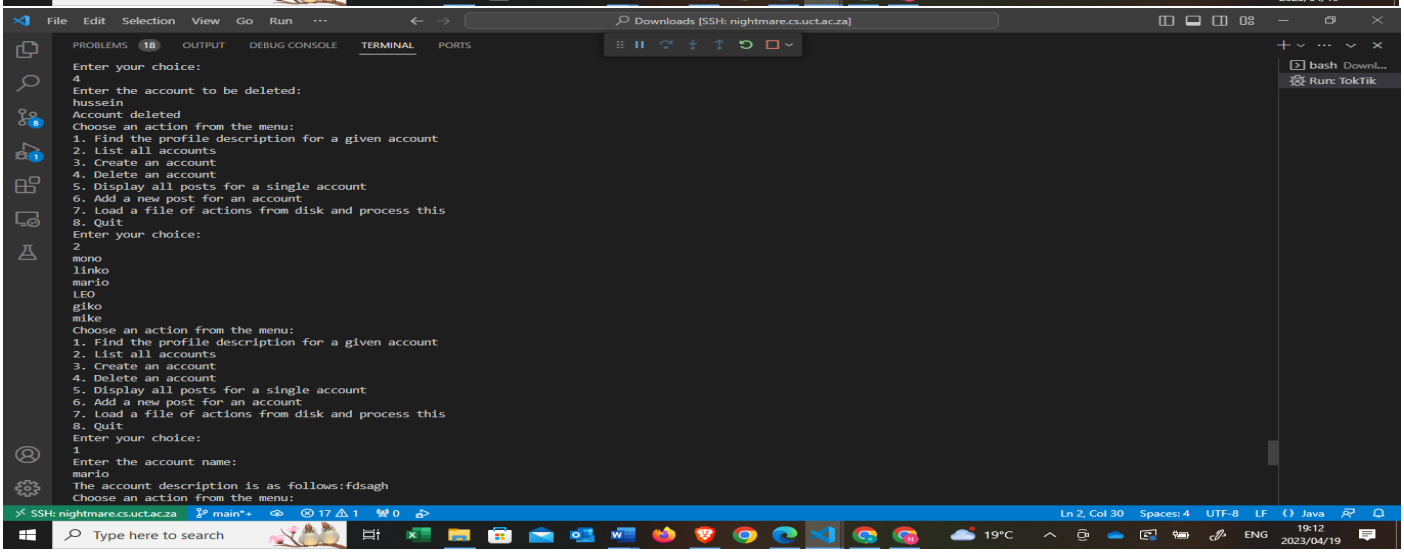
Author: Tendai Nyevedzanai <nyvten001@sl-dual-299.cs.uct.ac.za>

