



**Department of Electrical & Computer Engineering Summer
Semester, 2023/2024**

ENCS3130 Linux Laboratory Shell

Scripting Project – Medical Test Management System

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Section : 4

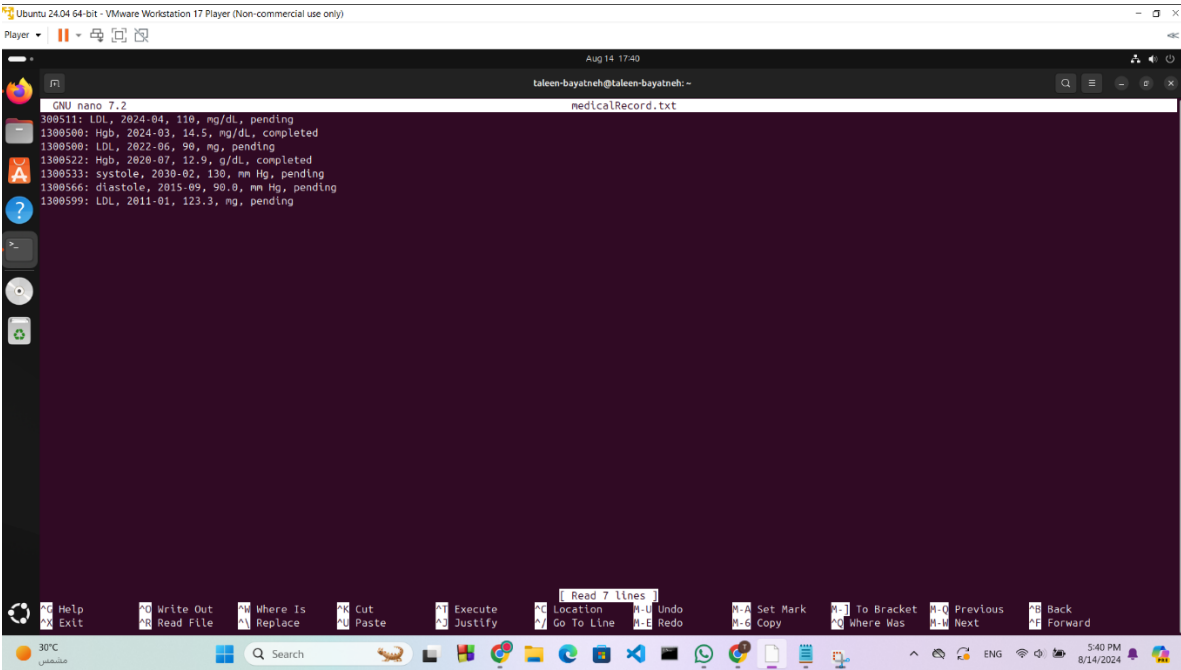
