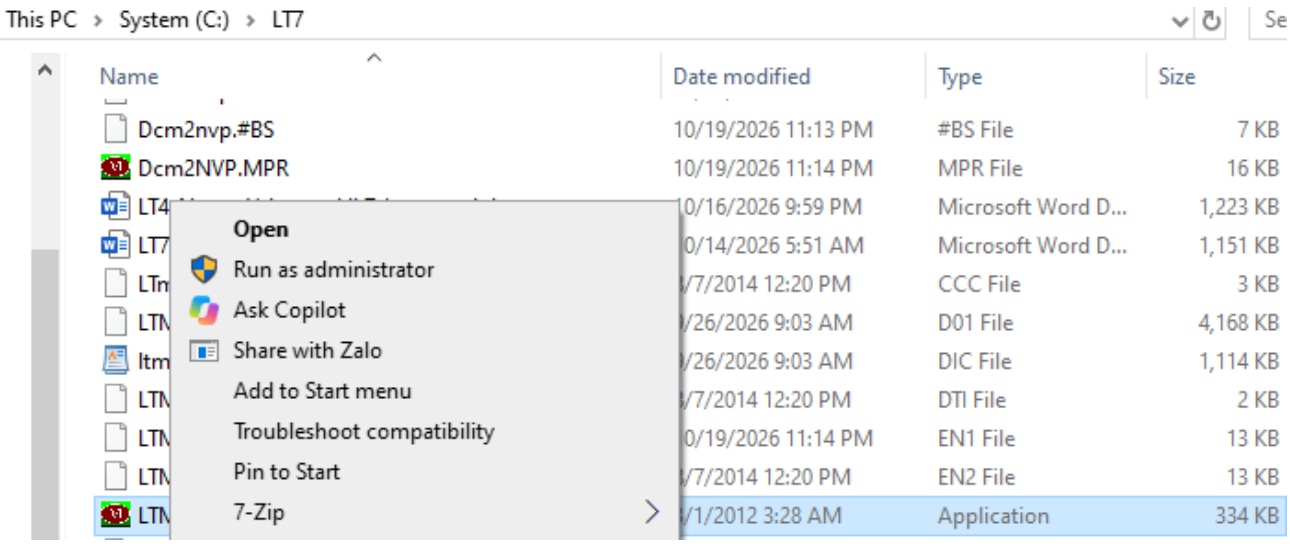
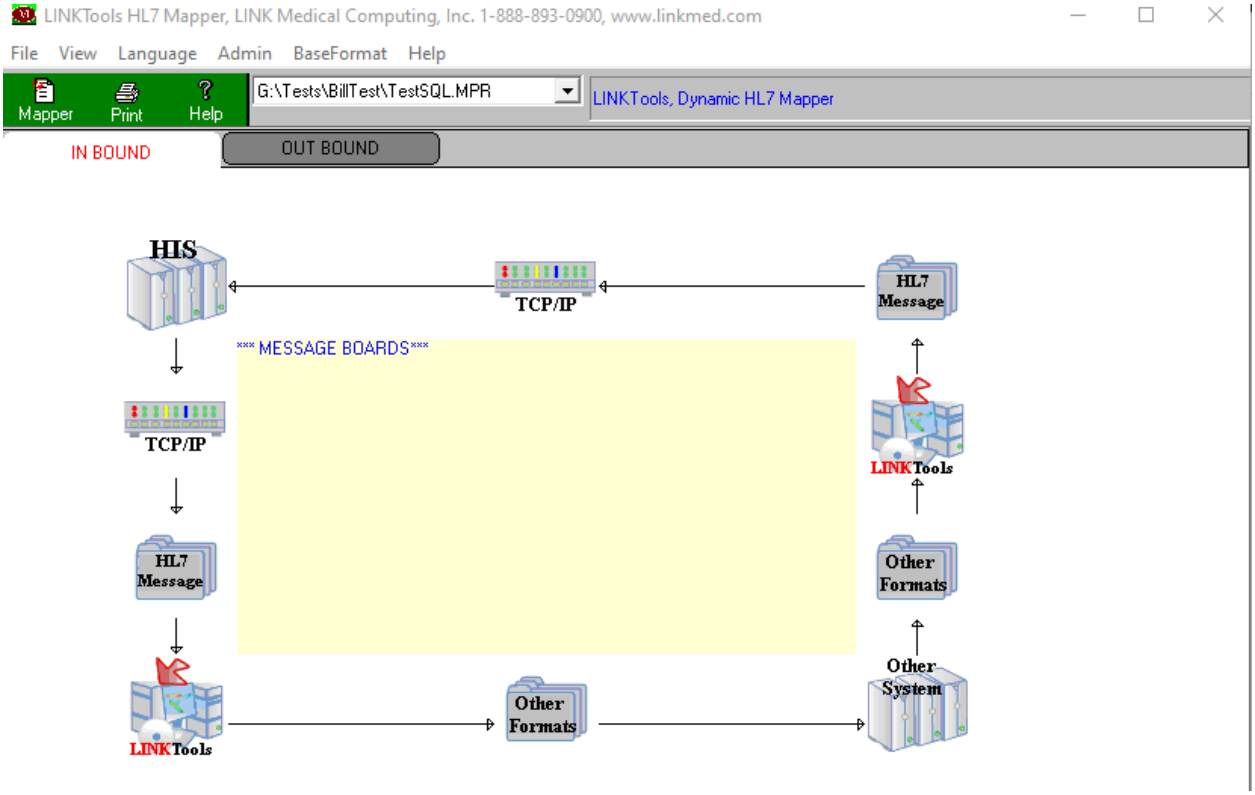
LT7 - Convert DICOM to Name-Value + JPG Images

1. Open and Configure the Dynamic Mapper.

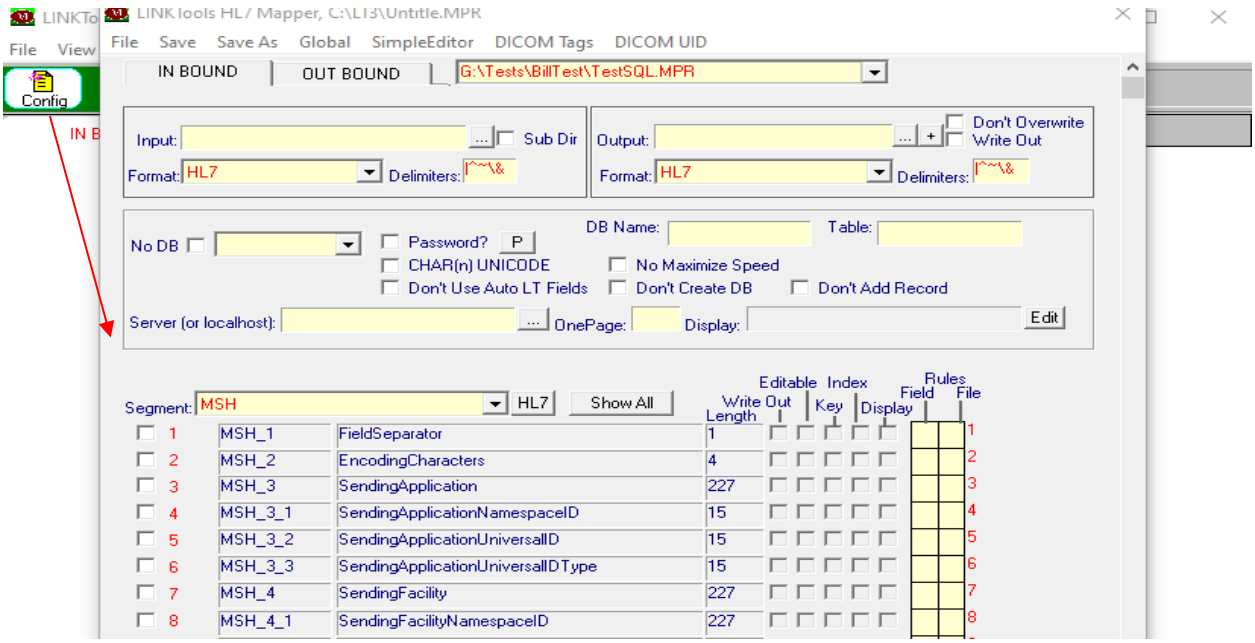
- Go to the C:\LT7 folder.
- Right-click “LTMAPPER.exe”.
- Click Run as administrator



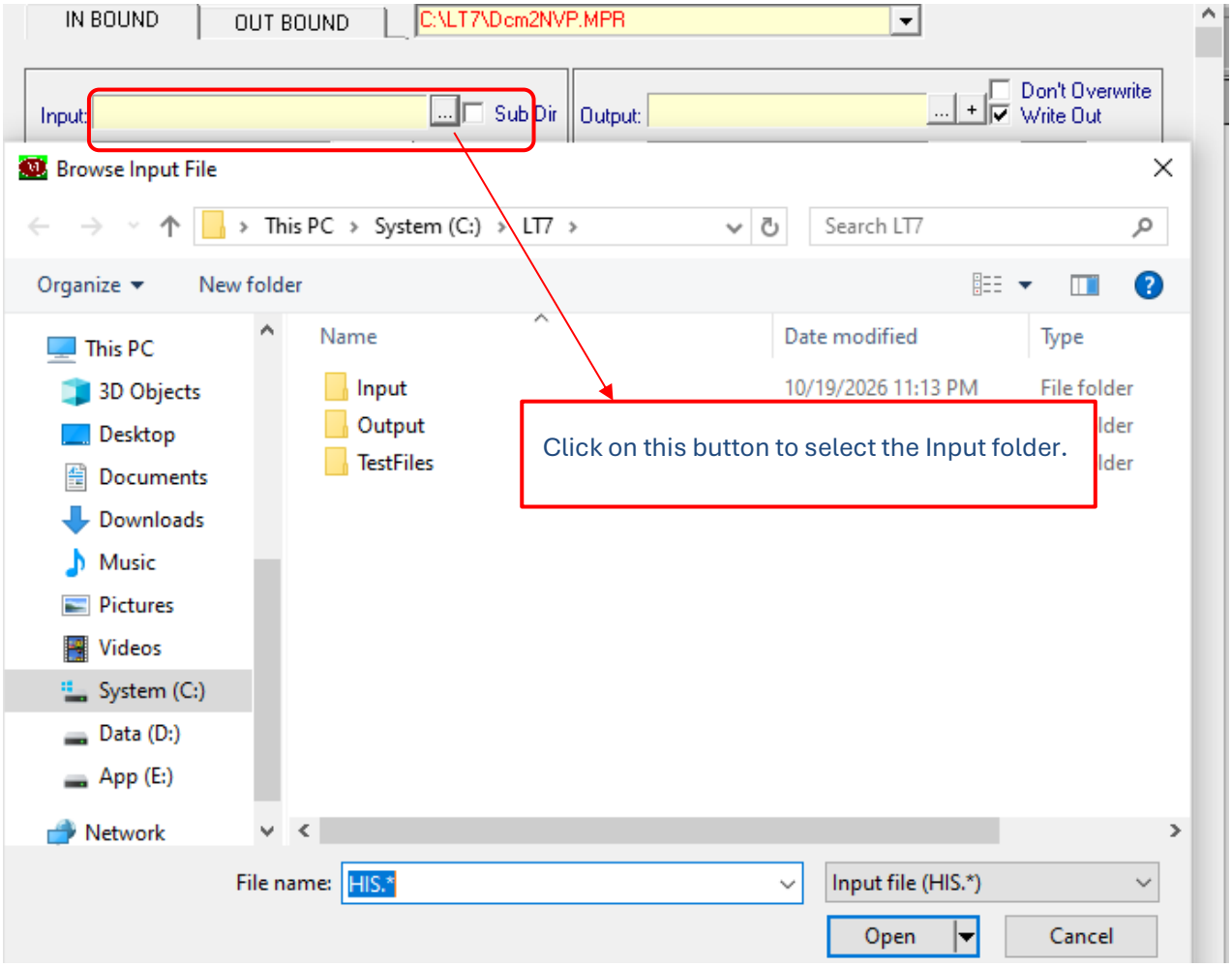
- This is the main screen of the Dynamic Mapper Application.