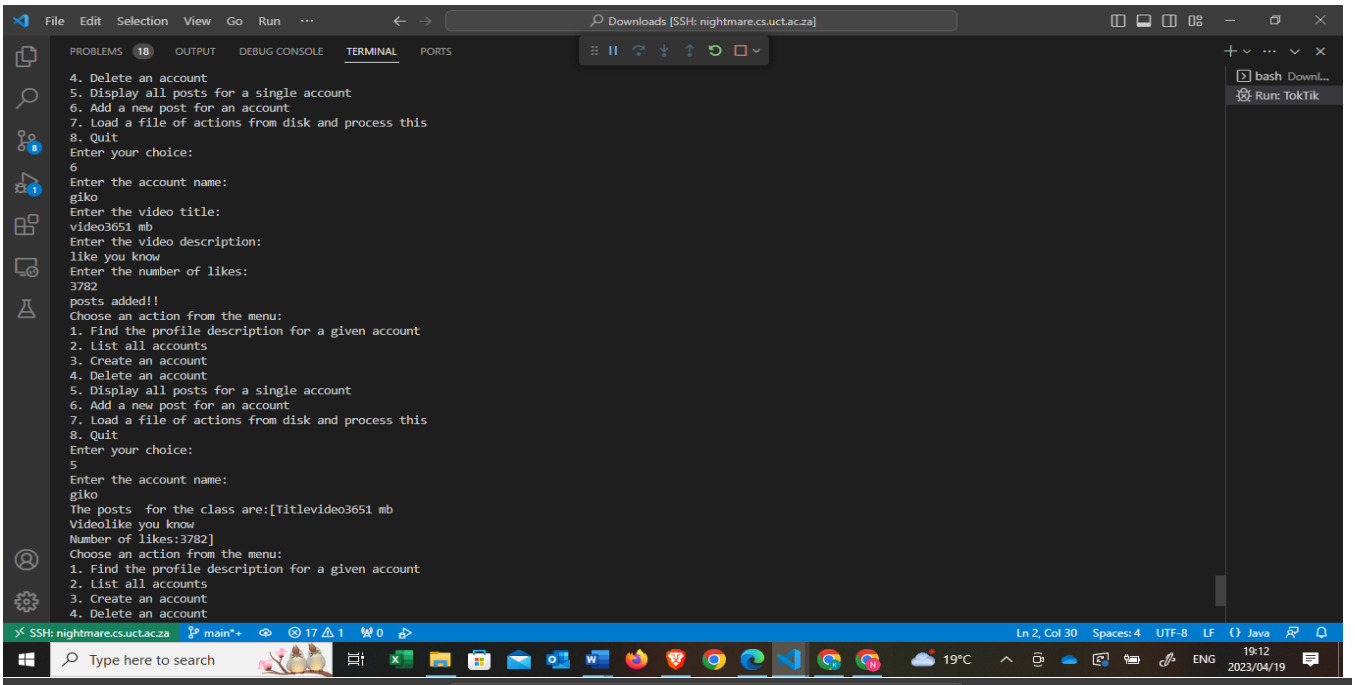
Date: Fri Apr 14 12:51:57 2023 +0200

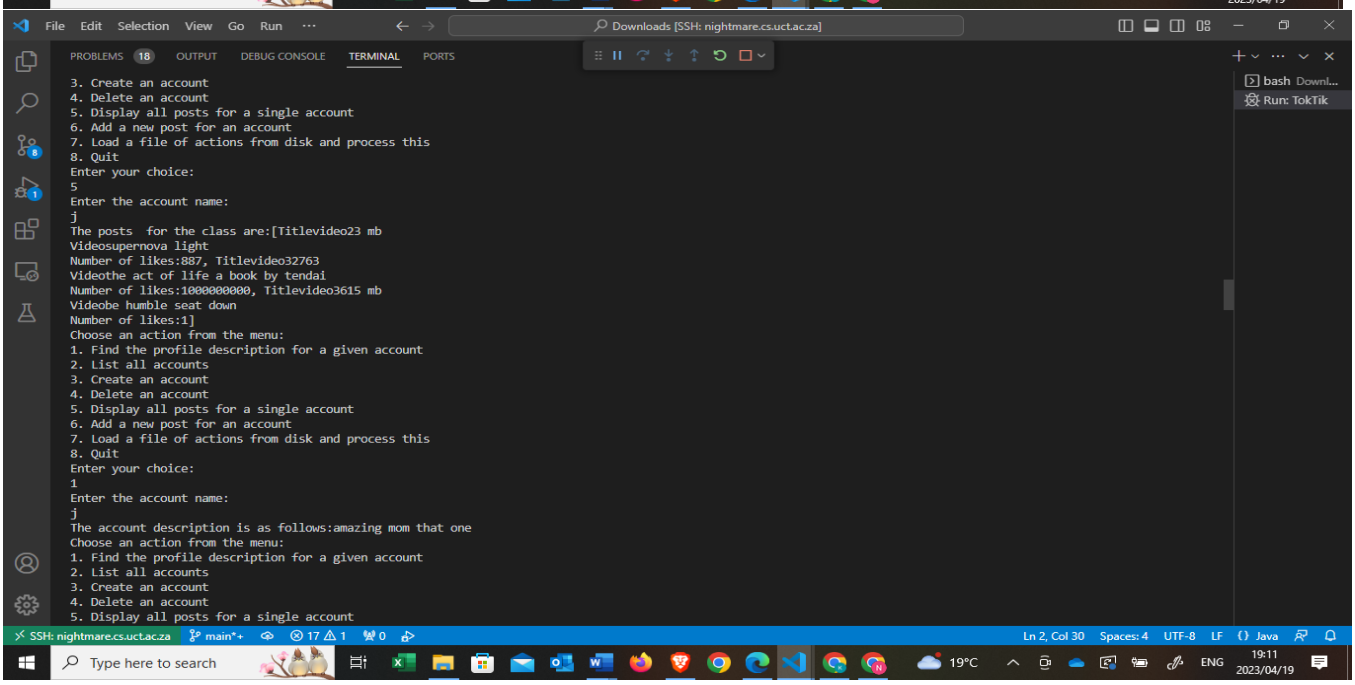

File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
fdsagh
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
giko
Enter the description:
gdsjH
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
LEO
Enter the description:
hfah
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19