Partner's Name : Masa Jalamneh

Id : 1212145

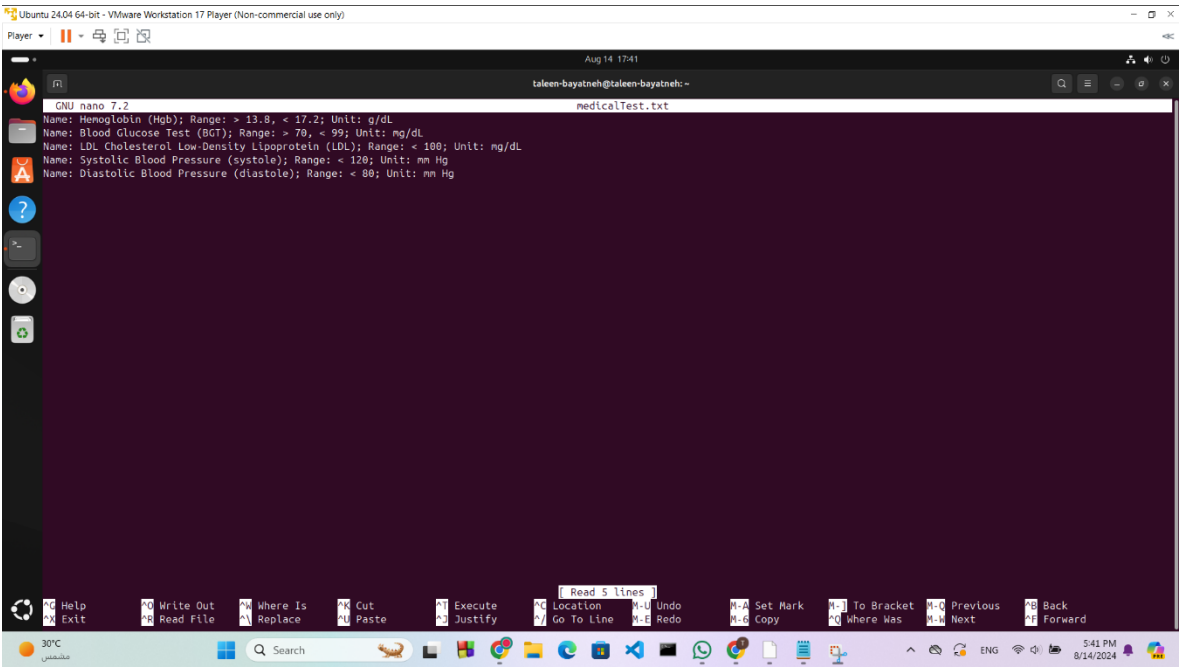
Section : 7

Date : 14-8-2024

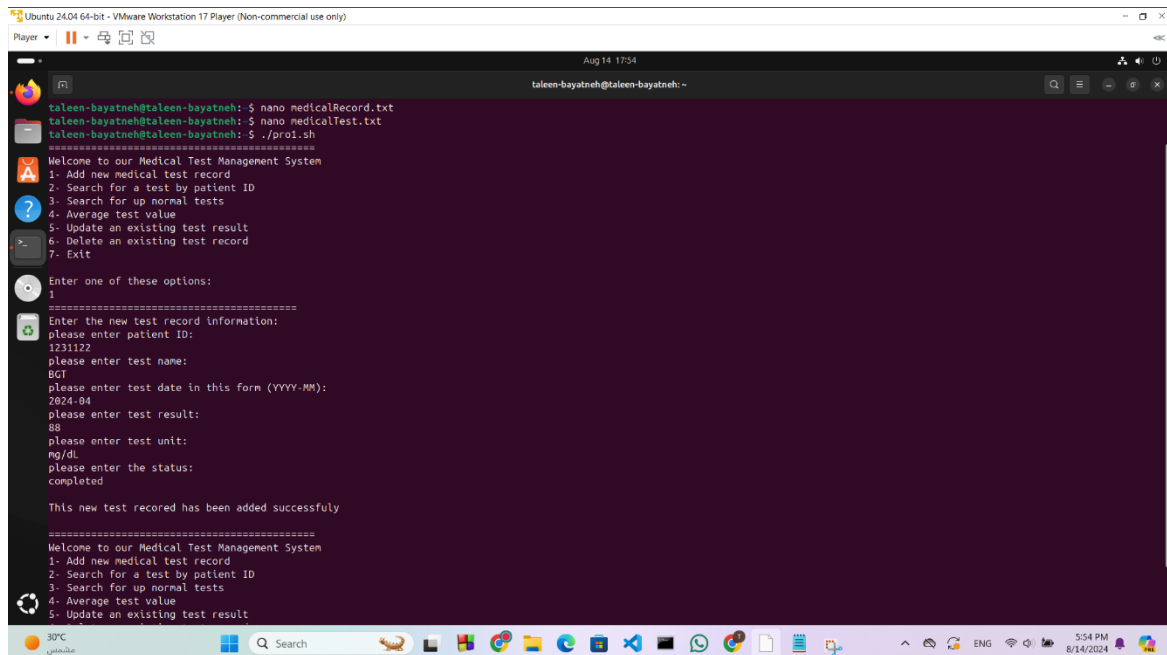
Medical records file:



Medical test file:



Trying option 1 with valid values:

