



Department of Electrical and Computer Engineering

Linux Lab

ENCS 3130

Summer Course 2023/2024

Project 1

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The goal is to create a shell script-based system to handle medical test records for patients. This system will serve as a simple patient record management tool that focuses on managing test results.

Function 1:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 1
Please Enter Patient ID (please enter exactly 7 digits):
1234qwe
wrong input, please make sure that the ID has 7 digits
1234
wrong input, please make sure that the ID has 7 digits
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 1
Please Enter Patient ID (please enter exactly 7 digits):
1234qwe
wrong input, please make sure that the ID has 7 digits
1234
wrong input, please make sure that the ID has 7 digits
1234567
Please Enter Test Name
hb3
Wrong input
1234
Wrong input
LDL
Please Enter Date
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 1
Please Enter Patient ID (please enter exactly 7 digits):
1234qwe
wrong input, please make sure that the ID has 7 digits
1234
wrong input, please make sure that the ID has 7 digits
1234567
Please Enter Test Name
hb3
Wrong input
1234
Wrong input
LDL
Please Enter Date
2024-1
Wrong input
202-13
Wrong input
2024-03
Please enter result:
```

```
GNU nano 7.2                                     medicalRecord.txt *
1300522: LDL, 2024-04, 110, mg/dL, completed
1300500: RBC, 2024-03, 13.5, mg/dL, completed
1300511: Hgb, 2024-03, 110, mg/dL, pending
1300533: RBC, 2024-04, 16, mg/dL, completed
1300511: LDL, 2024-03, 90, mg/dL, pending
1221003: BGT, 2024-08, 90, mg/dL, completed
1221004: BGT, 2024-03, 99, mg/dL, completed
1220245: Hgb, 2024-03, 14.5, mg/dL, completed
1221005: Hgb, 2024-03, 14.2, mg/dL, completed
1234567: LDL, 2024-03, 15, mg/dL, completed
```

Function 2:

Case 1:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 2
Please Enter Patient ID (please enter exactly 7 digits):
12
wrong input, please make sure that the ID has 7 digits
112ee
wrong input, please make sure that the ID has 7 digits
1234567
1. Retrieve all patient tests
2. Retrieve all abnormal patient tests
3. Retrieve all patient tests in a specific period
4. Retrieve all patient tests based on test status
Enter your choice [1-4]:1
1234567: LDL, 2024-03, 15, mg/dL, completed
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]:
```

Case 2:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 2
Please Enter Patient ID (please enter exactly 7 digits):
1300511
1. Retrieve all patient tests
2. Retrieve all abnormal patient tests
3. Retrieve all patient tests in a specific period
4. Retrieve all patient tests based on test status
Enter your choice [1-4]:2
normal: 1300511: LDL, 2024-03, 90, mg/dL, pending
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: █
```

Case 3:

We changed the date of the id 1300511 to show you that case 3 works

```
1300522: LDL, 2024-04, 110, mg/dL, completed
1300500: RBC, 2024-03, 13.5, mg/dL, completed
1300511: Hgb, 2024-03, 110, mg/dL, pending
1300533: RBC, 2024-04, 16, mg/dL, completed
1300511: LDL, 2024-06, 90, mg/dL, pending
1221003: BGT, 2024-08, 90, mg/dL, completed
1221004: BGT, 2024-03, 99, mg/dL, completed
1220245: Hgb, 2024-03, 14.5, mg/dL, completed
1221005: Hgb, 2024-03, 14.2, mg/dL, completed
1234567: LDL, 2024-03, 15, mg/dL, completed|
```

Medical Record Management System

1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit

Enter your choice [1-6]: 2

Please Enter Patient ID (please enter exactly 7 digits):

1300511

1. Retrieve all patient tests
2. Retrieve all abnormal patient tests
3. Retrieve all patient tests in a specific period
4. Retrieve all patient tests based on test status

Enter your choice [1-4]:3

Enter Start Date (YYYY-MM):

2024-03

Enter End Date (YYYY-MM):

2024-06

1300511: Hgb, 2024-03, 110, mg/dL, pending

1300511: LDL, 2024-03, 90, mg/dL, pending

Medical Record Management System

1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit

Enter your choice [1-6]:

Case 4:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 2
Please Enter Patient ID (please enter exactly 7 digits):
1221003
1. Retrieve all patient tests
2. Retrieve all abnormal patient tests
3. Retrieve all patient tests in a specific period
4. Retrieve all patient tests based on test status
Enter your choice [1-4]:4
Enter status (pending, completed, reviewed):Completed
1221003: BGT, 2024-08, 90, mg/dL, completed
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: █
```

Function 3:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 3
please enter patient ID
1220245
Please Enter Test Name
Hgb
Please Enter Date
2024-03
Please enter a new result:
50
Record updated successfully.
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: █
```

```
GNU nano 7.2 medicalRecord.txt
1300522: LDL, 2024-04, 110, mg/dL, completed
1300500: RBC, 2024-03, 13.5, mg/dL, completed
1300511: Hgb, 2024-03, 110, mg/dL, pending
1300533: RBC, 2024-04, 16, mg/dL, completed
1300511: LDL, 2024-03, 90, mg/dL, pending
1221003: BGT, 2024-08, 90, mg/dL, completed
1221004: BGT, 2024-03, 99, mg/dL, completed
1221005: Hgb, 2024-03, 14.2, mg/dL, completed
1234567: LDL, 2024-03, 15, mg/dL, completed
1220245: Hgb, 2024-03, 50, mg/dL, completed
```

We asked the user to enter the date in case there's two same tests for the same id

Function 4:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]: 4
```

```
Please Enter Test Name
```

```
LDL
```

```
Average = 71.66
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]: 4
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]: 4
```

```
Please Enter Test Name
```

```
Hgb
```

```
Average = 58.06
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]: 4
```

```
Please Enter Test Name
```

```
RBC
```

```
Average = 14.75
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]:
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]: 4
```

```
Please Enter Test Name
```

```
maysa
```

```
No record found for Test Name: maysa.
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
```

```
Enter your choice [1-6]:
```

Function 5:

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 5
Please Enter Test Name
LDL
normal: 1300511: LDL, 2024-03, 90, mg/dL, pending
normal: 1234567: LDL, 2024-03, 15, mg/dL, completed
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]:
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 5
Please Enter Test Name
Hgb
normal :1221005: Hgb, 2024-03, 14.2, mg/dL, completed
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]:
```

```
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: 5
Please Enter Test Name
fadi
not found!
Medical Record Management System
1. Add a new medical test record
2. Search for tests by patient ID
3. Update an existing test result
4. Retrieve average test values
5. Searching for up normal tests
6. Exit
Enter your choice [1-6]: █
```