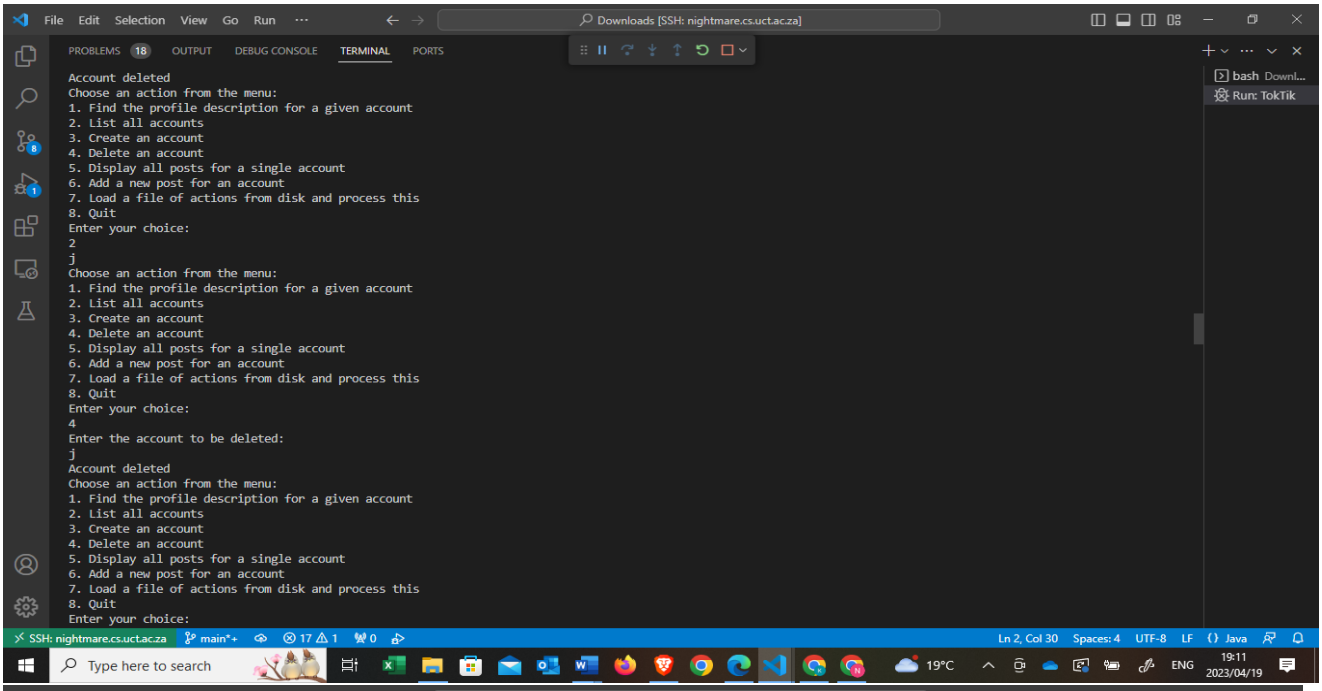

File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
mario
Enter the description:
dhah
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
linko
Enter the description:
hah
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
mono
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19

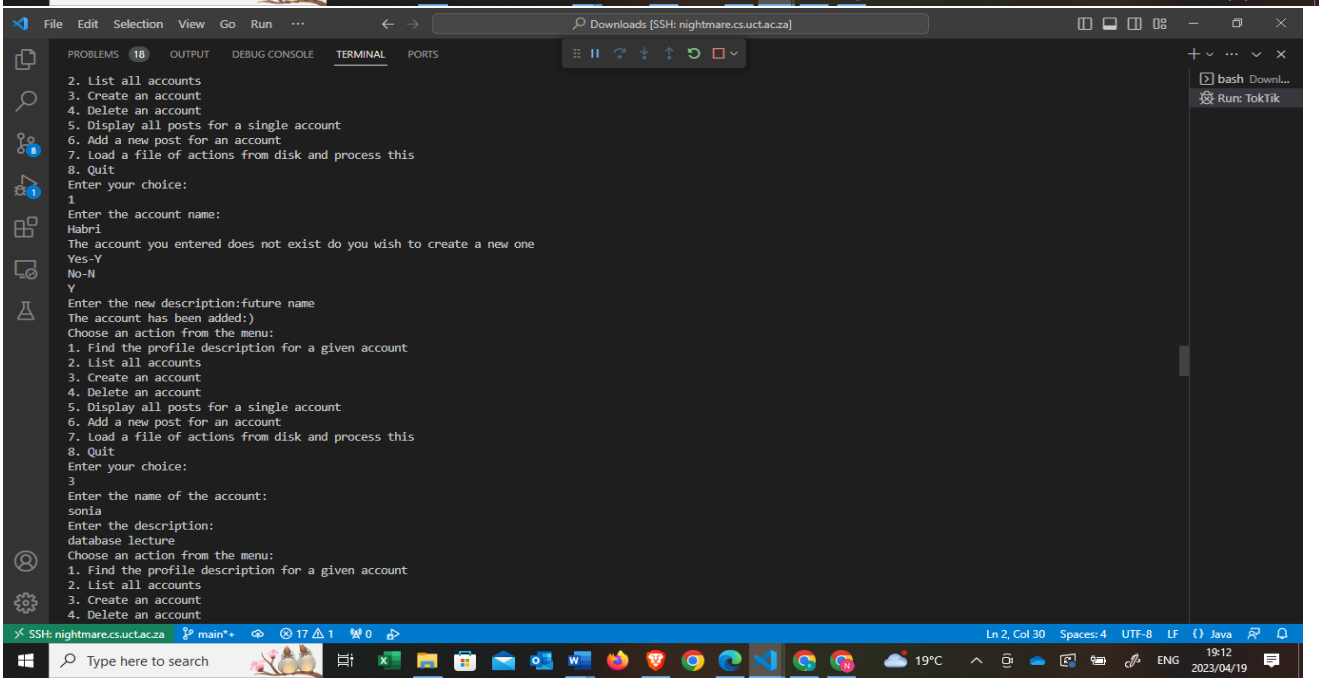

File Edit Selection View Go Run ···
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Enter your choice:
3
Enter the name of the account:
mono
Enter the description:
hagfhj
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
2
mono
linko
mario
LEO
giko
mike
Hussein
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
4
Enter the account to be deleted:
hussein
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19