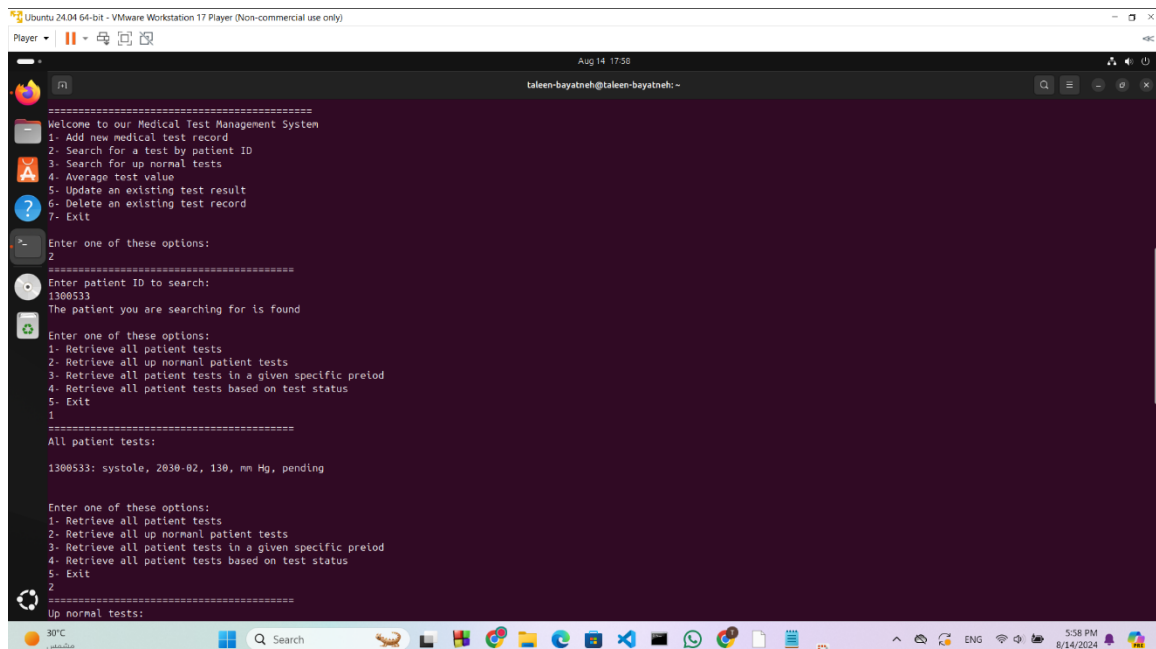


```
talteen-bayatneh@talteen-bayatneh:~$ nano medicalRecord.txt
talteen-bayatneh@talteen-bayatneh:~$ nano medicalTest.txt
talteen-bayatneh@talteen-bayatneh:~$ ./pro1.sh
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
=====
Enter one of these options:
1
=====
Enter the new test record information:
please enter patient ID:
1231122
please enter test name:
BGT
please enter test date in this form (YYYY-MM):
2024-04
please enter test result:
88
please enter test unit:
mg/dL
please enter the status:
completed

This new test recored has been added successfully

=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
```

Trying option 2 with a valid value, it will display the second menu, the screen shows the option one that search for all patient tests:

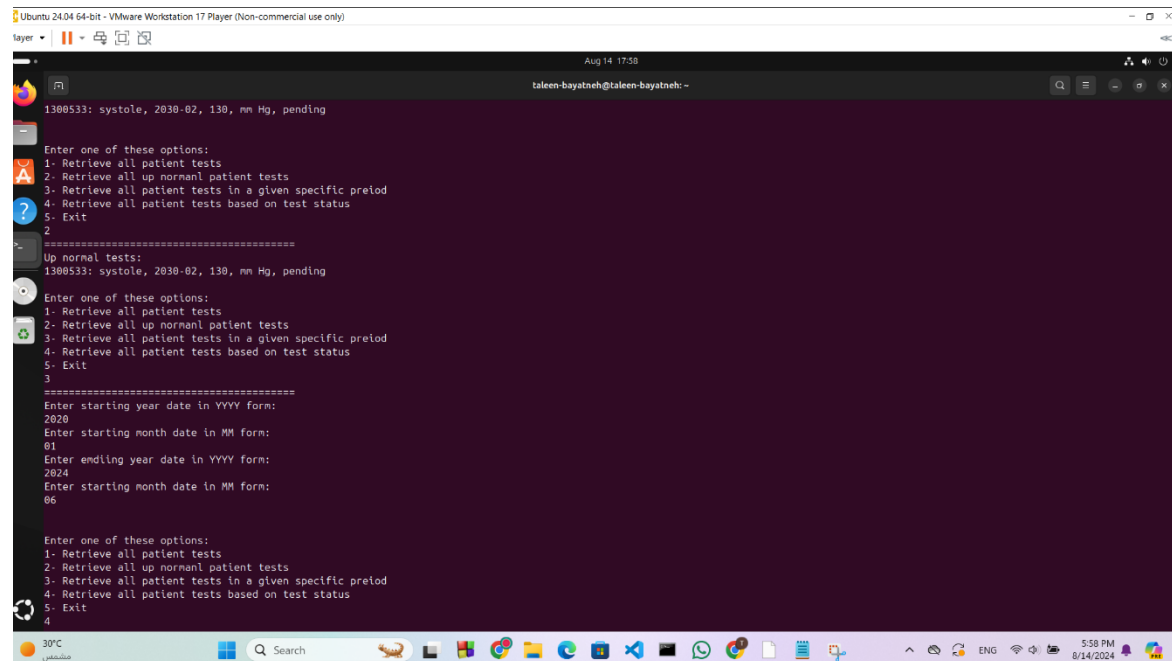


```
talteen-bayatneh@talteen-bayatneh:~$ ./pro1.sh
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
=====
Enter one of these options:
2
=====
Enter patient ID to search:
1308533
The patient you are searching for is found

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific prelod
4- Retrieve all patient tests based on test status
5- Exit
1
=====
All patient tests:
1308533: systole, 2030-02, 130, mm Hg, pending

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific prelod
4- Retrieve all patient tests based on test status
5- Exit
2
=====
Up normal tests:
```