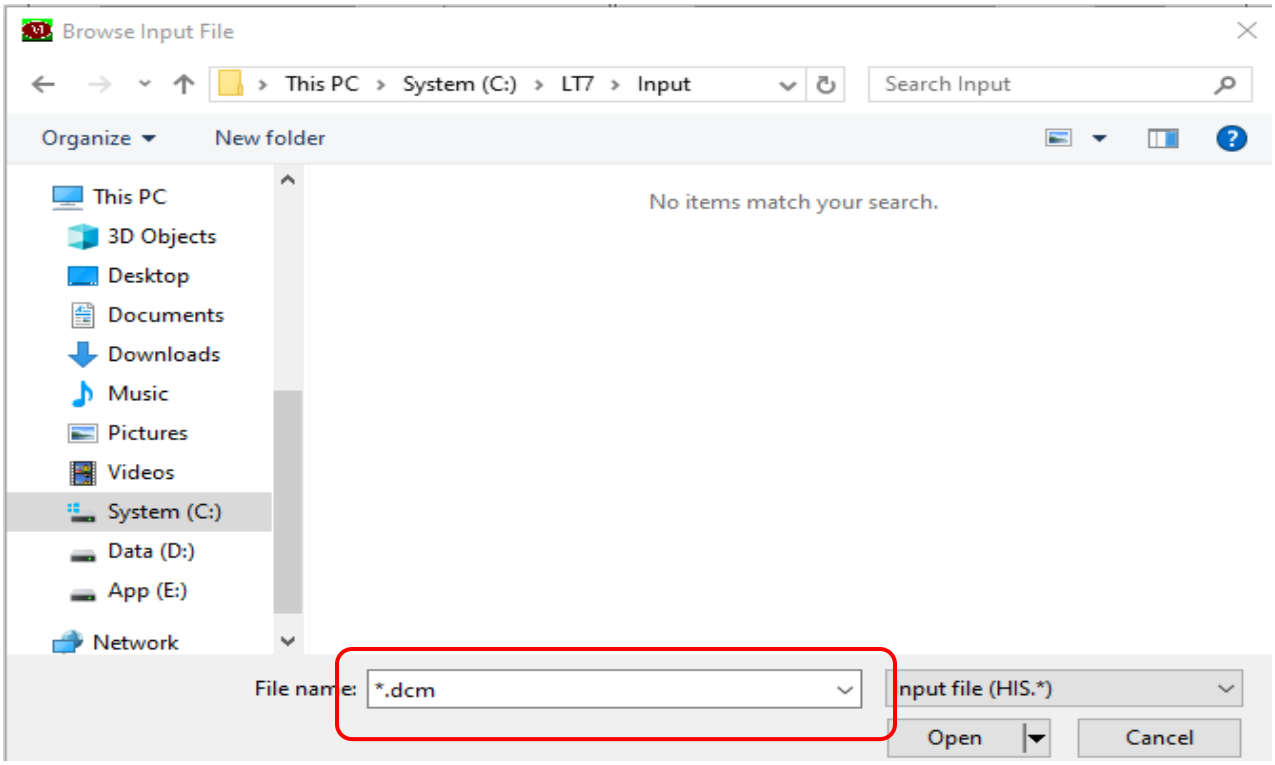
- - From the main screen, click on “**Config**” button to access the Configuration Dialog Box.



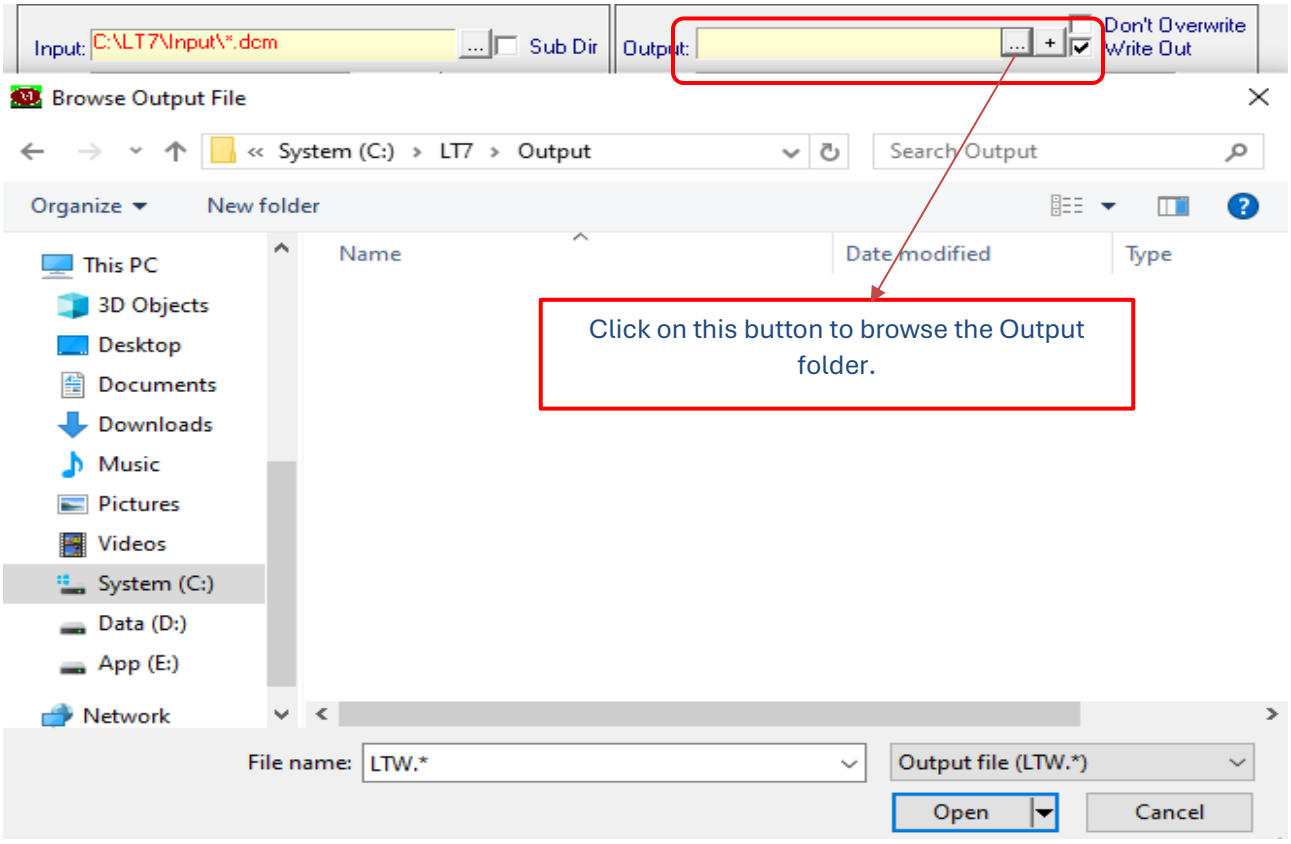
- Configure Input file path.



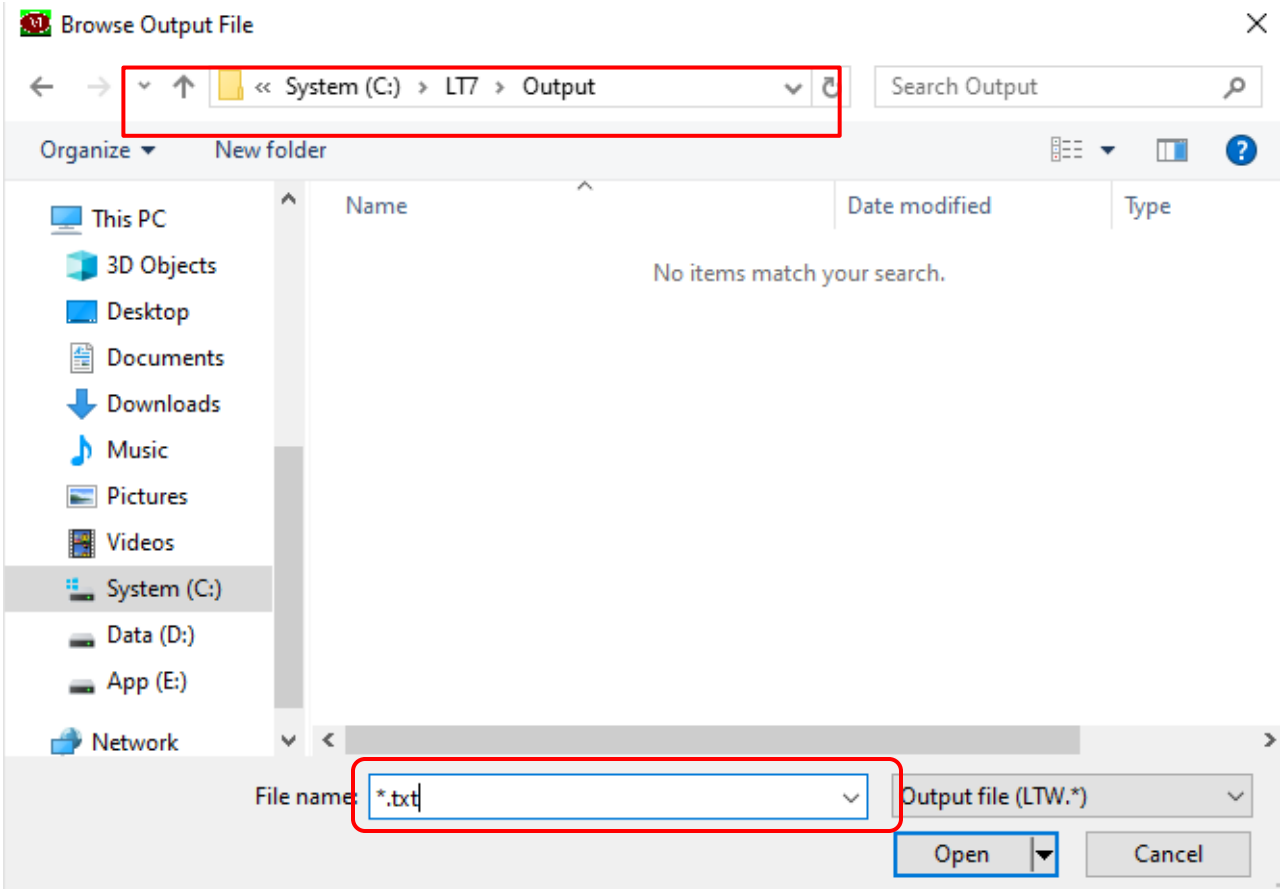
- Browse to C:\LT7\Input folder.



- Change the file name from “HIS.*” to “*.dcm”and click Open.
- Next, select the Output folder for the interface.