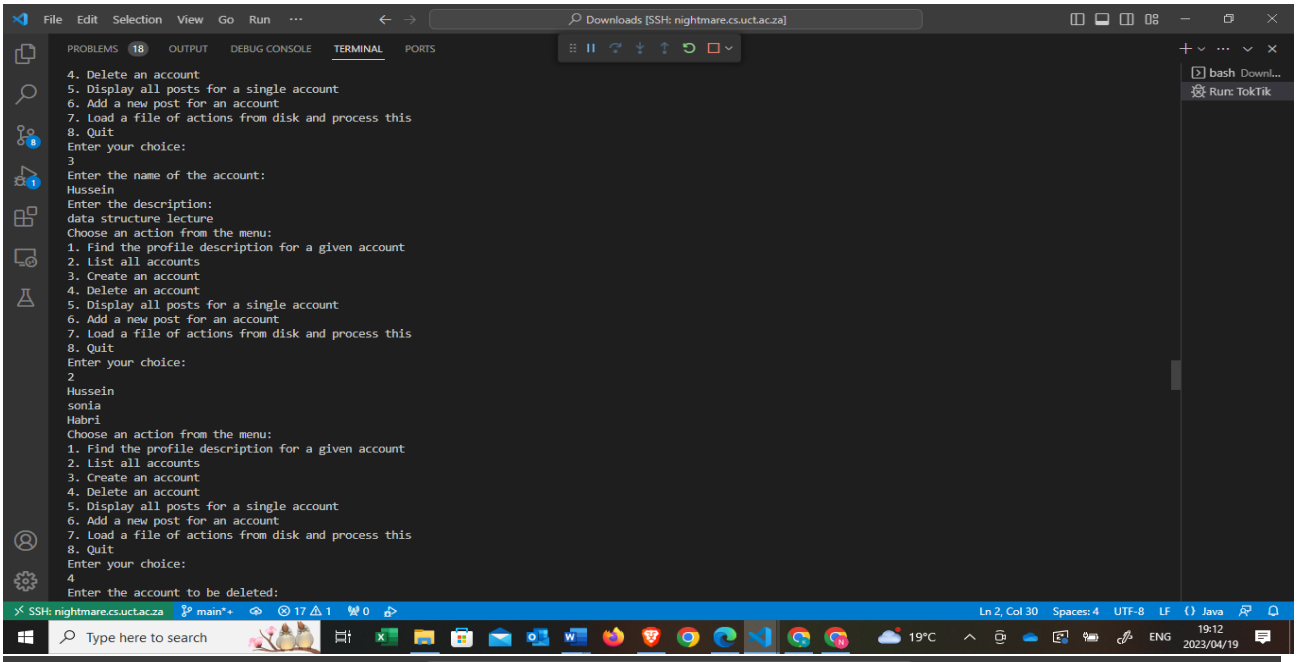

File Edit Selection View Go Run ···
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Enter your choice:
4
Enter the account to be deleted:
hussein
Account deleted
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
2
mono
linko
mario
LEO
giko
mike
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
1
Enter the account name:
mario
The account description is as follows:fdsagh
Choose an action from the menu:
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19