This screen shows the option two that print all the up normal tests for that patient. Also option three that ask the user to enter a specific period to search it for tests:



```
Aug 14 17:58
taleen-bayatneh@taleen-bayatneh:~$
1300533: systole, 2030-02, 130, mm Hg, pending

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
2

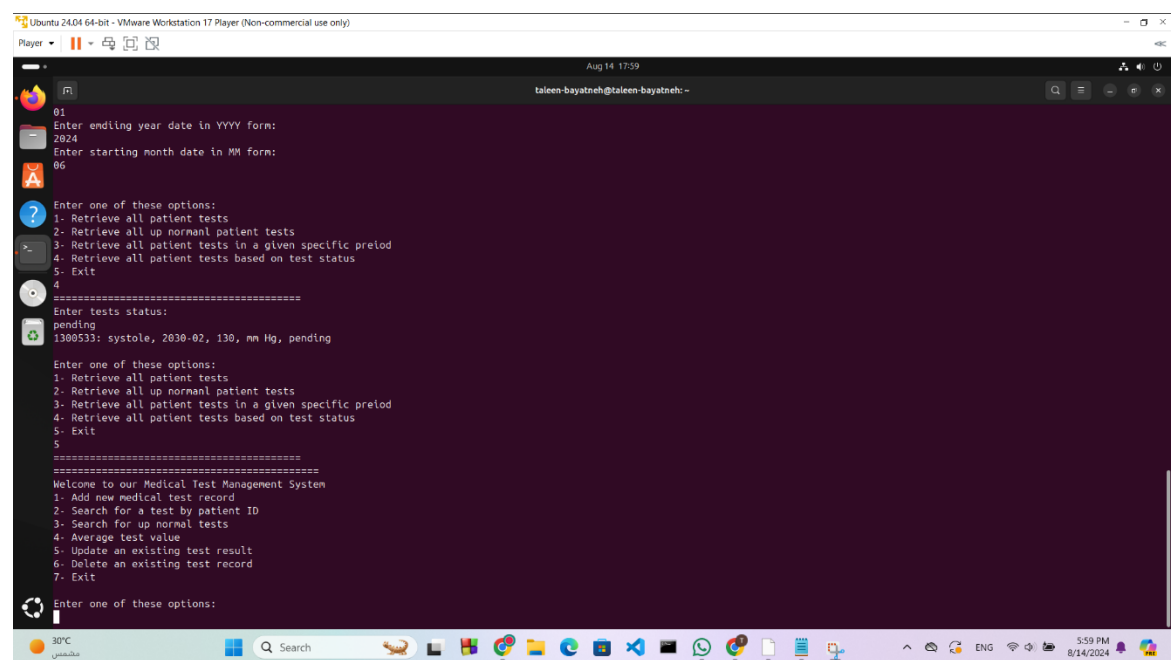
=====
Up normal tests:
1300533: systole, 2030-02, 130, mm Hg, pending

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
3

=====
Enter starting year date in YYYY form:
2020
Enter starting month date in MM form:
01
Enter ending year date in YYYY form:
2024
Enter starting month date in MM form:
06

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
4
```

The screen shows option four that print patient tests based on test status. And option five that exit the menu and go back to main menu:



```
Aug 14 17:59
taleen-bayatneh@taleen-bayatneh:~$
01
Enter ending year date in YYYY form:
2024
Enter starting month date in MM form:
06

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
4

=====
Enter tests status:
pending
1300533: systole, 2030-02, 130, mm Hg, pending

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
5

=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit

Enter one of these options:
7
```