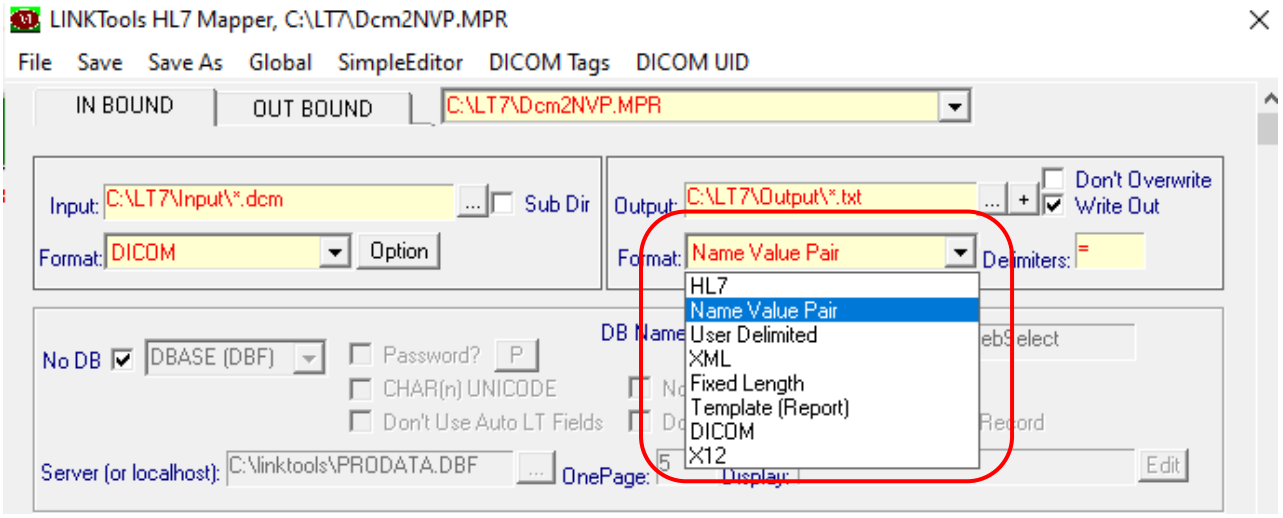


- Use the upper arrow button or click on LT7 from the address to show all subfolders of C:\LT7 folder and select “Output”. The output folder is “C:\LT7\Output”

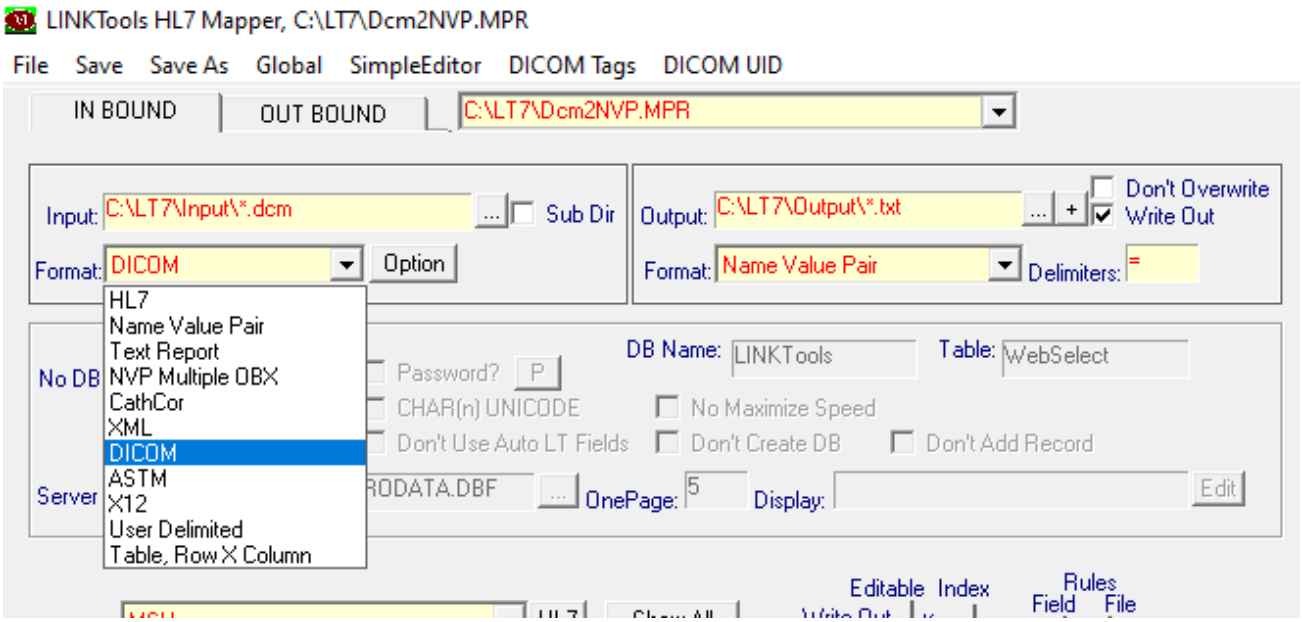


- The file name field: Change the file name from LTW.* to *.txt and click Open.
- You have done configuring the Input and Output folders for the interface.

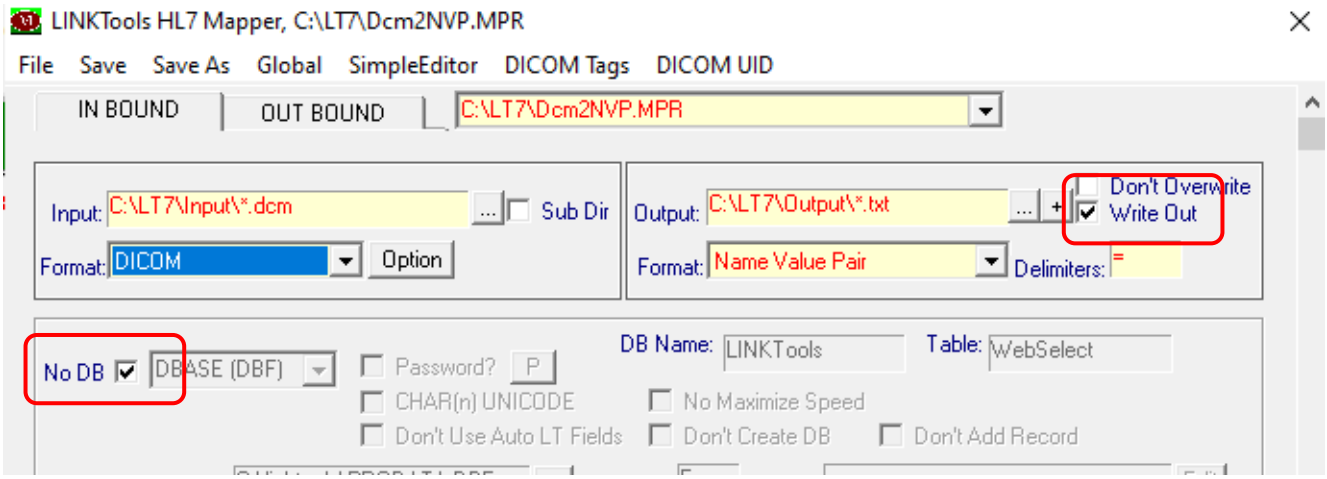
- Next, select the “Format” down arrow below the Output column and select “Name Value Pair” for the output format.

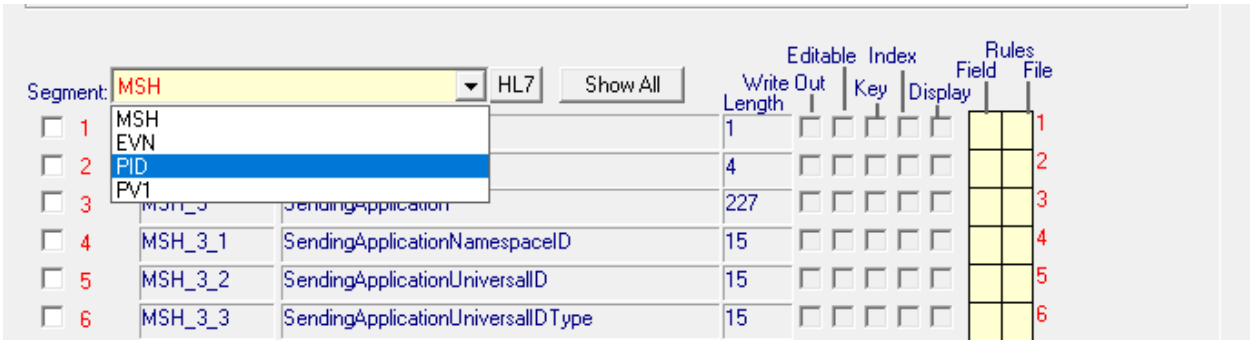


- Click the “Format” down arrow below the Input column and select “DICOM” for the input format

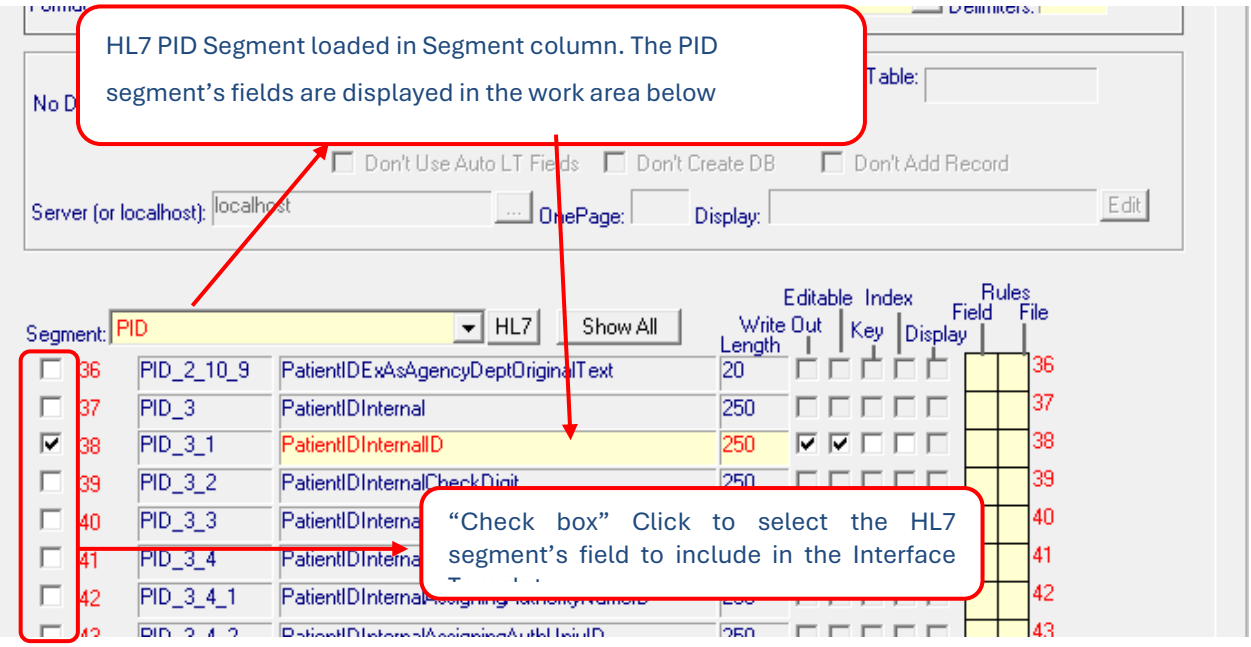


- Click two check boxes “No DB” and “Write Out”.