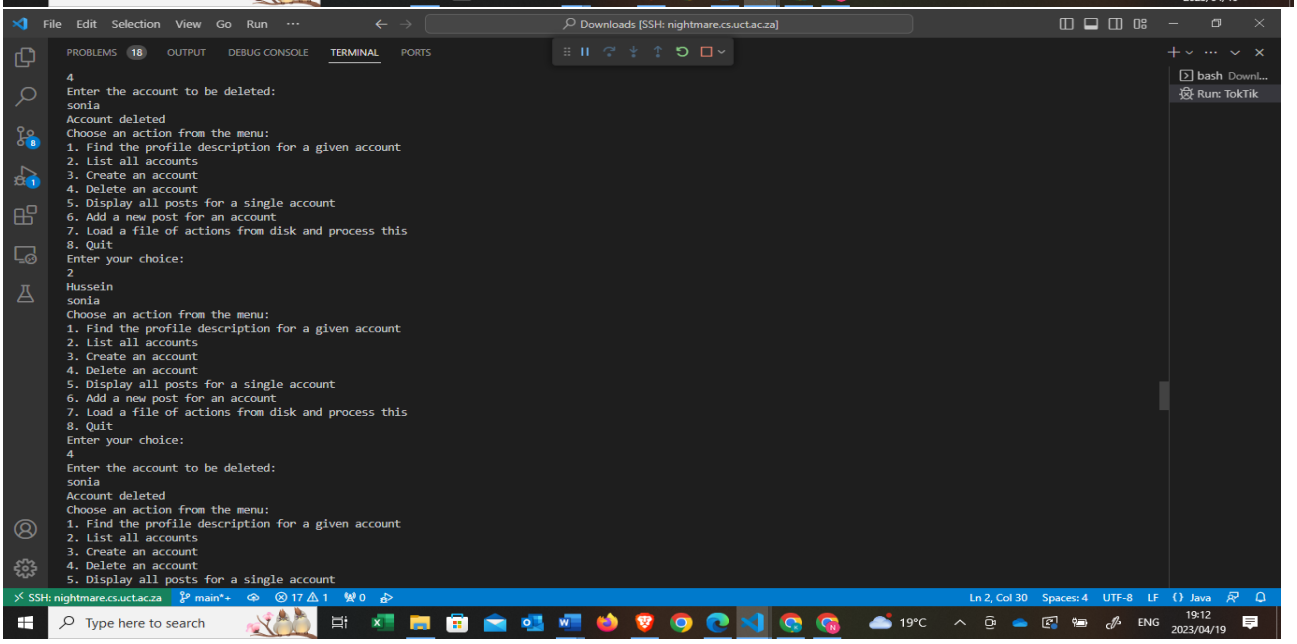

File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
6
Enter the account name:
giko
Enter the video title:
video3651 mb
Enter the video description:
like you know
Enter the number of likes:
3782
posts added!!
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
5
Enter the account name:
giko
The posts for the class are:[Titlevideo3651 mb
Videolike you know
Number of likes:3782]
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19

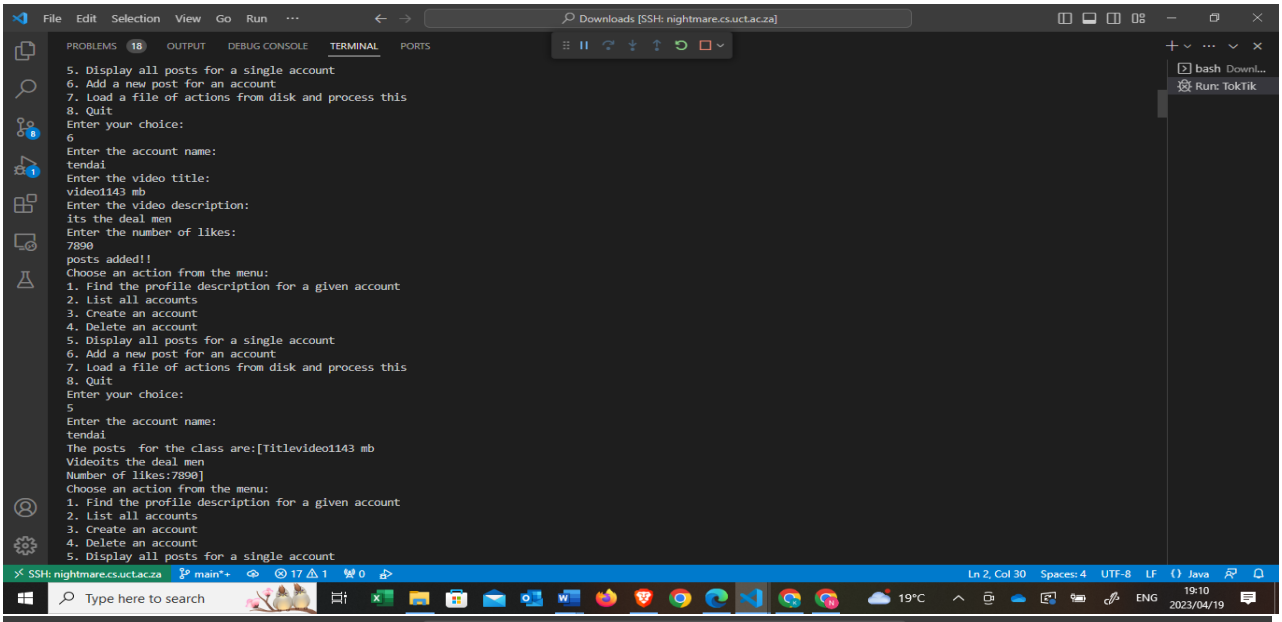

File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
5
Enter the account name:
j
The posts for the class are:[Titlevideo23 mb
Videosupernova light
Number of likes:887, Titlevideo32763
Videothe act of life a book by tendai
Number of likes:1000000000, Titlevideo3615 mb
Videobe humble seat down
Number of likes:1]
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
1
Enter the account name:
j
The account description is as follows:amazing mom that one
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19

