

Source		Label
la \$t6	testNames	# testNames
tests.txt - Notepad		
File Edit Format View Help		
la \$t6	1300500: HGB, 2020-01,	12.1e
la \$t6	1300555: HGB, 2025-06,	14.6e
la \$t6	1300523: HGB, 2020-01,	18.1e
la \$a	1300566: BGT, 2026-07,	79.9e
la \$a	1300511: BGT, 2021-02,	50.2e
li \$v	1300511: BGT, 2021-02,	103.2e
sysca	1300522: LDL, 2022-03,	120.3e
	1300577: LDL, 2027-09,	60.8e
	1300522: LDL, 2022-03,	100.1e
	1300533: BPTS, 2023-04,	180.4e
	1300588: BPTS, 2028-09,	100.9e
(+8)	1300588: BPTS, 2028-09,	45.1e
0000000	1300544: BPTD, 2024-05,	90.5e
0000000	1300599: BPTD, 2029-10,	40.0e
0000000	1300599: BPTD, 2029-10,	130.0e
0000000		
0000000		
0000000		

```
0- load data
1- Add a new medical test
2- Search for a test by patient ID
3- Retrieve all patient tests
4- Retrieve all normal tests
5- Retrieve all patient tests in a given specific period
6- Searching for unnormal tests
7- Average test value
8- Update an existing test result
9- Delete a test
10- Save to file
11- Exit
```

Your choice: enter a choice (0-11): 0

data loaded successfully

```
0- load data
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6- Searching for unnormal tests
7- Average test value
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```

Your choice: enter a choice (0-11):

Your choice: enter a choice (0-11): 3

1300500 HGB 2020-01 12.1
1300555 HGB 2025-06 14.6
1300523 HGB 2020-01 18.1
1300566 BGT 2026-07 79.9
1300511 BGT 2021-02 50.2
1300511 BGT 2021-02 103.2
1300522 LDL 2022-03 120.3
1300577 LDL 2027-09 60.8
1300522 LDL 2022-03 100.1
1300533 BPTS 2023-04 180.4
1300588 BPTS 2028-09 100.9
1300588 BPTS 2028-09 45.1
1300544 BPTD 2024-05 90.5
1300599 BPTD 2029-10 40.0
1300599 BPTD 2029-10 130.0

- 0- load data
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- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11):

```
Your choice: enter a choice (0-11): 1
enter patient ID (int only): 12
id is invalid the id should contain 7 digits and take this shape : 'xxxxxxx' where a cant be '0'
enter patient ID (int only): 1234567
enter test name: 1
invalid test name only : 'HGB,BGT,LDL,BPTS,BPTD' (upper case) are available
enter test name: LDL
enter test date (YYYY-MM): 2
invalid date format! right format: 'yyyy-mm'
enter test date (YYYY-MM): 2022-03
enter test result (nums only eg. 15.3 15 15.0 ...): 77.2
data loaded successfully

0- load data
1- Add a new medical test
2- Search for a test by patient ID
3- Retrieve all patient tests
4- Retrieve all normal tests
5- Retrieve all patient tests in a given specific period
6- Searching for unnormal tests
7- Average test value
8- Update an existing test result
9- Delete a test
10- Save to file
11- Exit

Your choice: enter a choice (0-11):
```

11- Exit

Your choice: enter a choice (0-11): 3

1300500 HGB 2020-01 12.1

1300555 HGB 2025-06 14.6

1300523 HGB 2020-01 18.1

1300566 BGT 2026-07 79.9

1300511 BGT 2021-02 50.2

1300511 BGT 2021-02 103.2

1300522 LDL 2022-03 120.3

1300577 LDL 2027-09 60.8

1300522 LDL 2022-03 100.1

1300533 BPTS 2023-04 180.4

1300588 BPTS 2028-09 100.9

1300588 BPTS 2028-09 45.1

1300544 BPTD 2024-05 90.5

1300599 BPTD 2029-10 40.0

1300599 BPTD 2029-10 130.0

1234567 LDL 2022-03 77.2

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1- Add a new medical test

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5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file

11- Exit

Your choice: enter a choice (0-11):

Your choice: enter a choice (0-11): 10

data saved Successfully

0- load data

1- Add a new medical test

2- Search for a test by patient ID

3- Retrieve all patient tests

4- Retrieve all normal tests

5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file

11- Exit

Your choice: enter a choice (0-11):

tests.txt - Notepad

File Edit Format View Help