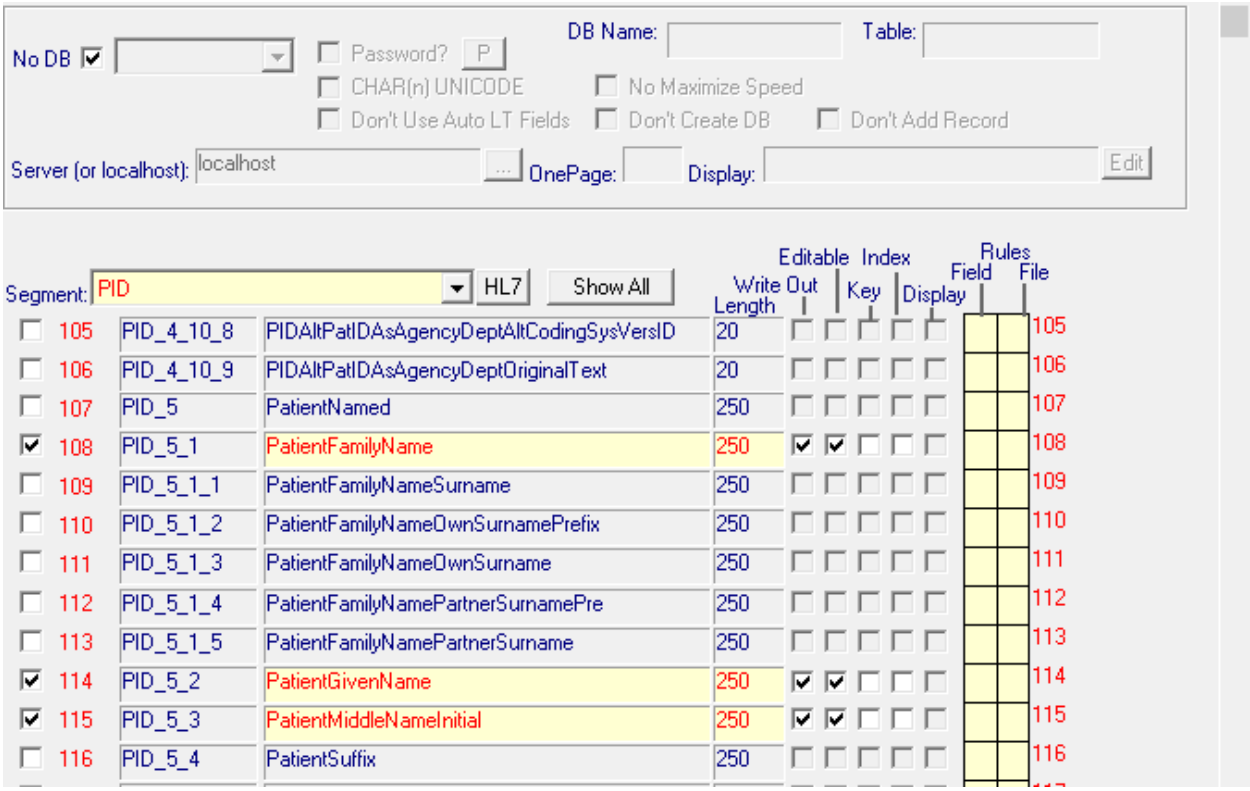




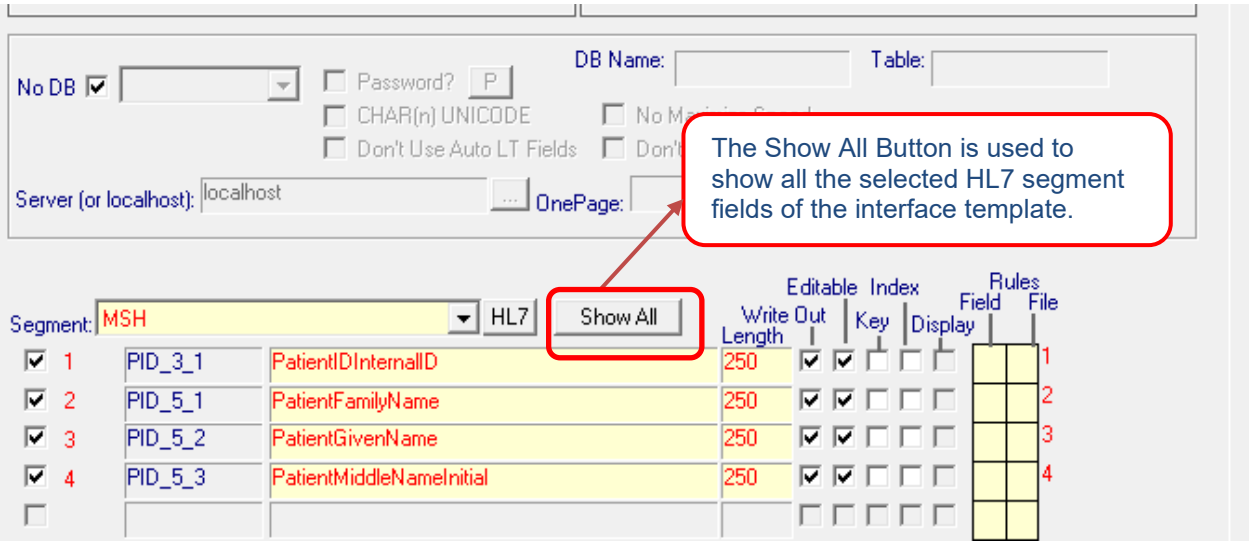
- Next, we will configure the HL7 segment’s fields for the interface.
- First of all, we will configure the PID segment.
- Click on “Segment” down arrow and select PID. All PID segment’s fields will be displayed.



- Click on the work area and scroll up/down to go to the segment fields we need.
- Scroll down and find the segment "PID_3_1 – PatientIDInternalID" and click the check box on the left to select this field.
- Next, scroll down and select PID_5_1, PID_5_2, PID_5_3 like below image.



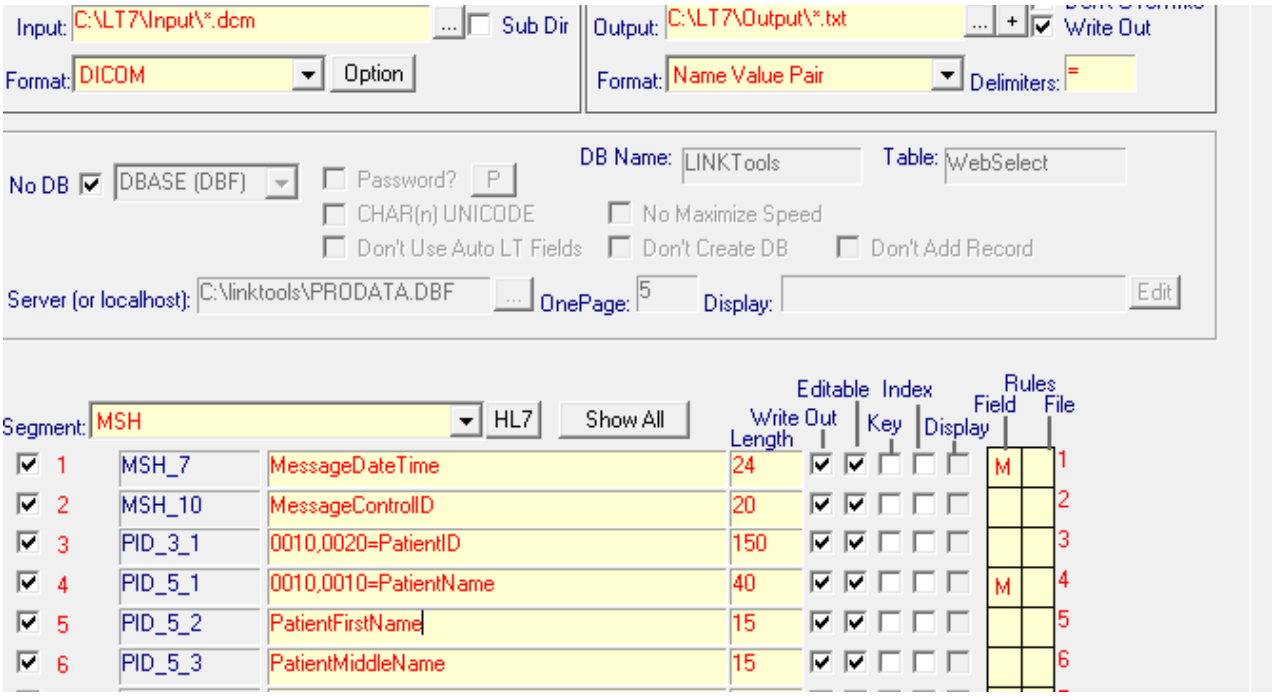
- Next, click on the “Show All” button to show all the selected HL7 segment fields.



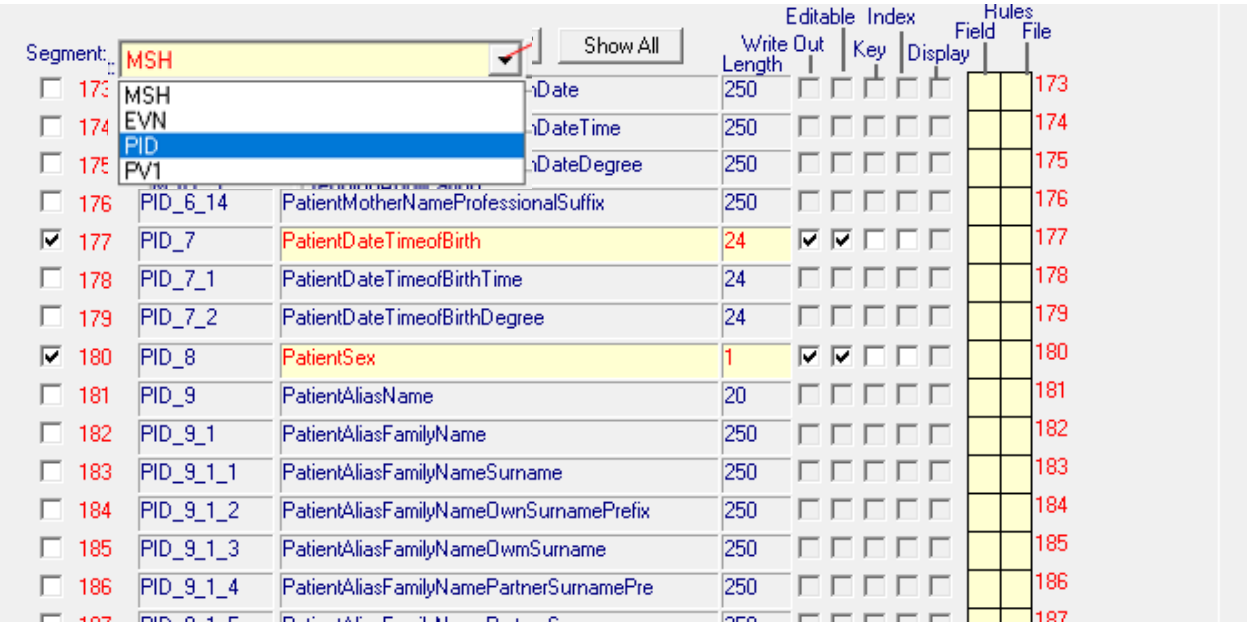
- Change the field name for the name value pair output file.

  Click on PID_3_1 – PatientIDInternalID, change it to “0010,0020=PatientID”. This is a text box and you can copy, paste, change or delete its content.