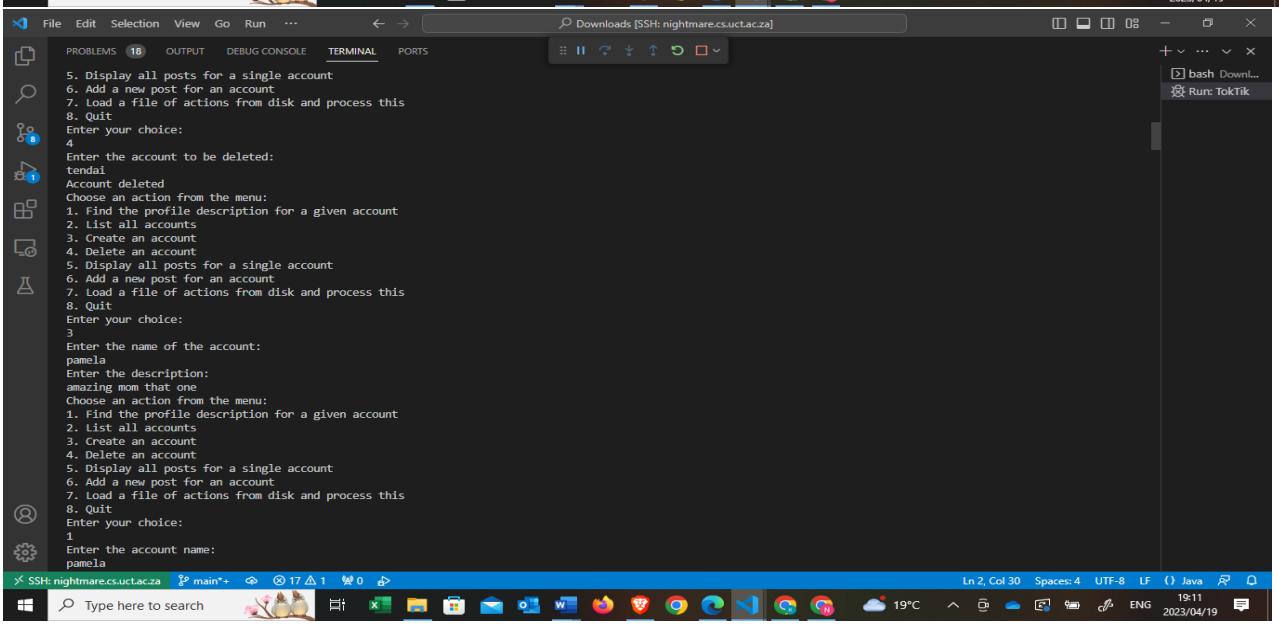

File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Account deleted
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
2
j
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
4
Enter the account to be deleted:
j
Account deleted
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19

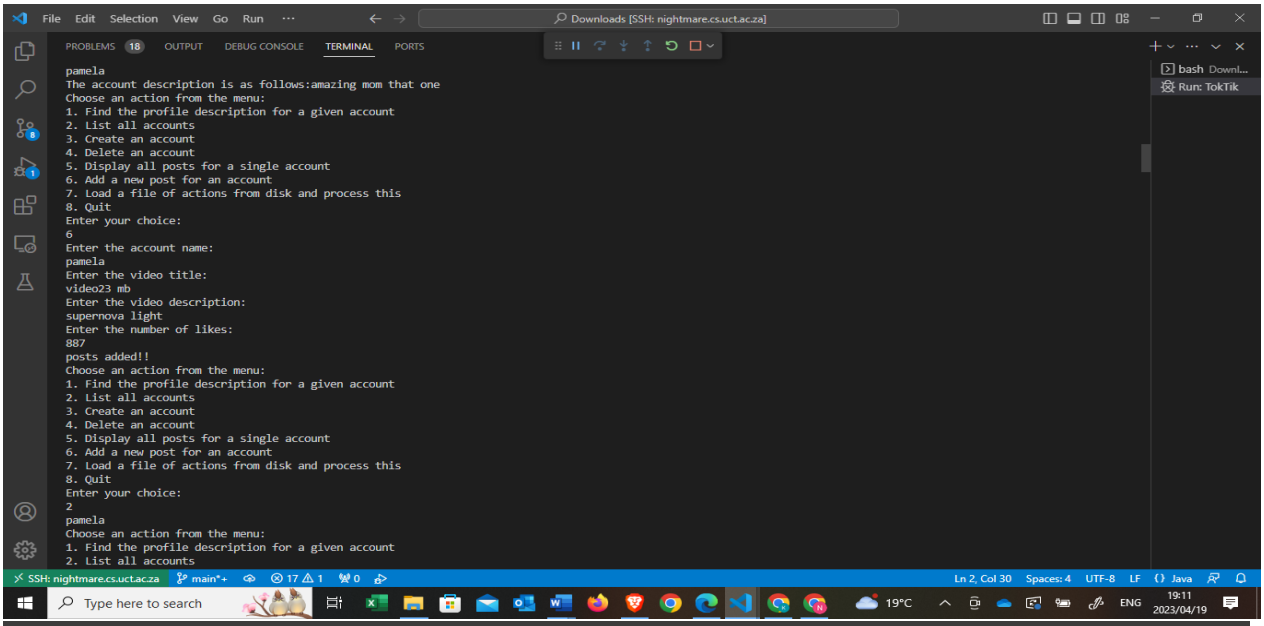

File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
1
Enter the account name:
Habri
The account you entered does not exist do you wish to create a new one
Yes-Y
No-N
Y
Enter the new description:future name
The account has been added:)
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
sonia
Enter the description:
database lecture
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19

