



**Faculty of Engineering & Technology
ENCS, Computer Systems Engineering
LINUX LABORATORY**

REPORT#1

**Shell Scripting Project – Medical Test Management
System**

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Testing the program

- **Add a new medical test record:** the system will allow the user to store a new medical test with the

required data. The system will check the validity of the input data.

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 1
You selected: Add a new medical test record
Enter Patient ID (7-digit integer):
1478523
Enter Test Name (e.g., 'Hgb' or 'BGT' or 'LDL' 'systole' or 'diastol'):
Ldl
Enter Test Date (format YYYY-MM):
2023-07
Enter Test Result (e.g., '13.5 g/dL'):
88
Enter Test Status (Pending, Completed, Reviewed):
Completed
Record added successfully.
Press Enter to continue...
```

If you press 1 as an option the program will check if the id is exactly 7digit int and then it will check if every other field is in suitable format

- **Search for a test by patient ID:** the system will have the following functionality based on user selection:

First it will search if the provided information does exist then it will print the required info

a)Retrieve all patient tests

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 2
You selected: Search for a test by patient ID
a. Retrieve all patient tests
b. Retrieve all abnormal patient tests
c. Retrieve all patient tests in a given specific period
d. Retrieve all patient tests based on test status
Please choose an option: a
Retrieve all patient tests
Enter Patient ID (7-digit integer):
1234567
All tests for Patient ID 1234567:
1234567: hgb, 2024-06, 14.2, Pending
1234567: systole, 2024-08, 130, Completed
Press Enter to continue...█
```

b)Retrieve all up normal patient tests

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 2
You selected: Search for a test by patient ID
a. Retrieve all patient tests
b. Retrieve all abnormal patient tests
c. Retrieve all patient tests in a given specific period
d. Retrieve all patient tests based on test status
Please choose an option: b
Retrieve all abnormal patient tests
Enter Patient ID (7-digit integer):
1234567
Abnormal tests for Patient ID 1234567:
1234567: systole, 2024-08, 130, Completed
Press Enter to continue...
```

c) Retrieve all patient tests in a given specific period

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 2
You selected: Search for a test by patient ID
a. Retrieve all patient tests
b. Retrieve all abnormal patient tests
c. Retrieve all patient tests in a given specific period
d. Retrieve all patient tests based on test status
Please choose an option: c
Retrieve all patient tests in a given specific period
Enter Patient ID (7-digit integer):
1234567
Enter Start Date (format YYYY-MM):
2023-06
Enter End Date (format YYYY-MM):
2024-07
Tests for Patient ID 1234567 from 2023-06 to 2024-07:
1234567: hgb, 2024-06, 14.2, Pending
Press Enter to continue...
```

d) Retrieve all patient tests based on test status

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 2
You selected: Search for a test by patient ID
a. Retrieve all patient tests
b. Retrieve all abnormal patient tests
c. Retrieve all patient tests in a given specific period
d. Retrieve all patient tests based on test status
Please choose an option: d
Retrieve all patient tests based on test status
Enter Test Status (Pending, Completed, Reviewed):
Completed
Tests with Status 'Completed':
1234567: systole, 2024-08, 130, Completed
Press Enter to continue...
```


e) retrieve all up normal test

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
   e. Retrieve all abnormal tests
3. search for up normal tests using test name
4. Delete an existing test result
5. Update an existing test result
6. Calculate average test values
7. Exit
=====
Please choose an option: 2
a. Retrieve all patient tests
b. Retrieve all abnormal patient tests
c. Retrieve all patient tests in a given specific period
d. Retrieve all patient tests based on test status
e. Retrieve all abnormal results
Please choose an option (a/b/c/d): e
Retrieving abnormal tests for all patients:
Abnormal Test Found - Patient ID: 1234567 - 1234567: systole, 2024-08, 130, Completed
Press any key to return to the main menu...█
```

ps: we added e at the last time when we notice it , so I apologize for the previous output

- **Average test value:** the system will retrieve the average value of each medical test

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 3
You selected: Average test value
Average value for bgt: 13.50
Average value for hgb: 14.90
Average value for Ldl: 88.00
Average value for systole: 130.00
Press Enter to continue...
```

Terminal

- delete an existing patient info

```

=====
          Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 4
You selected: Delete an existing test result
Enter Patient ID (7-digit integer):
9876543
Enter Test Name (e.g., 'Hgb' or 'BGT'):
hgb
Enter Test Date (format YYYY-MM):
2022-08
Existing record found: 9876543: hgb, 2022-08, 15.6, Reviewed
Are you sure you want to delete this record? (y/n):
y
Record deleted successfully.
Press Enter to continue...

```

- Update an existing test result.

```

=====
          Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 5
You selected: Update an existing test result
Enter Patient ID (7-digit integer):
1234567
Enter Test Name (e.g., 'Hgb' or 'BGT'):
hgb
Enter Test Date (format YYYY-MM):
2024-06
Existing record found: 1234567: hgb, 2024-06, 14.2, Pending
Enter new Test Result (e.g., '14.2 g/dL'):
14.6
Enter new Test Status (Pending, Completed, Reviewed):
Completed
Record updated successfully.
Press Enter to continue...

```


- exit

```
=====
      Medical Test System
=====
1. Add a new medical test record
2. Search for a test by patient ID
   a. Retrieve all patient tests
   b. Retrieve all abnormal patient tests
   c. Retrieve all patient tests in a given specific period
   d. Retrieve all patient tests based on test status
3. Average test value
4. Delete an existing test result
5. Update an existing test result
6. Exit
=====
Please choose an option: 6
Exiting...
Python3 SUBTOTAL: 10-14-6
```