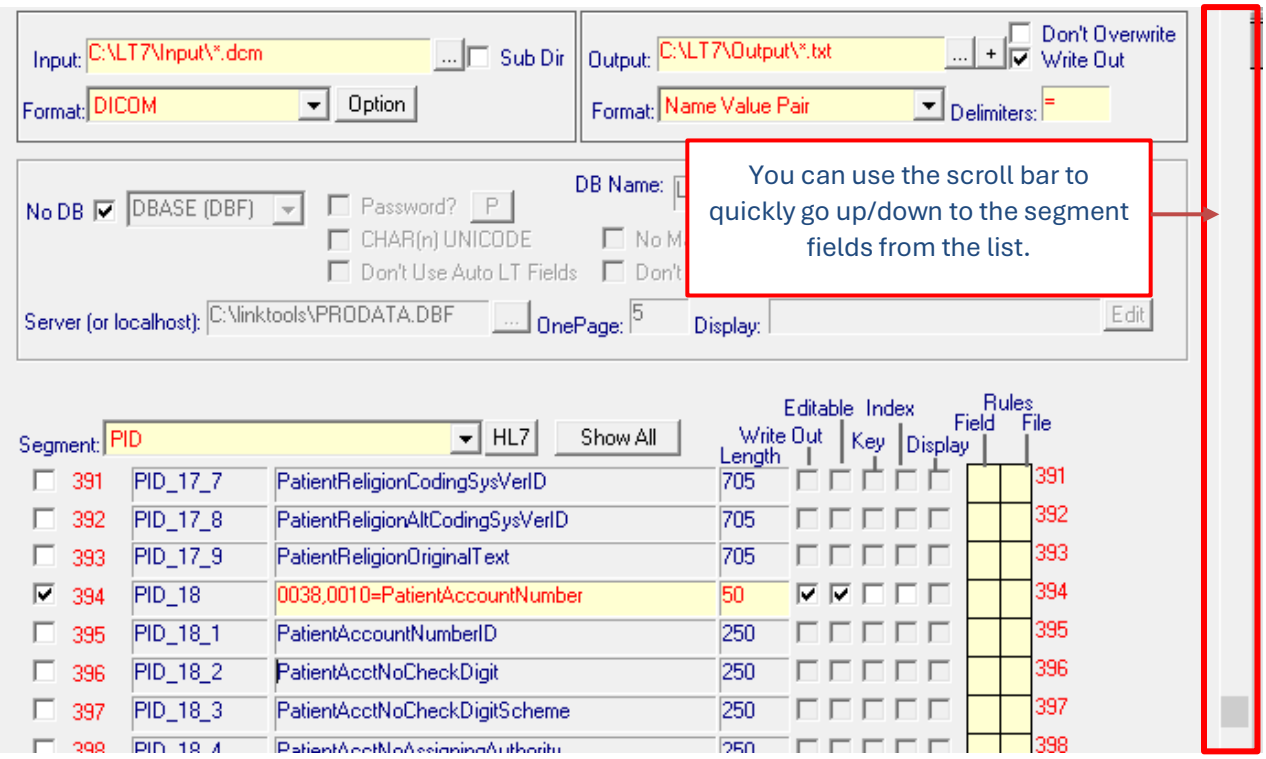
  Rename PID_5_1, PID_5_2, and PID_5_3 to “0010,0010=PatientName”, PatientFirstName, and PatientMiddleName.



- Next, click on Segment down arrow to select the PID segment again.
- The PID segment fields display again. We will select next PID segment’s fields for the interface.
- Scroll down and check to select “PID_7 - PatientDateTimeofBirth”, “PID_8 – PatientSex”



- Next, find and select PID_18

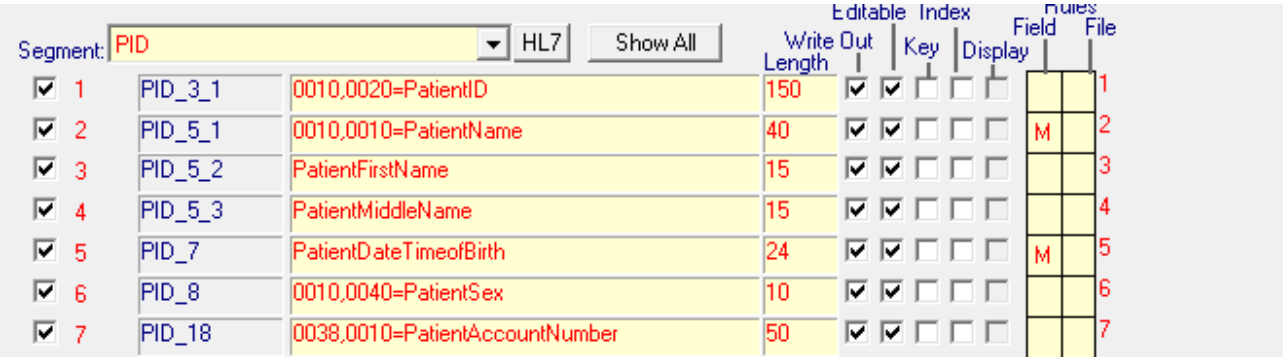


- We have a lot of fields and sub-fields for a segment so you can use the scroll bar on the right column to go up and down quickly.

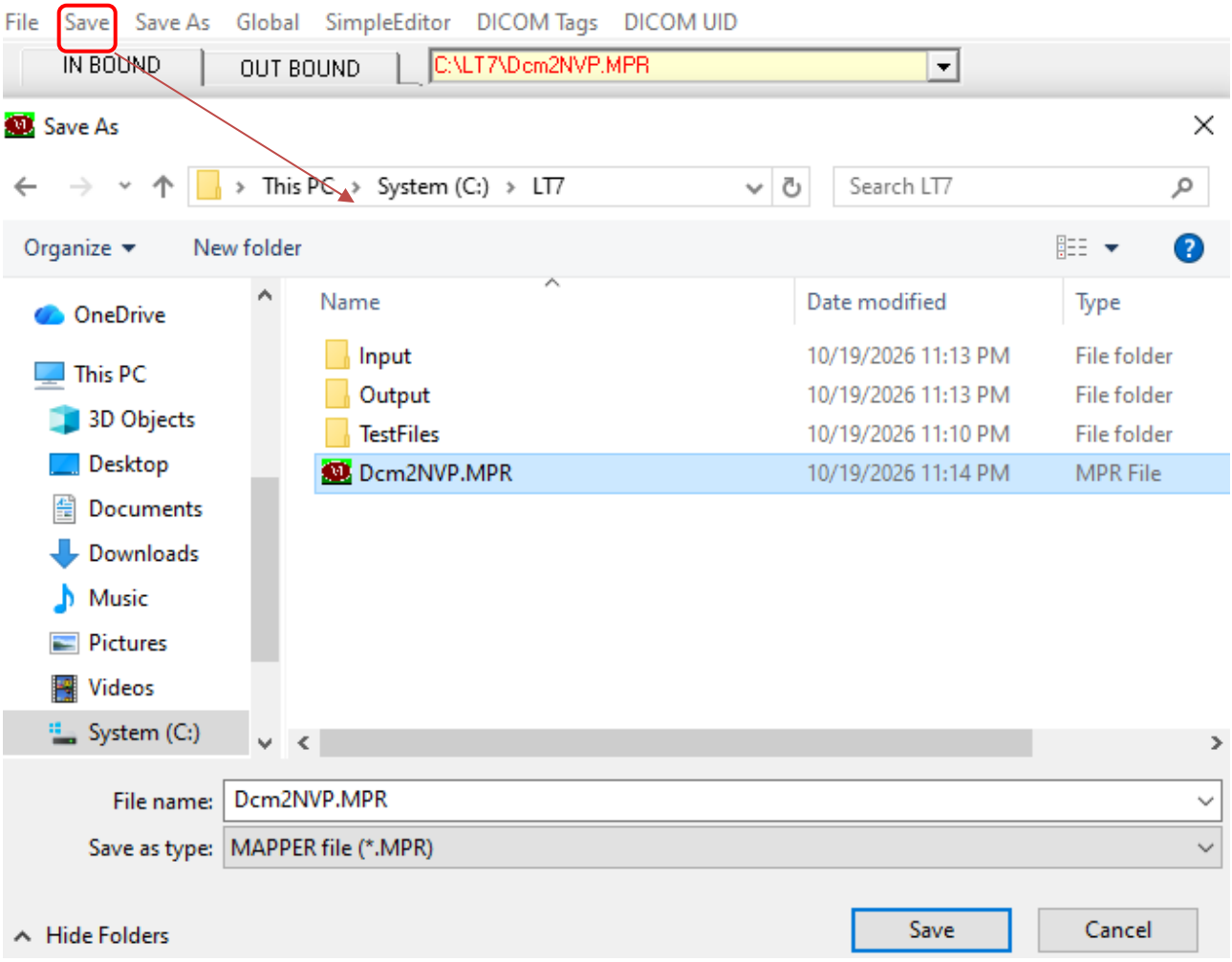
- Click **Show all**, you will see all the fields that you have selected.

- Change the field names:
- PID_7 = PatientDateOfBirth
- PID_8 = 0010,0040=PatientSex
- PID_18 = 0038,0010=PatientAccountNumber.

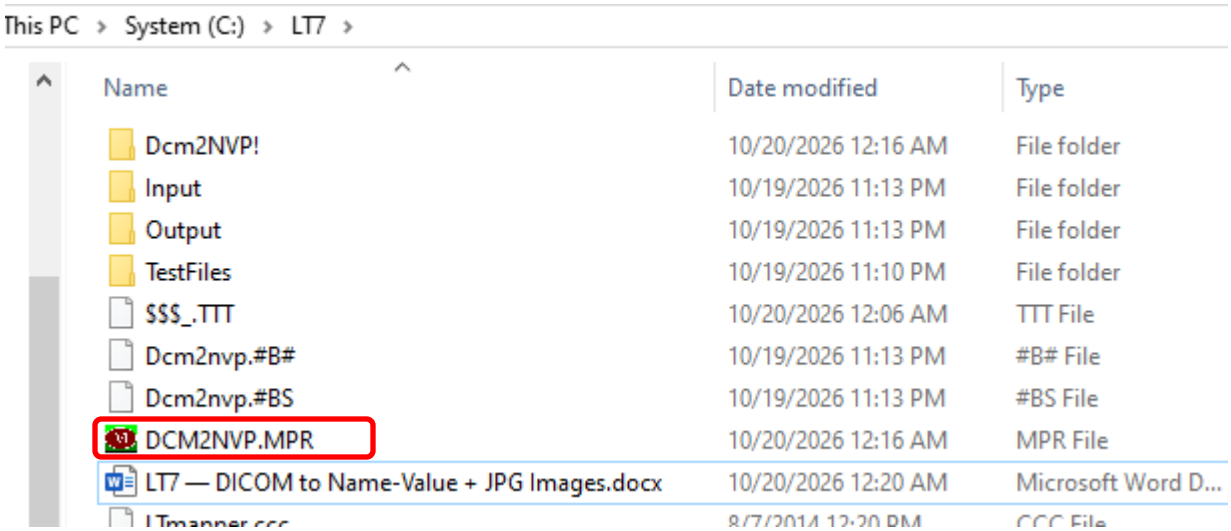
- After change all the field names, you will see like below image.



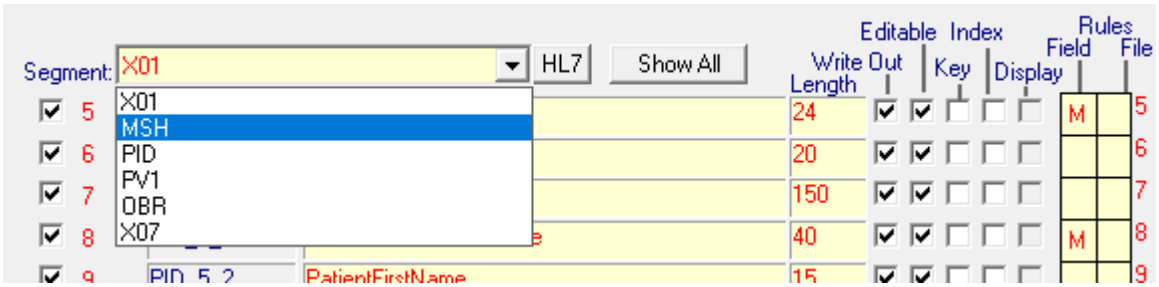
- Save the mapper template.
  Click Save on the menu bar.
  Select the folder and file name for the mapper template.