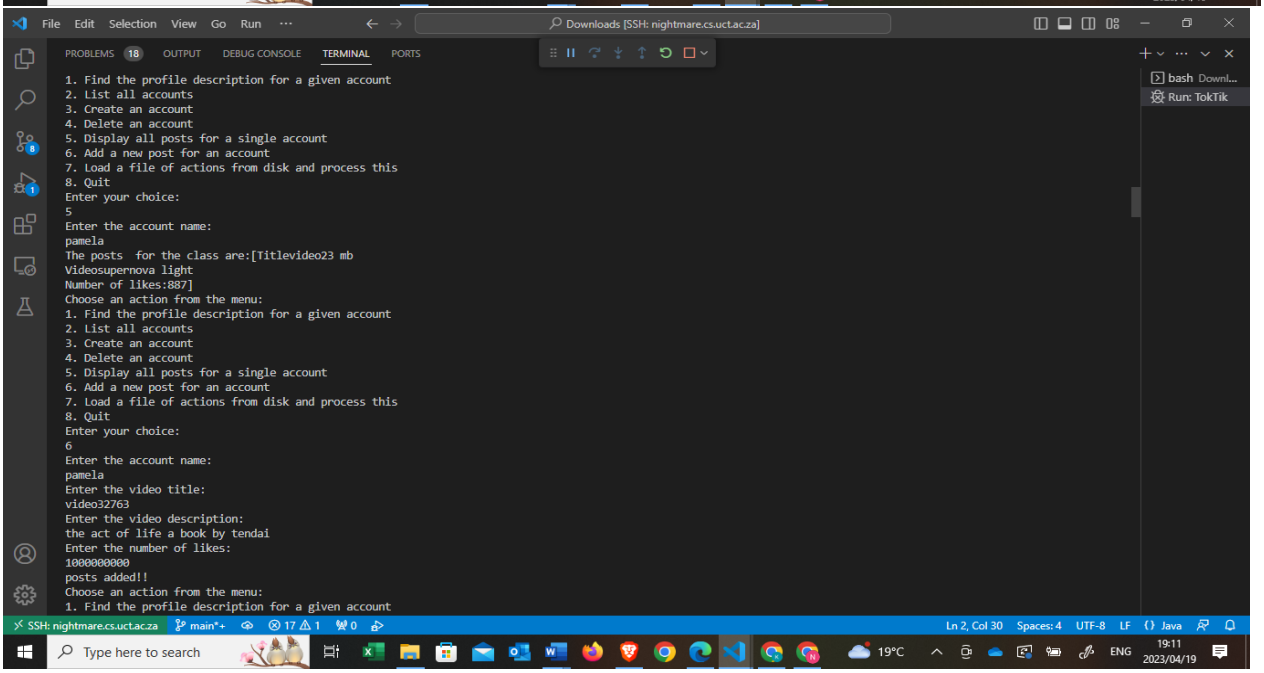

File Edit Selection View Go Run ···
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
bash Downl...
Run: TokTik
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
Hussein
Enter the description:
data structure lecture
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
2
Hussein
sonia
Habri
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
4
Enter the account to be deleted:
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19


File Edit Selection View Go Run ···
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
bash Downl...
Run: TokTik
4
Enter the account to be deleted:
sonia
Account deleted
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
2
Hussein
sonia
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
4
Enter the account to be deleted:
sonia
Account deleted
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:12
2023/04/19


File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
6
Enter the account name:
tendai
Enter the video title:
video1143 mb
Enter the video description:
its the deal men
Enter the number of likes:
7890
posts added!!
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
5
Enter the account name:
tendai
The posts for the class are:[Titlevideo1143 mb
Videoits the deal men
Number of likes:7890]
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:10
2023/04/19


File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
4
Enter the account to be deleted:
tendai
Account deleted
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
pamela
Enter the description:
amazing mom that one
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
1
Enter the account name:
pamela
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19


File Edit Selection View Go Run
Downloads [SSH: nightmare.cs.uct.ac.za]
PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
pamela
The account description is as follows:amazing mom that one
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
6
Enter the account name:
pamela
Enter the video title:
video23 mb
Enter the video description:
supernova light
Enter the number of likes:
887
posts added!!
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
2
pamela
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19