```
er 1300500: HGB, 2020-01, 12.1e
l.asm 1300555: HGB, 2025-06, 14.6e
:st.asm 1300523: HGB, 2020-01, 18.1e
1 1300566: BGT, 2026-07, 79.9e
1 1300511: BGT, 2021-02, 50.2e
1300511: BGT, 2021-02, 103.2e
1300522: LDL, 2022-03, 120.3e
1300577: LDL, 2027-09, 60.8e
e.asm 1300522: LDL, 2022-03, 100.1e
1300533: BPTS, 2023-04, 180.4e
1300588: BPTS, 2028-09, 100.9e
1300588: BPTS, 2028-09, 45.1e
1300544: BPTD, 2024-05, 90.5e
1300599: BPTD, 2029-10, 40.0e
1300599: BPTD, 2029-10, 130.0e
1234567: LDL, 2022-03, 77.2e
```

10- Save to file

11- Exit

Your choice: enter a choice (0-11): 2

enter patient ID (int only): 1

patient ID not found

0- load data

1- Add a new medical test

2- Search for a test by patient ID

3- Retrieve all patient tests

4- Retrieve all normal tests

5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file

11- Exit

Your choice: enter a choice (0-11): 1234567

invalid number. Please enter a valid number

0- load data

1- Add a new medical test

2- Search for a test by patient ID

3- Retrieve all patient tests

4- Retrieve all normal tests

5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file



11- Exit

Your choice: enter a choice (0-11): 1234567

invalid number. Please enter a valid number

0- load data

1- Add a new medical test

2- Search for a test by patient ID

3- Retrieve all patient tests

4- Retrieve all normal tests

5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file

11- Exit

Your choice: enter a choice (0-11): 2

enter patient ID (int only): 1234567

1234567 LDL 2022-03 77.2

0- load data

1- Add a new medical test

2- Search for a test by patient ID

3- Retrieve all patient tests

4- Retrieve all normal tests

5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file

11- Exit

Your choice: enter a choice (0-11):



- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 4

1300555 HGB 2025-06 14.6
1300566 BGT 2026-07 79.9
1300577 LDL 2027-09 60.8
1300588 BPTS 2028-09 100.9
1300588 BPTS 2028-09 45.1
1300599 BPTD 2029-10 40.0
1234567 LDL 2022-03 77.2

- 0- load data
- 1- Add a new medical test
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- 5- Retrieve all patient tests in a given specific period
- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 6

1300500 HGB 2020-01 12.1
1300523 HGB 2020-01 18.1
1300511 BGT 2021-02 50.2
1300511 BGT 2021-02 103.2
1300522 LDL 2022-03 120.3
1300522 LDL 2022-03 100.1
1300533 BPTS 2023-04 180.4
1300544 BPTD 2024-05 90.5
1300599 BPTD 2029-10 130.0

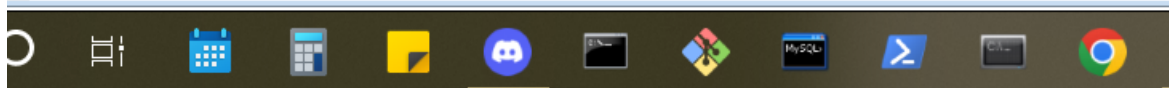
- 0- load data
- 1- Add a new medical test

```
9- Delete a test
10- Save to file
11- Exit

Your choice: enter a choice (0-11): 5
enter start date (YYYY-MM): 2022-
invalid date format! right format: 'yyyy-mm'
enter start date (YYYY-MM): 2020-01
enter end date (YYYY-MM): 202
invalid date format! right format: 'yyyy-mm'
enter end date (YYYY-MM): 2025-12
1300555 HGB 2025-06 14.6
1300511 BGT 2021-02 50.2
1300511 BGT 2021-02 103.2
1300522 LDL 2022-03 120.3
1300522 LDL 2022-03 100.1
1300533 BPTS 2023-04 180.4
1300544 BPTD 2024-05 90.5
1234567 LDL 2022-03 77.2

0- load data
1- Add a new medical test
2- Search for a test by patient ID
3- Retrieve all patient tests
4- Retrieve all normal tests
5- Retrieve all patient tests in a given specific period
6- Searching for unnormal tests
7- Average test value
8- Update an existing test result
9- Delete a test
10- Save to file
11- Exit