- The folder to save the file is C:\LT7
- Enter the file name “DCM2NVP” and click Save button, a successfully save message appears and click OK.
- Go to C:\LT7 folder, you will see a mapper template named “DCM2NVP.mpr”

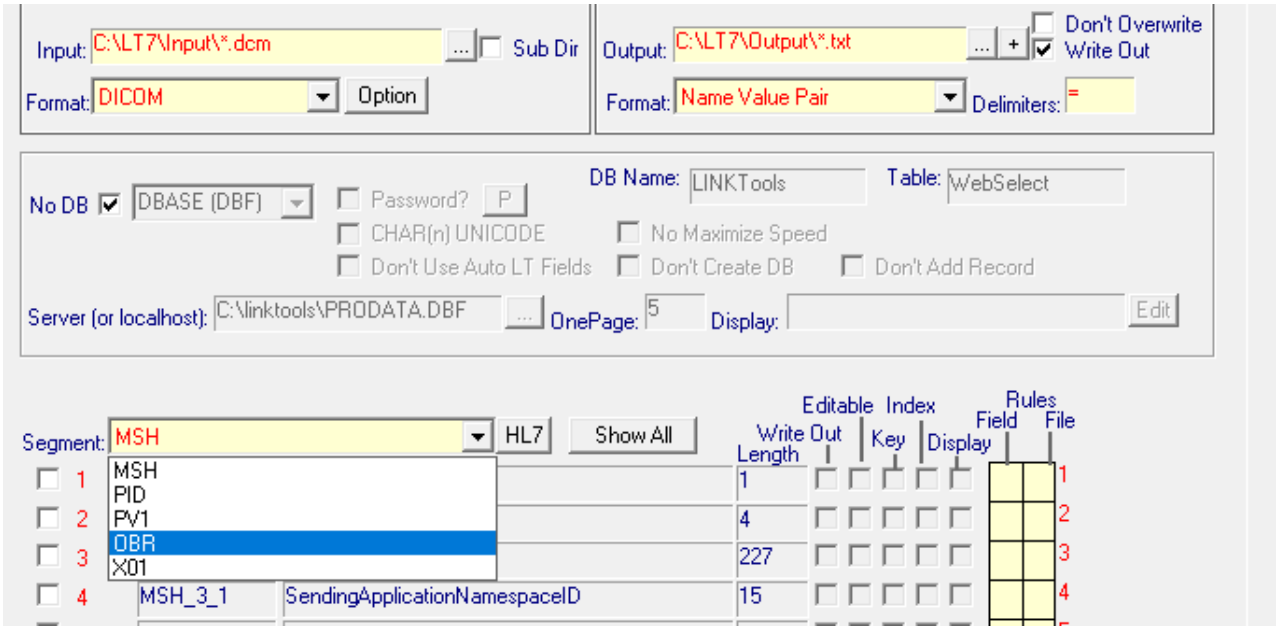


- Go back to the Mapper application to add more fields.
- Click on Segment down arrow and select MSH segment

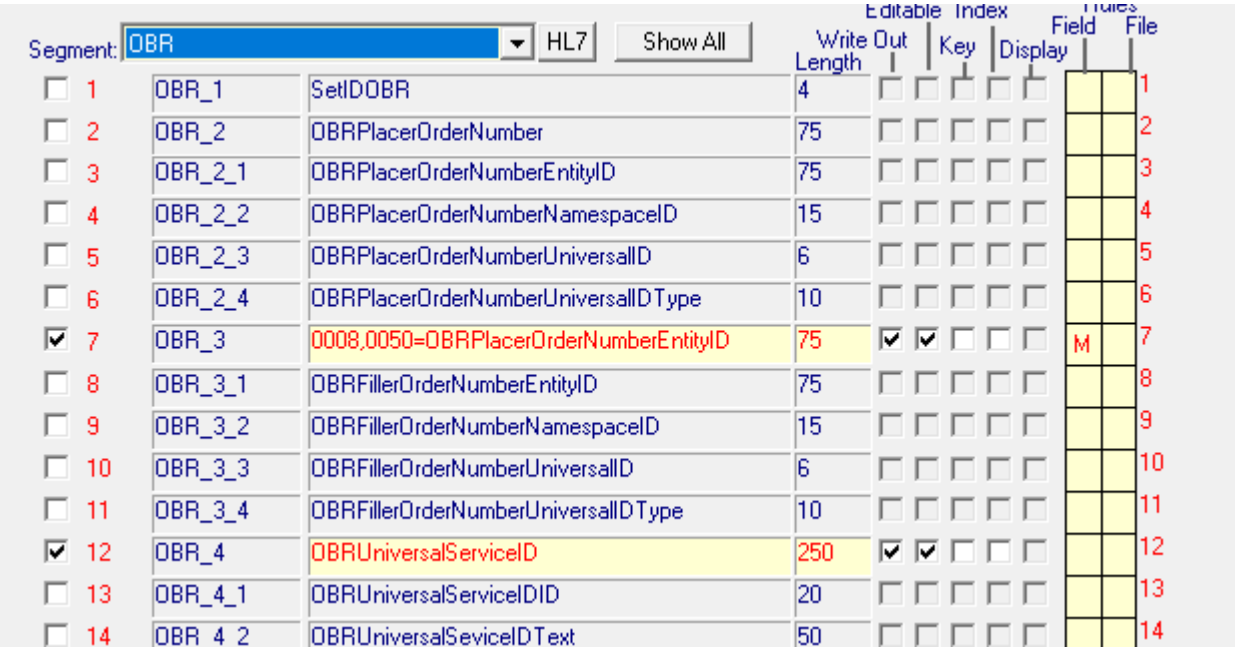


Click on check box to select these fields: MSH_7, MSH_10.

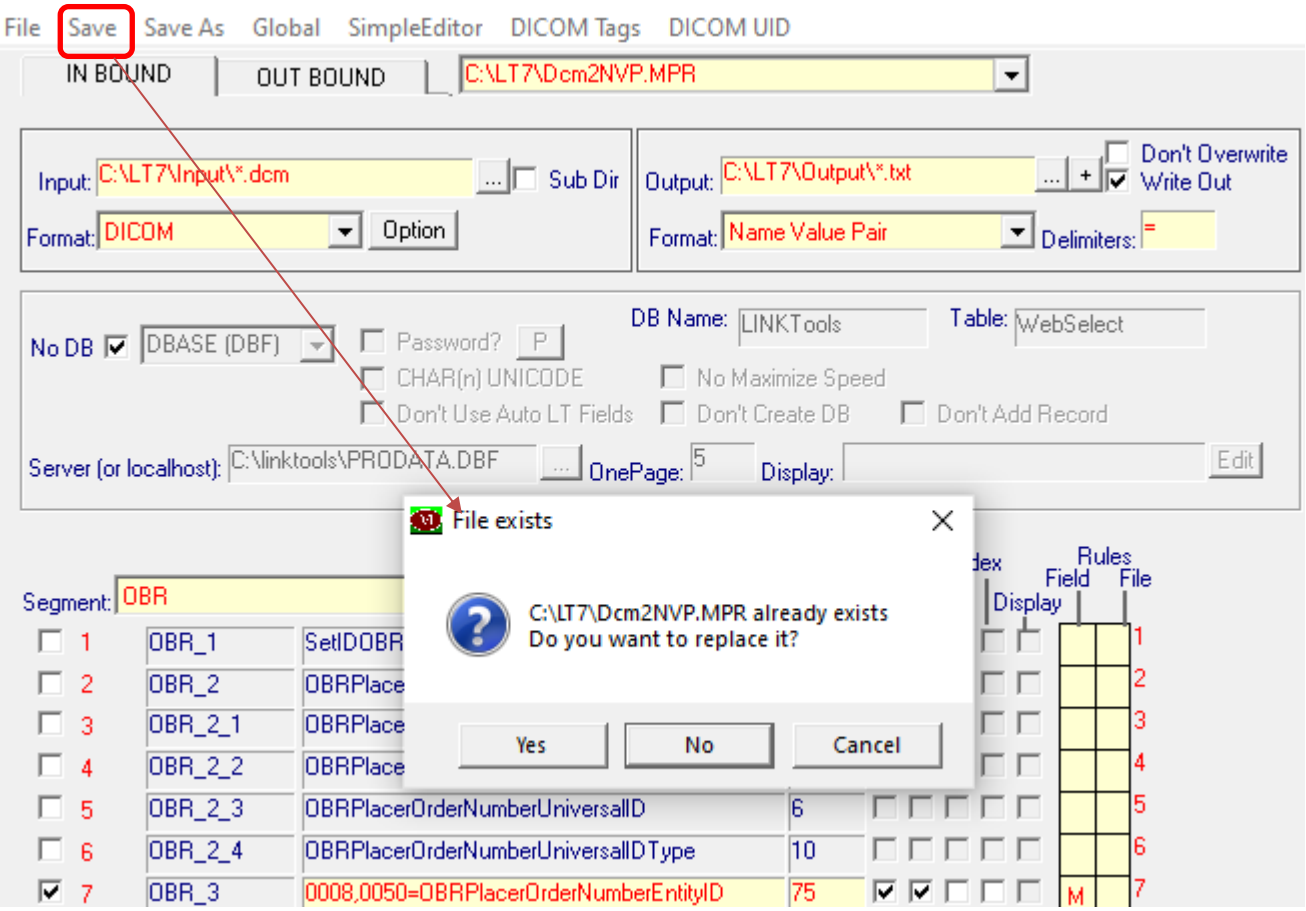
- Click on Segment down arrow and select OBR segment.



- All OBR segment's fields will be displayed.
- Click on check box to select these fields: OBR_3, OBR_4, OBR_6, OBR_7.

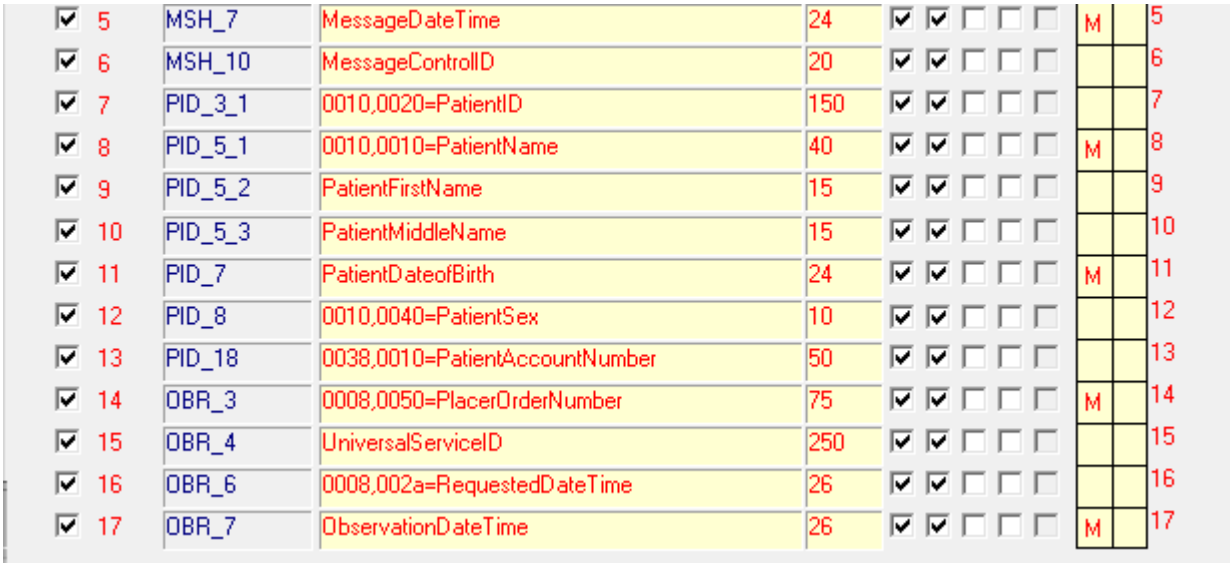


- Click Save button to save the change and click Yes to replace the mapper template “DCM2NVP.mpr”