File Edit Selection View Go Run
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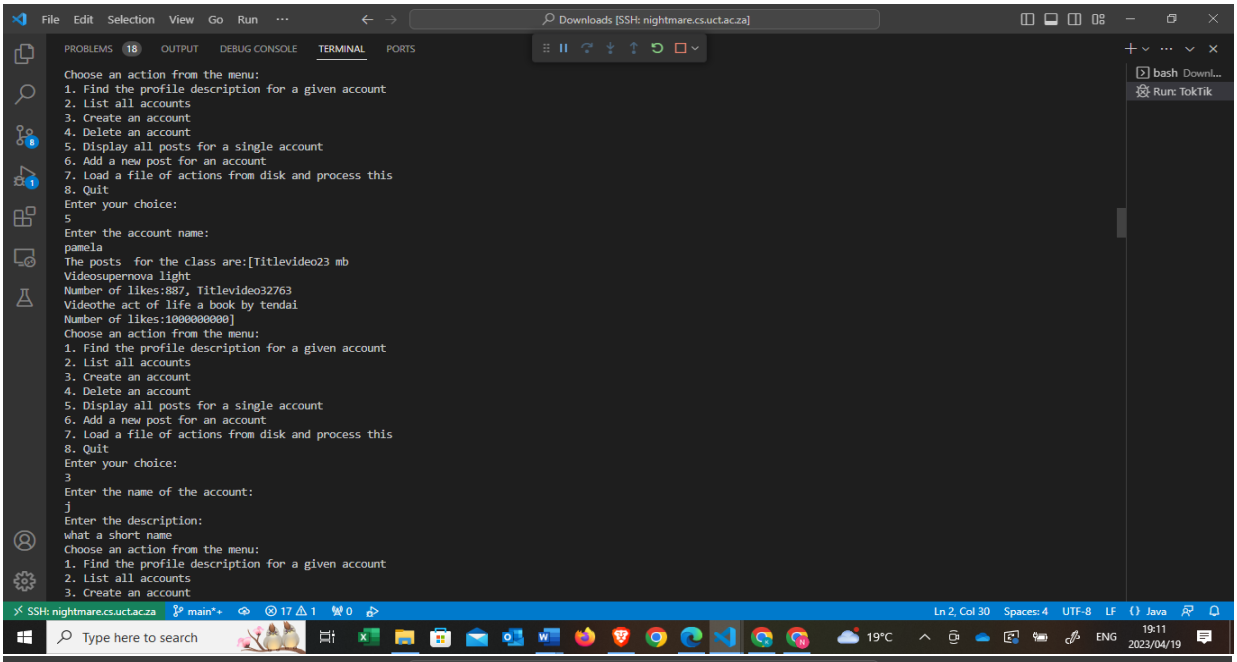
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
5
Enter the account name:
pamela
The posts for the class are:[Titlevideo23 mb
Videosupernova light
Number of likes:887]
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
6
Enter the account name:
pamela
Enter the video title:
video32763
Enter the video description:
the act of life a book by tendai
Enter the number of likes:
1000000000
posts added!!
Choose an action from the menu:
1. Find the profile description for a given account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19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PROBLEMS 18 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Choose an action from the menu:
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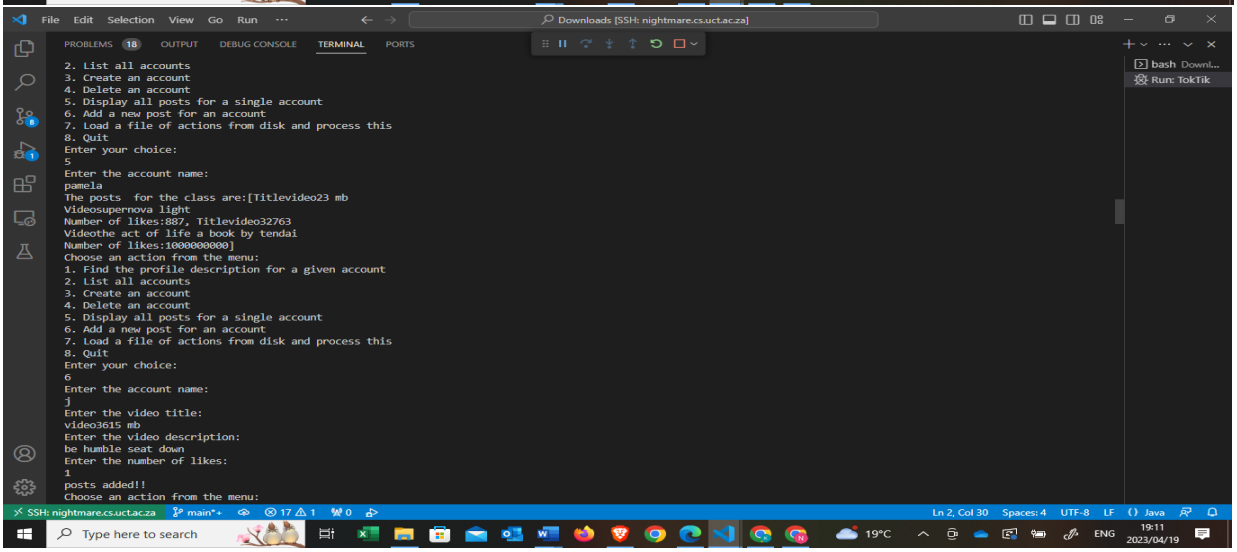
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
5
Enter the account name:
pamela
The posts for the class are:[Titlevideo23 mb
Videosupernova light
Number of likes:887, Titlevideo32763
Videothe act of life a book by tendai
Number of likes:1000000000]
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
3
Enter the name of the account:
j
Enter the description:
what a short name
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19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8. Quit
Enter your choice:
5
Enter the account name:
pamela
The posts for the class are:[Titlevideo23 mb
Videosupernova light
Number of likes:887, Titlevideo32763
Videothe act of life a book by tendai
Number of likes:1000000000]
Choose an action from the menu:
1. Find the profile description for a given account
2. List all accounts
3. Create an account
4. Delete an account
5. Display all posts for a single account
6. Add a new post for an account
7. Load a file of actions from disk and process this
8. Quit
Enter your choice:
6
Enter the account name:
j
Enter the video title:
video3615 mb
Enter the video description:
be humble seat down
Enter the number of likes:
1
posts added!!
Choose an action from the menu:
bash Downl...
Run: TokTik
SSH: nightmare.cs.uct.ac.za main*+ 17 1 0
Ln 2, Col 30 Spaces: 4 UTF-8 LF Java
Type here to search
19°C
ENG
19:11
2023/04/19