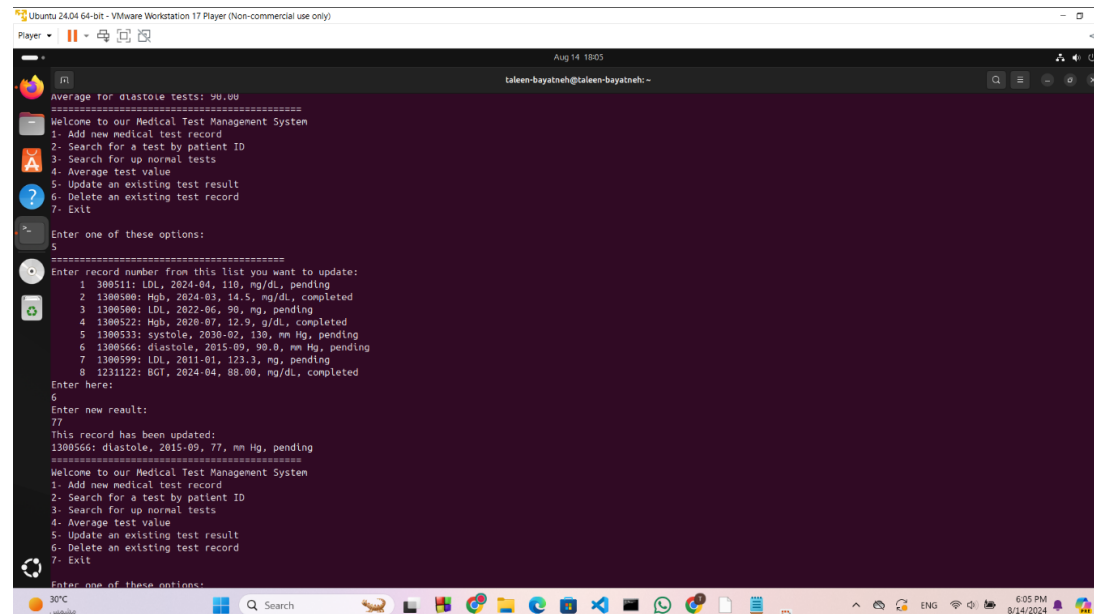
This screen shows option three for the main menu, it will print all the up normal tests in the medical record file:

```
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
3
=====
All up normal tests are:
300511: LDL, 2024-04, 110, mg/dL, pending
1300522: Hgb, 2020-07, 12.9, g/dL, completed
1300533: systole, 2030-02, 130, mm Hg, pending
1300566: diastole, 2015-09, 90.0, mm Hg, pending
1300599: LDL, 2011-01, 123.3, mg, pending
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
1
```

Option four in main menu will print the average tests values:

```
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
4
=====
Average tests value:
Average for Hgb tests: 13.79
Average for BCL tests: 88.00
Average for LDL tests: 107.77
Average for systolic tests: 130.00
Average for diastole tests: 90.00
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
```

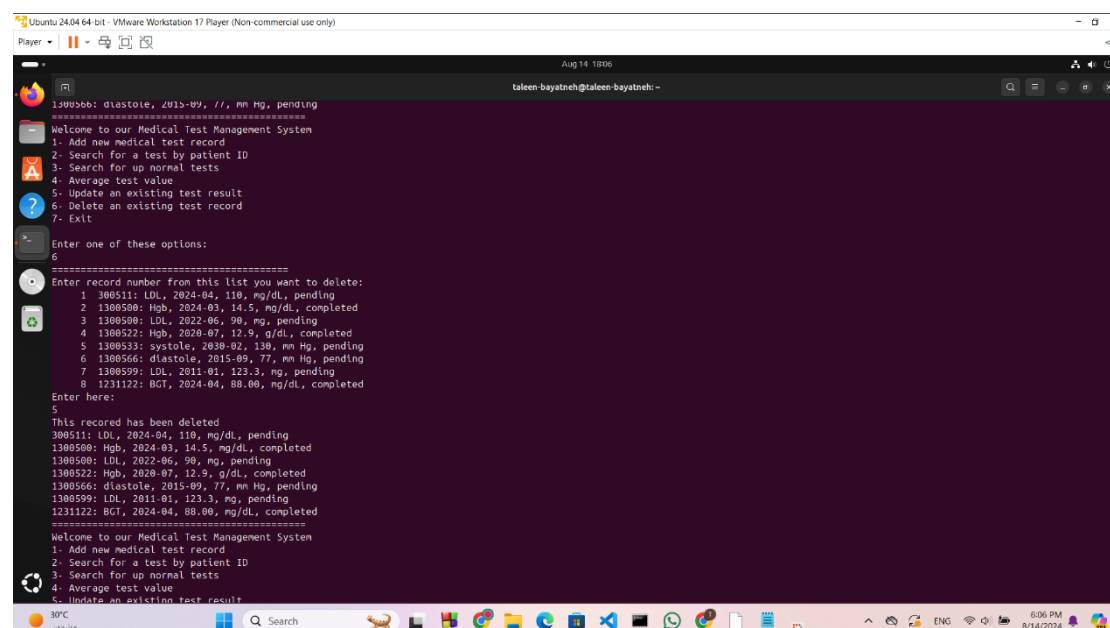
Option five for update a result, so the program will display a list for patient tests and the user will enter a line number and the new result:



```
Aug 14 1805
taleen-bayatneh@taleen-bayatneh: ~
=====
Average for diastole tests: 90.00
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
5
=====
Enter record number from this list you want to update:
1 1308511: LDL, 2024-04, 110, mg/dL, pending
2 1308508: Hgb, 2024-03, 14.5, mg/dL, completed
3 1308509: LDL, 2022-06, 90, mg, pending
4 1308522: Hgb, 2020-07, 12.9, g/dL, completed
5 1308533: systole, 2030-02, 130, mm Hg, pending
6 1308566: diastole, 2015-09, 90.0, mm Hg, pending
7 1308599: LDL, 2011-01, 123.3, mg, pending
8 1231122: BCl, 2024-04, 88.00, mg/dL, completed
Enter here:
6
Enter new result:
77
This record has been updated:
1308566: diastole, 2015-09, 77, mm Hg, pending
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
```

