

BEFORE STARTING

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help



Run speed at max (no interaction)

Mars Messages Run I/O

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

Please enter your choice:

Clear

MedicalTest.txt

```
1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210608:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:HGP,2023-12,15.00
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
```

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help



Run speed at max (no interaction)

Mars Messages Run I/O

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

Please enter your choice:
1

Please enter the patient ID (7 digits): 1212739
Please enter the test name (3 capital letters): LDL
Please enter the test date (YYYY-MM): 2022-12
Please enter the test result (e.g., 12.35): 90.00

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

Please enter your choice:

MedicalTest.txt

```
1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210608:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:HGP,2023-12,15.00
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00
```

File Edit Run Settings Tools Help

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

Mars Messages Run I/O

Please enter your choice:
1

Please enter the patient ID (7 digits): 1212739
Please enter the test name (3 capital letters): LDL
Please enter the test date (YYYY-MM): 2022-12
Please enter the test result (e.g., 12.35): 90.00

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

Please enter your choice:
2

Menu:
A) Retrieve all patient tests
B) Retrieve all abnormal patient tests
C) Retrieve all patient tests in a specific period

Enter your choice (A/B/C): A

Please enter the patient ID (7 digits): 1210608

1 1210608:HGP, 2024-03, 14.00
2 1210608:BPT, 2024-09, 200.0, 10.30
3 1210608:LDL, 2024-03, 120.0
4 1210608:HGP, 2024-03, 22.20

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

A

Run speed at max (no interaction)

MedicalTest.txt

```
1 1210608:HGP, 2024-03, 14.00
1212739:LDL, 2024-03, 90.00
1212739:BGT, 2024-03, 80.00
1210608:HGP, 2024-03, 22.20
1210808:BPT, 2024-09, 110.4, 90.32
1210608:BPT, 2024-09, 200.0, 10.30
1212739:BGT, 2024-03, 110.0
1210608:LDL, 2024-03, 120.0
1212739:HGP, 2023-10, 12.00
1212739:HGP, 2023-12, 15.09
1212739:BPT, 2021-05, 90.00, 100.0
1212739:BPT, 2020-11, 140.0, 70.00
1212739:LDL, 2022-12, 90.00
```

File Edit Run Settings Tools Help

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

Mars Messages Run I/O

Please enter the patient ID (7 digits): 1210608

1210608:HGP, 2024-03, 14.00
1210608:BPT, 2024-09, 200.0, 10.30
1210608:LDL, 2024-03, 120.0

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

A2

Menu:
A) Retrieve all patient tests
B) Retrieve all abnormal patient tests
C) Retrieve all patient tests in a specific period

Enter your choice (A/B/C): B

Please enter the patient ID (7 digits): 1212739

1 LDL:Normal
2 BGT:notNormal
3 BGT:notNormal
4 HGP:notNormal
5 HGP:notNormal

Number of matching names found: 0

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit

B

Run speed at max (no interaction)

MedicalTest.txt

```
1 1210608:HGP, 2024-03, 14.00
1212739:LDL, 2024-03, 90.00
1212739:BGT, 2024-03, 80.00
1210608:HGP, 2024-03, 22.20
1210808:BPT, 2024-09, 110.4, 90.32
1210608:BPT, 2024-09, 200.0, 10.30
1212739:BGT, 2024-03, 110.0
1210608:LDL, 2024-03, 120.0
1212739:HGP, 2023-10, 12.00
1212739:HGP, 2023-12, 15.09
1212739:BPT, 2021-05, 90.00, 100.0
1212739:BPT, 2020-11, 140.0, 70.00
1212739:LDL, 2022-12, 90.00
```

File Edit Run Settings Tools Help /Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

Mars Messages Run I/O Run speed at max (no interaction)

Please enter your choice:
2
Menu:
A) Retrieve all patient tests
B) Retrieve all abnormal patient tests
C) Retrieve all patient tests in a specific period
Enter your choice (A/B/C): C
Please enter the patient ID (7 digits): 1210608
Please enter the test date (YYYY-MM): 2024-09
1210608:BPT,2024-09,200.0,10.30
Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit
C2
Menu:
A) Retrieve all patient tests
B) Retrieve all abnormal patient tests
C) Retrieve all patient tests in a specific period
Enter your choice (A/B/C): C
Please enter the patient ID (7 digits): 1210608
Please enter the test date (YYYY-MM): 2024-03
1210608:HGP,2024-03,14.00
1210608:HGP,2024-03,22.20
1210608:LDL,2024-03,120.0
Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit
C

MedicalTest.txt

```
1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210608:BPT,2024-09,110.4,90.32
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:HGP,2023-12,15.09
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00
```

File Edit Run Settings Tools Help /Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

Mars Messages Run I/O Run speed at max (no interaction)

Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit
Please enter your choice:
3
Please enter the test name (3 capital letters): BGT
1 212739:BGT,2024-03,80.00
2 notNormal
212739:BGT,2024-03,110.0
Clear Number of matching names found: 2
Please choose an option:
1.Add new medical test
2.Search for a test (by patient ID)
3.Searching for abnormal tests
4.Average test value
5.Update an existing test result
6.Delete a test
7.Exit
Please enter your choice:

MedicalTest.txt

```
1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210608:BPT,2024-09,110.4,90.32
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:HGP,2023-12,15.09
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00
```

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help

Mars Messages Run I/O

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:
 3

Please enter the test name (3 capital letters): **BPT**
 Systolic Blood Pressure is Normal
 210808:BPT,2024-09,110.4,90.32

Systolic Blood Pressure is Normal
 210608:BPT,2024-09,200.0,10.30

Clear

Systolic Blood Pressure is Normal
 212739:BPT,2021-05,90.00,100.0

Systolic Blood Pressure is Normal
 212739:BPT,2020-11,140.0,70.00

Diastolic Blood Pressure is Normal
 210808:BPT,2024-09,110.4,90.32

Diastolic Blood Pressure is Normal
 210608:BPT,2024-09,200.0,10.30

Diastolic Blood Pressure is Normal
 212739:BPT,2021-05,90.00,100.0

Diastolic Blood Pressure is Normal
 212739:BPT,2020-11,140.0,70.00

each Line has 2 results

Please choose an option:
 1.Add new medical test

Run speed at max (no interaction)

MedicalTest.txt

```

1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210808:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:HGP,2023-12,15.00
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00

```

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

Edit Run Settings Tools Help

Mars Messages Run I/O

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:
 4

Please enter the test name (3 capital letters): **LDL**
 Number of matching names found: 3

Clear

sum= 300.0
 Average= 100.0
 Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:

Run speed at max (no interaction)

MedicalTest.txt

```

1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210808:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:HGP,2023-12,15.00
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00

```

**90+120+90=300
 AVG. $\frac{300}{3} = 100$**

File Edit Run Settings Tools Help



Run speed at max (no interaction)

MedicalTest.txt

```

1210608:HGP, 2024-03, 14.00
1212739:LDL, 2024-03, 90.00
1212739:BGT, 2024-03, 80.00
1210608:HGP, 2024-03, 22.20
1210608:BPT, 2024-09, 110.4, 90.32
1210608:BPT, 2024-09, 200.0, 10.30
1212739:BGT, 2024-03, 110.0
1210608:LDL, 2024-03, 120.0
1212739:HGP, 2023-10, 12.00
1212739:HGP, 2023-12, 15.00
1212739:BPT, 2021-05, 90.00, 100.0
1212739:BPT, 2020-11, 140.0, 70.00
1212739:BGT, 2020-12, 90.00

```

$$90.32 + 10.30 + 100 + 70 = 270.62$$

$$\frac{270.62}{4} = 67.655$$

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:
 4

Please enter the test name (3 capital letters): **BPT**

Menu:
 1.Systolic Blood Pressure
 2.Diastolic Blood Pressure
 Choose an option: 1

Number of matching names found: 4

Clear

sum= 270.62

Average= 67.655

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:

File Edit Run Settings Tools Help

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

Run speed at max (no interaction)

MedicalTest.txt

```

1210608:HGP, 2024-03, 14.00
1212739:LDL, 2024-03, 90.00
1212739:BGT, 2024-03, 80.00
1210608:HGP, 2024-03, 22.20
1210608:BPT, 2024-09, 110.4, 90.32
1210608:BPT, 2024-09, 200.0, 10.30
1212739:BGT, 2024-03, 110.0
1210608:LDL, 2024-03, 120.0
1212739:HGP, 2023-10, 12.00
1212739:HGP, 2023-12, 15.00
1212739:BPT, 2021-05, 90.00, 100.0
1212739:BPT, 2020-11, 140.0, 70.00
1212739:BGT, 2020-12, 90.00

```

$$140+90+200+110.4=540.4$$

$$\frac{540.4}{4}=135.1$$

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help

Mars Messages Run I/O

Run speed at max (no interaction)

Number of matching names found: 4
 sum = 811.02
 Average= 202.755
 Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:
 5
 1:1210608:HGP,2024-03,14.00
 2:1212739:LDL,2024-03,90.00
 3:1212739:BGT,2024-03,80.00
 4:1210608:HGP,2024-03,22.20
 5:1210808:BPT,2024-09,110.4,90.32
 6:1210608:BPT,2024-09,200.0,10.30
 7:1212739:BGT,2024-03,110.0
 8:1210608:LDL,2024-03,120.0
 9:1212739:HGP,2023-10,12.00
 10:1212739:HGP,2023-12,15.09
 11:1212739:BPT,2021-05,90.00,100.0
 12:1212739:BPT,2020-11,140.0,70.00
 13:1212739:LDL,2022-12,90.00