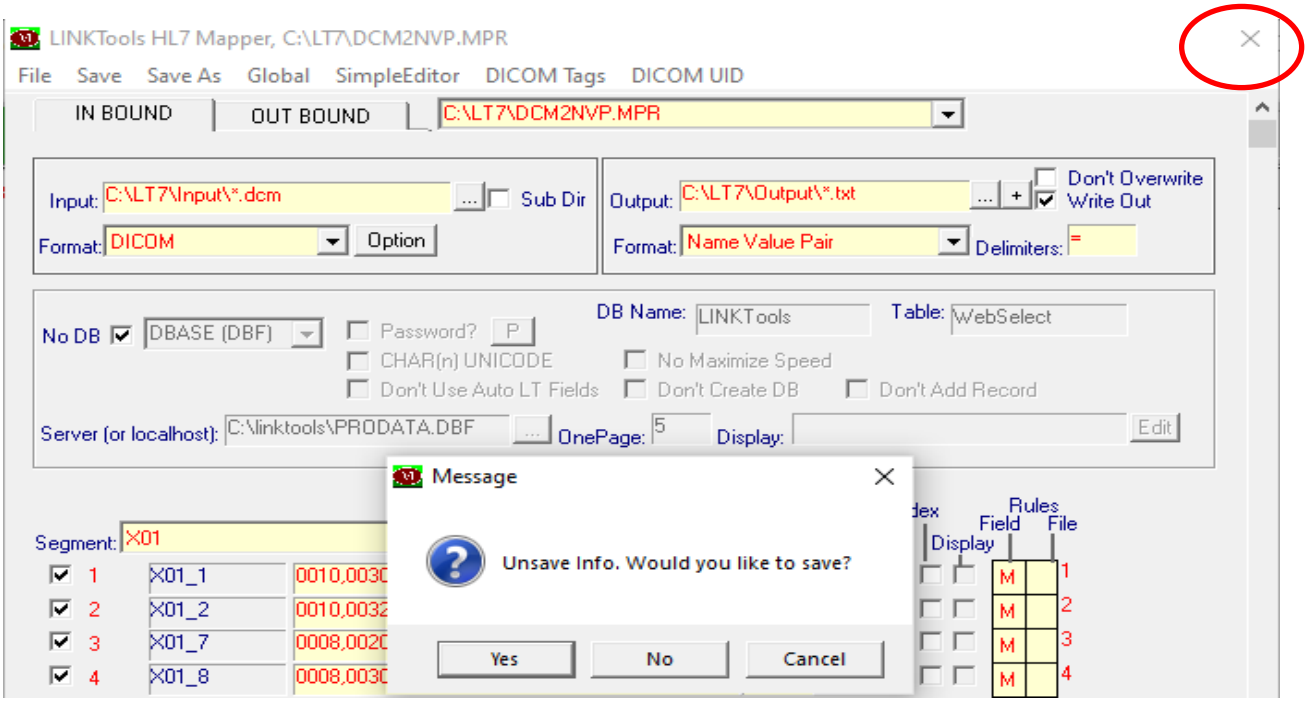
- Click **Show All** button to show OBR and MSH fields that you have selected.
- Change the field names for OBR segment.

  OBR_4 = 0008,0050= PlacerOrderNumber
  OBR_4 = UniversalServiceID
  OBR_5 = 0008,002a=RequestedDateTime
  OBR_7 = ObservationDateTime

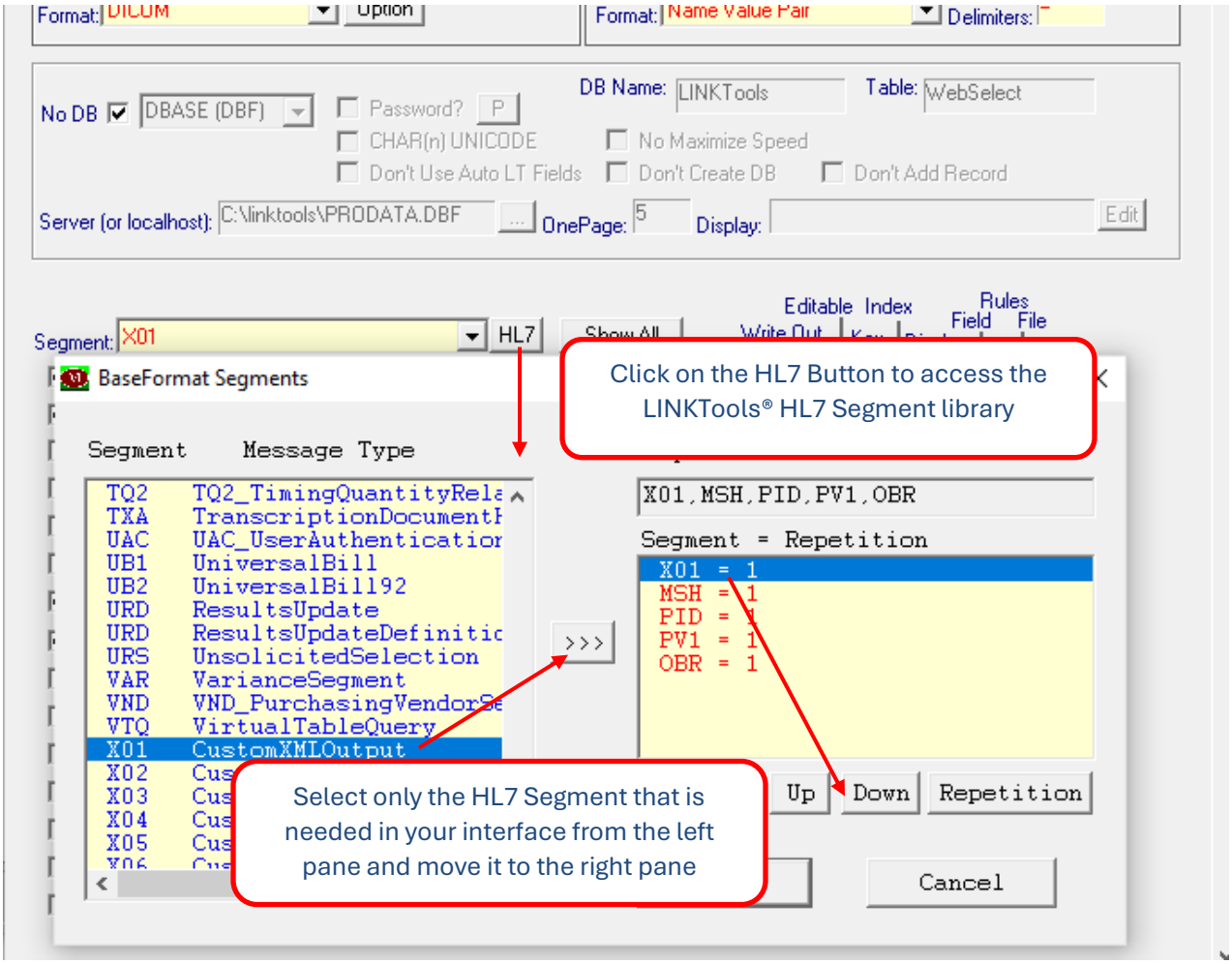


- Save the change and click Yes to replace the existing mapper template.

- After done your work, you can close the Mapper Config box by clicking on the X button on the top-right corner.
- If there are some information changed but not saved, it will appear a warning message to save or not.
- Click Save button to save the changes.

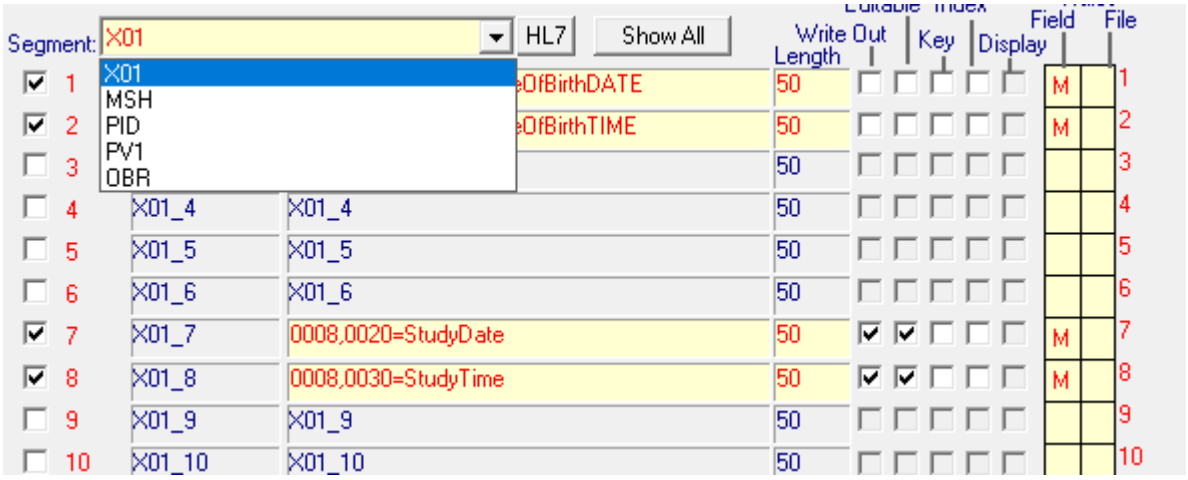


- After closing, click on **Config** button to open Mapper Config again.
- Add a segment from HL7 segment library.



Add X01 segment:

- Click HL7 button, scroll down and select X01, double-click or click on >>> button to move to right panel. Use the Up and Down button to move the X01 from the bottom to the top, as above image.
- Click OK
- Click segment drop down list and select X01.



Click the check boxes to select X01_1, X01_2, X01_7, X01_8

Enter the field name for 4 these fields:

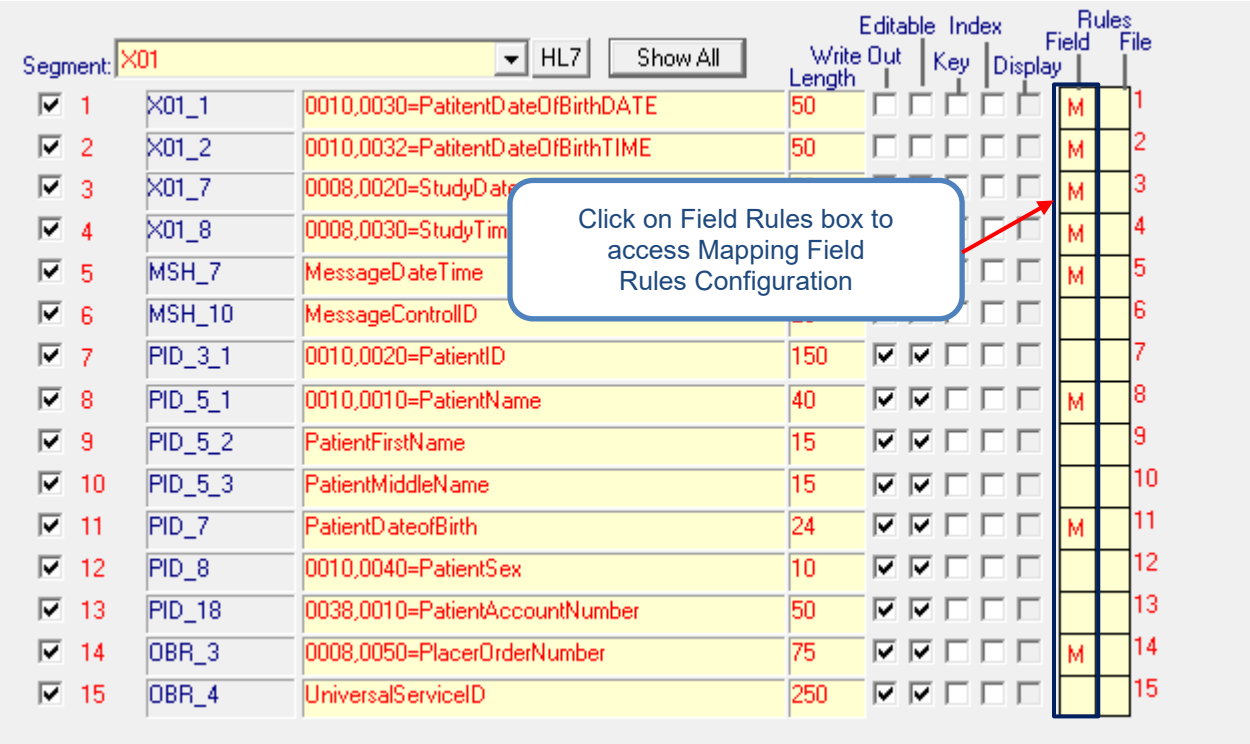
X01_1 = 0010,0030=PatitentDateOfBirthDATE