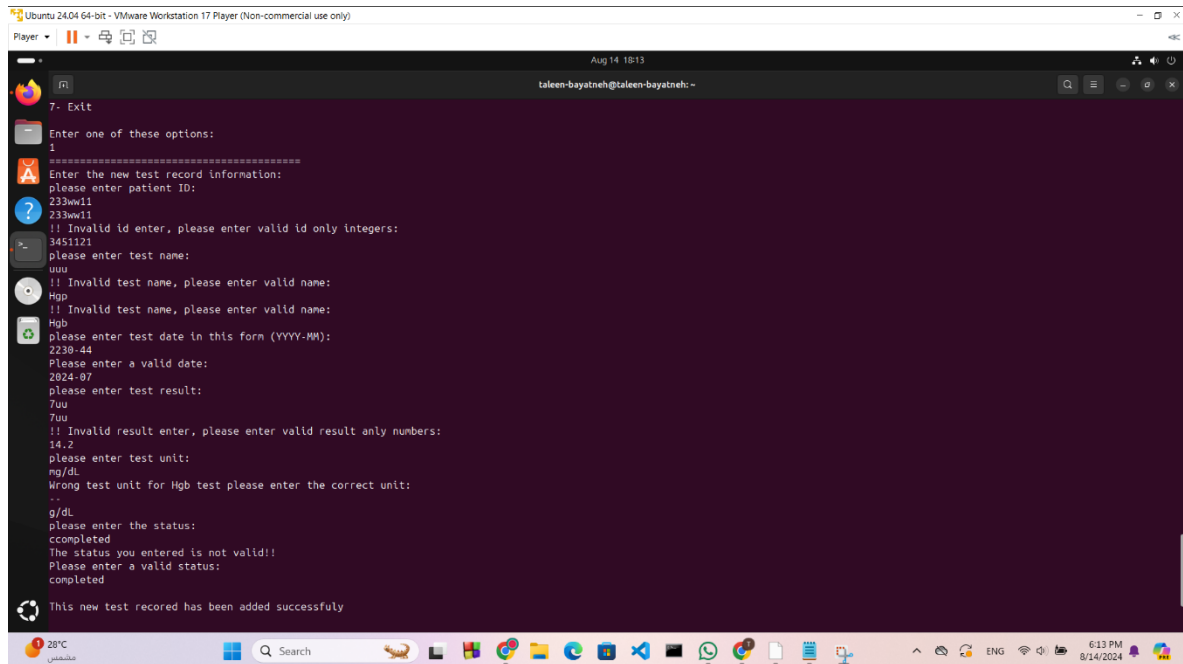
Option six for delete a test, so the program will display a list for patient tests and the user will enter a line number to delete it:

(Note: after taking screenshots, an incorrect value was noticed. It was added using the nano text editor, and due to lack of time, we deleted it using the delete option because it appears in 6 screenshots)