Enter the line number to update:

* All The Lines before Updating

MedicalTest.txt

```
1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210808:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,12.00
1212739:BPT,2023-12,15.09
1212739:BPT,2021-05,90.00,100.0
1212739:LDL,2022-12,90.00
```

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help

Mars Messages Run I/O

Run speed at max (no interaction)

6:1210608:BPT,2024-09,200.0,10.30
 7:1212739:BGT,2024-03,110.0
 8:1210608:LDL,2024-03,120.0
 9:1212739:HGP,2023-10,12.00
 10:1212739:HGP,2023-12,15.09
 11:1212739:BPT,2021-05,90.00,100.0
 12:1212739:BPT,2020-11,140.0,70.00
 13:1212739:LDL,2022-12,90.00

Enter the line number to update: 9
 Enter the new 5-digit content: 9.000 1210608:HGP,2024-03,14.00
 1212739:LDL,2024-03,90.00
 1212739:BGT,2024-03,80.00
 1210608:HGP,2024-03,22.20
 1210808:BPT,2024-09,110.4,90.32
 1210608:BPT,2024-09,200.0,10.30
 1212739:BGT,2024-03,110.0
 1210608:LDL,2024-03,120.0
 1212739:HGP,2023-10,9.000
 1212739:HGP,2023-12,15.09
 1212739:BPT,2021-05,90.00,100.0
 1212739:BPT,2020-11,140.0,70.00
 1212739:LDL,2022-12,90.00

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:

After updating

MedicalTest.txt

```
1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210808:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:BGT,2024-03,110.0
1210608:LDL,2024-03,120.0
1212739:HGP,2023-10,9.000
1212739:HGP,2023-12,15.09
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00
```

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help

Mars Messages Run I/O

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:
 6

1:1210608:HGP,2024-03,14.00
 2:1212739:LDL,2024-03,90.00
 3:1212739:BGT,2024-03,80.00
 4:1210608:HGP,2024-03,22.20
 5:1210808:BPT,2024-09,110.4,90.32
 6:1210608:BPT,2024-09,200.0,10.30
 7:1212739:BGT,2024-03,110.0
 8:1210608:LDL,2024-03,120.0
 9:1212739:HGP,2023-10,9.000
 10:1212739:HGP,2023-12,15.09
 11:1212739:BPT,2021-05,90.00,100.0
 12:1212739:BPT,2020-11,140.0,70.00
 13:1212739:LDL,2022-12,90.00
 14:1212739:LDL,2022-12,90.00

Enter the line number to delete:

Run speed at max (no interaction)

MedicalTest.txt

```

1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210808:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:LDL,2024-03,120.0
1212739:HGP,2023-10,9.000
1212739:HGP,2023-12,15.09
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00
1212739:LDL,2022-12,90.00
    
```

File content before deleting

/Users/malakmoqbel/Desktop/ArcProject1.asm - MARS 4.5

File Edit Run Settings Tools Help

Mars Messages Run I/O

2:1212739:LDL,2024-03,90.00
 3:1212739:BGT,2024-03,80.00
 4:1210608:HGP,2024-03,22.20
 5:1210808:BPT,2024-09,110.4,90.32
 6:1210608:BPT,2024-09,200.0,10.30
 7:1212739:BGT,2024-03,110.0
 8:1210608:LDL,2024-03,120.0
 9:1212739:HGP,2023-10,9.000
 10:1212739:HGP,2023-12,15.09
 11:1212739:BPT,2021-05,90.00,100.0
 12:1212739:BPT,2020-11,140.0,70.00
 13:1212739:LDL,2022-12,90.00
 14:1212739:LDL,2022-12,90.00

Enter the line number to delete: 7

Please choose an option:
 1.Add new medical test
 2.Search for a test (by patient ID)
 3.Searching for abnormal tests
 4.Average test value
 5.Update an existing test result
 6.Delete a test
 7.Exit

Please enter your choice:
 7
- Exit

-- program is finished running --

Run speed at max (no interaction)

MedicalTest.txt

```

1210608:HGP,2024-03,14.00
1212739:LDL,2024-03,90.00
1212739:BGT,2024-03,80.00
1210608:HGP,2024-03,22.20
1210808:BPT,2024-09,110.4,90.32
1210608:BPT,2024-09,200.0,10.30
1212739:LDL,2024-03,120.0
1212739:HGP,2023-10,9.000
1212739:HGP,2023-12,15.09
1212739:BPT,2021-05,90.00,100.0
1212739:BPT,2020-11,140.0,70.00
1212739:LDL,2022-12,90.00
1212739:LDL,2022-12,90.00
    
```

File content after deleting Line #7