Your choice: enter a choice (0-11):
```



1234567 LDL 2022-03 77.2

- 0- load data
- 1- Add a new medical test
- 2- Search for a test by patient ID
- 3- Retrieve all patient tests
- 4- Retrieve all normal tests
- 5- Retrieve all patient tests in a given specific period
- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 7

average HGB tests' results: 14.933334

average BGT tests' results: 77.76667

average LDL tests' results: 89.600006

average BPTS tests' results: 108.799995

average BPTD tests' results: 86.833336

- 0- load data
- 1- Add a new medical test
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- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11):



11- Exit

Your choice: enter a choice (0-11): 8

```
0 1300500 HGB 2020-01 12.1
1 1300555 HGB 2025-06 14.6
2 1300523 HGB 2020-01 18.1
3 1300566 BGT 2026-07 79.9
4 1300511 BGT 2021-02 50.2
5 1300511 BGT 2021-02 103.2
6 1300522 LDL 2022-03 120.3
7 1300577 LDL 2027-09 60.8
8 1300522 LDL 2022-03 100.1
9 1300533 BPTS 2023-04 180.4
10 1300588 BPTS 2028-09 100.9
11 1300588 BPTS 2028-09 45.1
12 1300544 BPTD 2024-05 90.5
13 1300599 BPTD 2029-10 40.0
14 1300599 BPTD 2029-10 130.0
15 1234567 LDL 2022-03 77.2
```

enter index of test to update: 15

enter test name: 1

invalid test name only : 'HGB,BGT,LDL,BPTS,BPTD' (upper case) are ava

enter test name: HGB

enter test date (YYYY-MM): 2

invalid date format! right format: 'yyyy-mm'

enter test date (YYYY-MM): 2022-02

enter test result (nums only eg. 15.3 15 15.0 ...): 67.2

data loaded successfully

0- load data

1- Add a new medical test

2- Search for a test by patient ID

3- Retrieve all patient tests

4- Retrieve all normal tests

5- Retrieve all patient tests in a given specific period

6- Searching for unnormal tests

7- Average test value



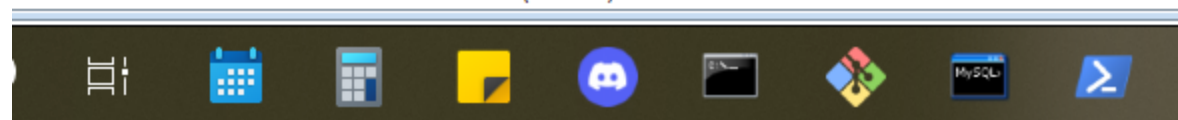
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 3

1300500 HGB 2020-01 12.1
1300555 HGB 2025-06 14.6
1300523 HGB 2020-01 18.1
1300566 BGT 2026-07 79.9
1300511 BGT 2021-02 50.2
1300511 BGT 2021-02 103.2
1300522 LDL 2022-03 120.3
1300577 LDL 2027-09 60.8
1300522 LDL 2022-03 100.1
1300533 BPTS 2023-04 180.4
1300588 BPTS 2028-09 100.9
1300588 BPTS 2028-09 45.1
1300544 BPTD 2024-05 90.5
1300599 BPTD 2029-10 40.0
1300599 BPTD 2029-10 130.0
1234567 HGB 2022-02 67.2

- 0- load data
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- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11):



10- Save to file

11- Exit

Your choice: enter a choice (0-11): 9

0 1300500 HGB 2020-01 12.1

1 1300555 HGB 2025-06 14.6

2 1300523 HGB 2020-01 18.1

3 1300566 BGT 2026-07 79.9

4 1300511 BGT 2021-02 50.2

5 1300511 BGT 2021-02 103.2

6 1300522 LDL 2022-03 120.3

7 1300577 LDL 2027-09 60.8

8 1300522 LDL 2022-03 100.1

9 1300533 BPTS 2023-04 180.4

10 1300588 BPTS 2028-09 100.9

11 1300588 BPTS 2028-09 45.1

12 1300544 BPTD 2024-05 90.5

13 1300599 BPTD 2029-10 40.0

14 1300599 BPTD 2029-10 130.0

15 1234567 HGB 2022-02 67.2

enter the index of the test to delete: 123

invalid input. Please enter a number

0 1300500 HGB 2020-01 12.1

1 1300555 HGB 2025-06 14.6

2 1300523 HGB 2020-01 18.1

3 1300566 BGT 2026-07 79.9

4 1300511 BGT 2021-02 50.2

5 1300511 BGT 2021-02 103.2

6 1300522 LDL 2022-03 120.3

7 1300577 LDL 2027-09 60.8

8 1300522 LDL 2022-03 100.1

9 1300533 BPTS 2023-04 180.4

10 1300588 BPTS 2028-09 100.9

11 1300588 BPTS 2028-09 45.1

12 1300544 BPTD 2024-05 90.5

13 1300599 BPTD 2029-10 40.0

14 1300599 BPTD 2029-10 130.0

15 1234567 HGB 2022-02 67.2

enter the index of the test to delete: 0

.