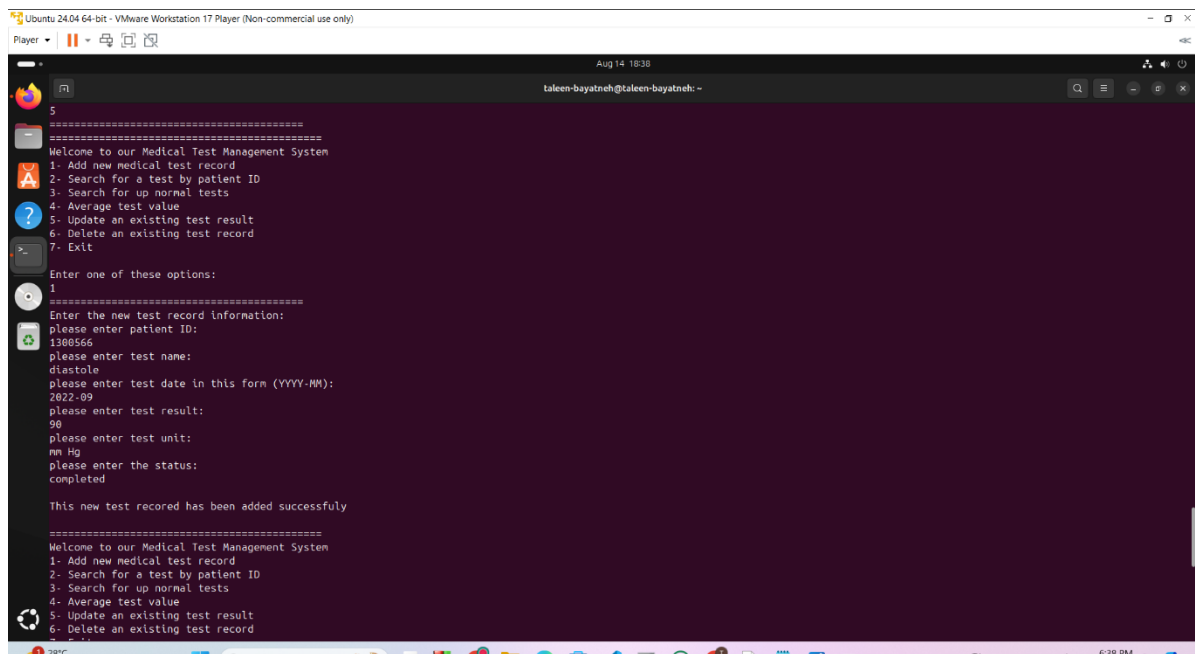
```
Aug 14 1806
taleen-bayatneh@taleen-bayatneh: ~
1308566: diastole, 2015-09, 77, mm Hg, pending
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
6
=====
Enter record number from this list you want to delete:
1 1308511: LDL, 2024-04, 110, mg/dL, pending
2 1308508: Hgb, 2024-03, 14.5, mg/dL, completed
3 1308509: LDL, 2022-06, 90, mg, pending
4 1308522: Hgb, 2020-07, 12.9, g/dL, completed
5 1308533: systole, 2030-02, 130, mm Hg, pending
6 1308566: diastole, 2015-09, 77, mm Hg, pending
7 1308599: LDL, 2011-01, 123.3, mg, pending
8 1231122: BCl, 2024-04, 88.00, mg/dL, completed
Enter here:
5
This record has been deleted
1308511: LDL, 2024-04, 110, mg/dL, pending
1308508: Hgb, 2024-03, 14.5, mg/dL, completed
1308509: LDL, 2022-06, 90, mg, pending
1308522: Hgb, 2020-07, 12.9, g/dL, completed
1308566: diastole, 2015-09, 77, mm Hg, pending
1308599: LDL, 2011-01, 123.3, mg, pending
1231122: BCl, 2024-04, 88.00, mg/dL, completed
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
```

Option one with invalid values to make sure that the program taking a true value:



```
Player | Aug 14 18:13 | taleen-bayatneh@taleen-bayatneh: ~  
7- Exit  
Enter one of these options:  
1  
===== Enter the new test record information: =====  
please enter patient ID:  
233wd11  
233wd11  
!! Invalid id enter, please enter valid id only integers:  
3451121  
please enter test name:  
uuu  
!! Invalid test name, please enter valid name:  
Hgp  
!! Invalid test name, please enter valid name:  
Hgb  
please enter test date in this form (YYYY-MM):  
2230-44  
Please enter a valid date:  
2024-07  
please enter test result:  
7uu  
7uu  
!! Invalid result enter, please enter valid result only numbers:  
14.2  
please enter test unit:  
mg/dL  
Wrong test unit for Hgb test please enter the correct unit:  
--  
g/dL  
please enter the status:  
completed  
The status you entered is not valid!!  
Please enter a valid status:  
completed  
This new test recored has been added successfully
```

Adding another test for the same id in the file:



```
Player | Aug 14 18:38 | taleen-bayatneh@taleen-bayatneh: ~  
5  
===== Welcome to our Medical Test Management System =====  
1- Add new medical test record  
2- Search for a test by patient ID  
3- Search for up normal tests  
4- Average test value  
5- Update an existing test result  
6- Delete an existing test record  
7- Exit  
Enter one of these options:  
1  
===== Enter the new test record information: =====  
please enter patient ID:  
1380566  
please enter test name:  
diastole  
please enter test date in this form (YYYY-MM):  
2022-09  
please enter test result:  
90  
please enter test unit:  
mm Hg  
please enter the status:  
completed  
This new test recored has been added successfully  
===== Welcome to our Medical Test Management System =====  
1- Add new medical test record  
2- Search for a test by patient ID  
3- Search for up normal tests  
4- Average test value  
5- Update an existing test result  
6- Delete an existing test record  
7- Exit
```

```

taleen-bayatneh@taleen-bayatneh: ~
$ ./EX11
Enter one of these options:
2
=====
Enter patient ID to search:
5674u44
5674u44
? Invalid id enter, please enter valid id:
1300566
The patient you are searching for is found

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
1
=====
All patient tests:

1300566: diastole, 2015-09, 77, mm Hg, pending

1300566: diastole, 2022-09, 98.00, mm Hg, completed

Enter one of these options:
1- Retrieve all patient tests
2- Retrieve all up normal patient tests
3- Retrieve all patient tests in a given specific preiod
4- Retrieve all patient tests based on test status
5- Exit
2
=====
Up normal tests:
1300566: diastole, 2022-09, 98.00, mm Hg, completed

Enter one of these options:

```

```

Aug 14 18:30
taleen-bayatneh@taleen-bayatneh: ~
Average for LDL tests: 107.77
There is no records under "systole" test name
Average for diastole tests: 77.00
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit

Enter one of these options:
5
=====
Enter record number from this list you want to update:
1 300511: LDL, 2024-04, 110, mg/dL, pending
2 1300500: Hgb, 2024-03, 14.5, mg/dL, completed
3 1300500: LDL, 2022-06, 90, mg, pending
4 1300522: Hgb, 2020-07, 12.9, g/dL, completed
5 1300566: diastole, 2015-09, 77, mm Hg, pending
6 1300599: LDL, 2011-01, 123.3, mg, pending
7 1231122: BGL, 2024-04, 89.00, mg/dL, completed
8 3451121: Hgb, 2024-07, 14.20, g/dL, completed

Enter here:
-1
Please enter one of the shown numbers:
9
Please enter one of the shown numbers:
4
Enter new result:
14.5
This record has been updated:
1300522: Hgb, 2020-07, 14.5, g/dL, completed
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID

```


Invalid values for option 6:

```
Ubuntu 24.04 64-bit - VMware Workstation 17 Player (Non-commercial use only)
Player
Aug 14 18:32
taleen-bayatneh@taleen-bayatneh: ~
Enter one of these options:
6
=====
Enter record number from this list you want to delete:
1 300511: LDL, 2024-04, 110, mg/dL, pending
2 1300500: Hgb, 2024-03, 14.5, mg/dL, completed
3 1300500: LDL, 2022-06, 90, mg, pending
4 1300522: Hgb, 2020-07, 14.5, g/dL, completed
5 1300566: diastole, 2015-09, 77, mm Hg, pending
6 1300599: LDL, 2011-01, 123.3, mg, pending
7 1231122: BGT, 2024-04, 88.00, mg/dL, completed
8 3451121: Hgb, 2024-07, 14.20, g/dL, completed
Enter here:
11
Please enter one of the shown numbers:
22
Please enter one of the shown numbers:
6
This record has been deleted
300511: LDL, 2024-04, 110, mg/dL, pending
1300500: Hgb, 2024-03, 14.5, mg/dL, completed
1300500: LDL, 2022-06, 90, mg, pending
1300522: Hgb, 2020-07, 14.5, g/dL, completed
1300566: diastole, 2015-09, 77, mm Hg, pending
1231122: BGT, 2024-04, 88.00, mg/dL, completed
3451121: Hgb, 2024-07, 14.20, g/dL, completed
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
7
=====
```

Trying to enter more than 7 digits for patient id:

```
Ubuntu 24.04 64-bit - VMware Workstation 17 Player (Non-commercial use only)
Player
Aug 14 19:29
taleen-bayatneh@taleen-bayatneh: ~
7
=====
taleen-bayatneh@taleen-bayatneh: ~$ nano pro1.sh
taleen-bayatneh@taleen-bayatneh: ~$ ./pro1.sh
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
3- Search for up normal tests
4- Average test value
5- Update an existing test result
6- Delete an existing test record
7- Exit
Enter one of these options:
1
=====
Enter the new test record information:
please enter patient ID:
65544332233
1) Invalid id enter id only 7 integers
3232322
please enter test name:
Hgb
please enter test date in this form (YYYY-MM):
2024-09
please enter test result:
55
please enter test unit:
g/dL
please enter the status:
pending
This new test record has been added successfully
=====
Welcome to our Medical Test Management System
1- Add new medical test record
2- Search for a test by patient ID
```