```
13 1300599 BPTD 2029-10 40.0
14 1300599 BPTD 2029-10 130.0
15 1234567 HGB 2022-02 67.2
enter the index of the test to delete: 0
data loaded successfully
```

```
0- load data
1- Add a new medical test
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Your choice: enter a choice (0-11): 3

```
1300555 HGB 2025-06 14.6
1300523 HGB 2020-01 18.1
1300566 BGT 2026-07 79.9
1300511 BGT 2021-02 50.2
1300511 BGT 2021-02 103.2
1300522 LDL 2022-03 120.3
1300577 LDL 2027-09 60.8
1300522 LDL 2022-03 100.1
1300533 BPTS 2023-04 180.4
1300588 BPTS 2028-09 100.9
1300588 BPTS 2028-09 45.1
1300544 BPTD 2024-05 90.5
1300599 BPTD 2029-10 40.0
1300599 BPTD 2029-10 130.0
1234567 HGB 2022-02 67.2
```

```
0- load data
1- Add a new medical test
```


- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
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- 11- Exit

Your choice: enter a choice (0-11): 10
data saved Successfully

- 0- load data
- 1- Add a new medical test
- 2- Search for a test by patient ID
- 3- Retrieve all patient tests
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Your choice: enter a choice (0-11):

- 1- Add a new medical test
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ear

Your choice: enter a choice (0-11): 10
data saved Successfully

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- 7- Average test value
- 8- Update an existing test result
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- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 11

-- program is finished running --



der
id.asm
fest.asm
m
m
t
ile.asm

tests.txt - Notepad

File Edit Format View Help

1300555: HGB, 2025-06, 14.6e
1300523: HGB, 2020-01, 18.1e
1300566: BGT, 2026-07, 79.9e
1300511: BGT, 2021-02, 50.2e
1300511: BGT, 2021-02, 103.2e
1300522: LDL, 2022-03, 120.3e
1300577: LDL, 2027-09, 60.8e
1300522: LDL, 2022-03, 100.1e
1300533: BPTS, 2023-04, 180.4e
1300588: BPTS, 2028-09, 100.9e
1300588: BPTS, 2028-09, 45.1e
1300544: BPTD, 2024-05, 90.5e
1300599: BPTD, 2029-10, 40.0e
1300599: BPTD, 2029-10, 130.0e
1234567: HGB, 2022-02, 67.2e

Your choice: enter a choice (0-11): 11

-- program is finished running --

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- 1- Add a new medical test
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- 3- Retrieve all patient tests
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- 5- Retrieve all patient tests in a given specific period
- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 0

data loaded successfully

- 0- load data
- 1- Add a new medical test
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- 3- Retrieve all patient tests
- 4- Retrieve all normal tests
- 5- Retrieve all patient tests in a given specific period
- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
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- 11- Exit

Your choice: enter a choice (0-11):

11- Exit

Your choice: enter a choice (0-11): 3

1300555 HGB 2025-06 14.6

1300523 HGB 2020-01 18.1

1300566 BGT 2026-07 79.9

1300511 BGT 2021-02 50.2

1300511 BGT 2021-02 103.2

1300522 LDL 2022-03 120.3

1300577 LDL 2027-09 60.8

1300522 LDL 2022-03 100.1

1300533 BPTS 2023-04 180.4

1300588 BPTS 2028-09 100.9

1300588 BPTS 2028-09 45.1

1300544 BPTD 2024-05 90.5

1300599 BPTD 2029-10 40.0

1300599 BPTD 2029-10 130.0

1234567 HGB 2022-02 67.2

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7- Average test value

8- Update an existing test result

9- Delete a test

10- Save to file

11- Exit

Your choice: enter a choice (0-11):

- 6- Searching for unnormal tests
- 7- Average test value
- 8- Update an existing test result
- 9- Delete a test
- 10- Save to file
- 11- Exit

Your choice: enter a choice (0-11): 11

-- program is finished running --