X01_2 = 0010,0032=PatitentDateOfBirthTIME

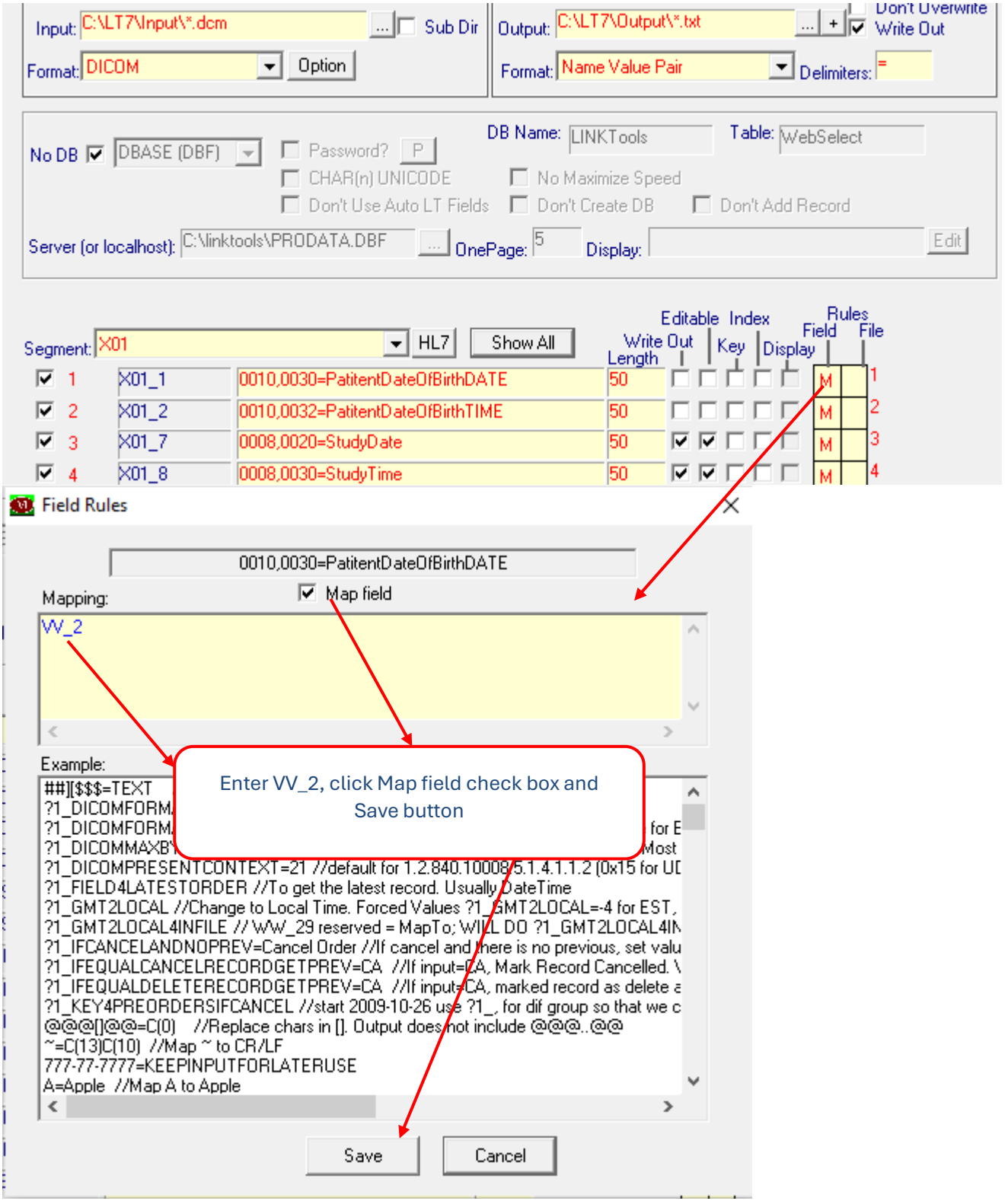
X01_7 = 0008,0020=StudyDate

X01_8 = 0008,0030=StudyTime

- Click Show All to show the fields selected.



- Configure the value for selected fields of the interface.

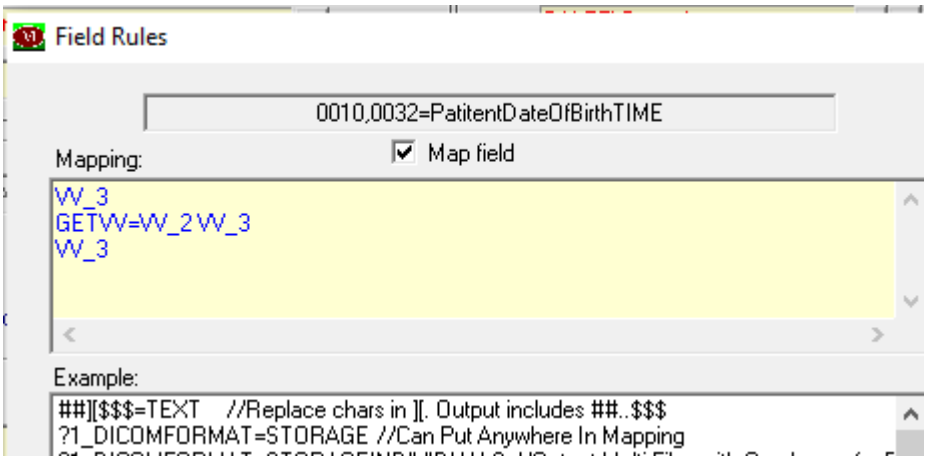


- Click the Field Rules box for X01_1 – 0010,0030=PatitentDateOfBirthDATE to configure this field
- Enter phrase “VV_2” in the text box, check “Map field” check box and click Save button.

Repeat the same steps to add values for the remaining fields below:

- X01_2 - 0010,0032=PatitentDateOfBirthTIME:

  Click on Field Rules → Enter below content in the text box, check “Map field” check box and click Save button.
  VV_3
  GETVV=VV_2 VV_3
  VV_3



- X01_7 - 0008,0020=StudyDate:

  Click on Field Rules, enter phrase “VV_7” in the text box, check “Map field” check box and click Save button.

- X01_8 - 0008,0030=StudyTime:

  Click on Field Rules, enter phrase “VV_8” in the text box, check “Map field” check box and click Save button.

- MSH_7 – MessageDateTime:

  Click on Field Rules → Enter below content in the text box, check “Map field” check box and click Save button.

  ?1_DICOMFORMAT=DICOMINDIVIDUALS
  ?1_DICOMFORMAT=DICOM

- PID_5_1 – 0010,0010=PatientName:

  Click on Field Rules → Enter below content in the text box, check “Map field” check box and click Save button.

  VV_1

  FULLNAMEGETLASTNAME

- PID_7 – PatientDateofBirth:

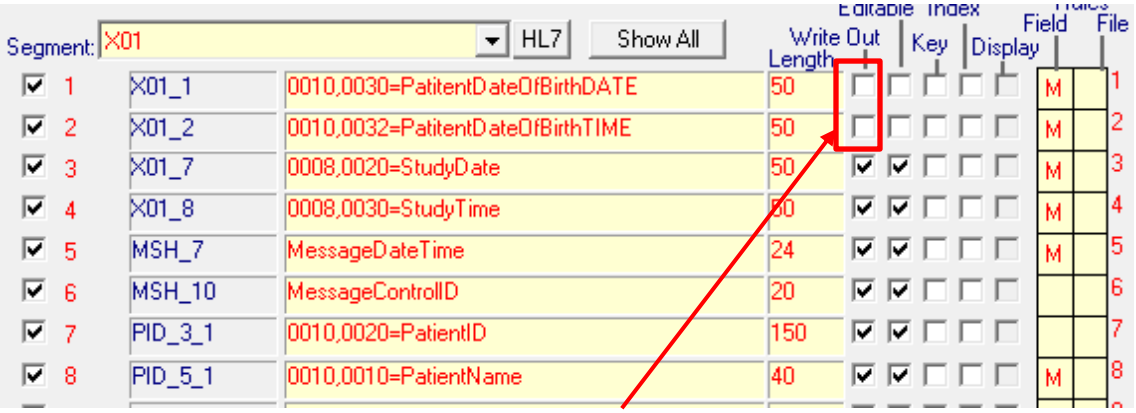
  Click on Field Rules, enter phrase “GETVV=VV_3” in the text box, check “Map field” check box and click Save button.

- OBR_3 – 0008,0050=PlacerOrderNumber:

Click on Field Rules, enter phrase “WW_1” in the text box, check “Map field” check box and click Save button.

- OBR_7 – ObservationDateTime:

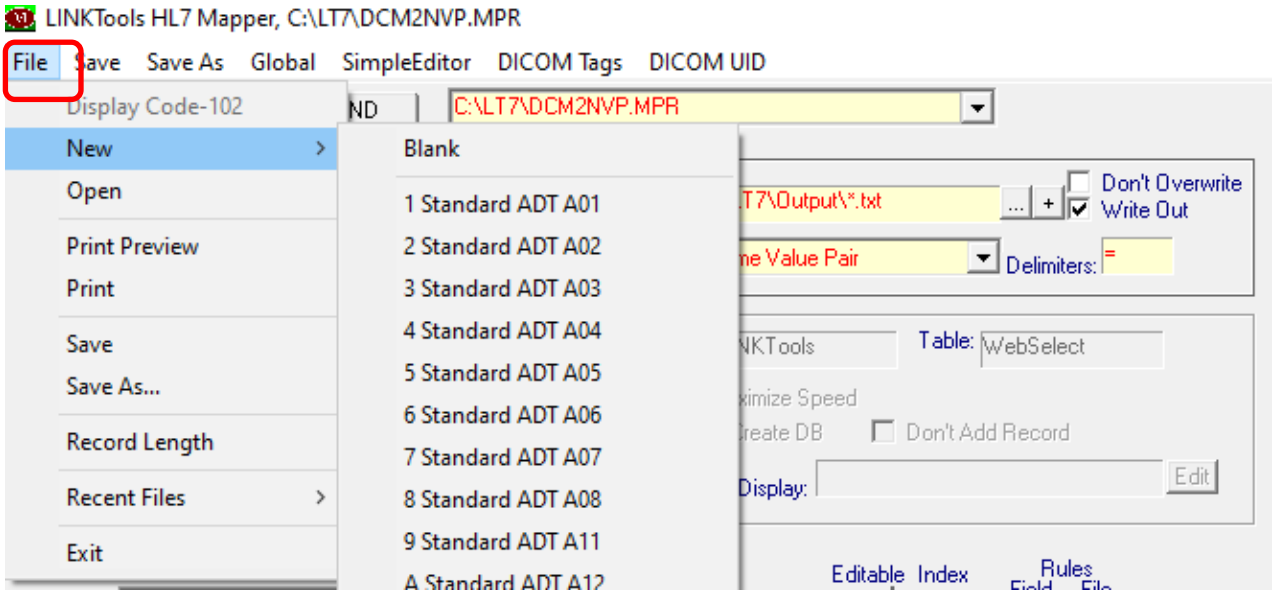
  Click on Field Rules, enter phrase “GETVV=VV_7VV_8” in the text box, check “Map field” check box and click Save button



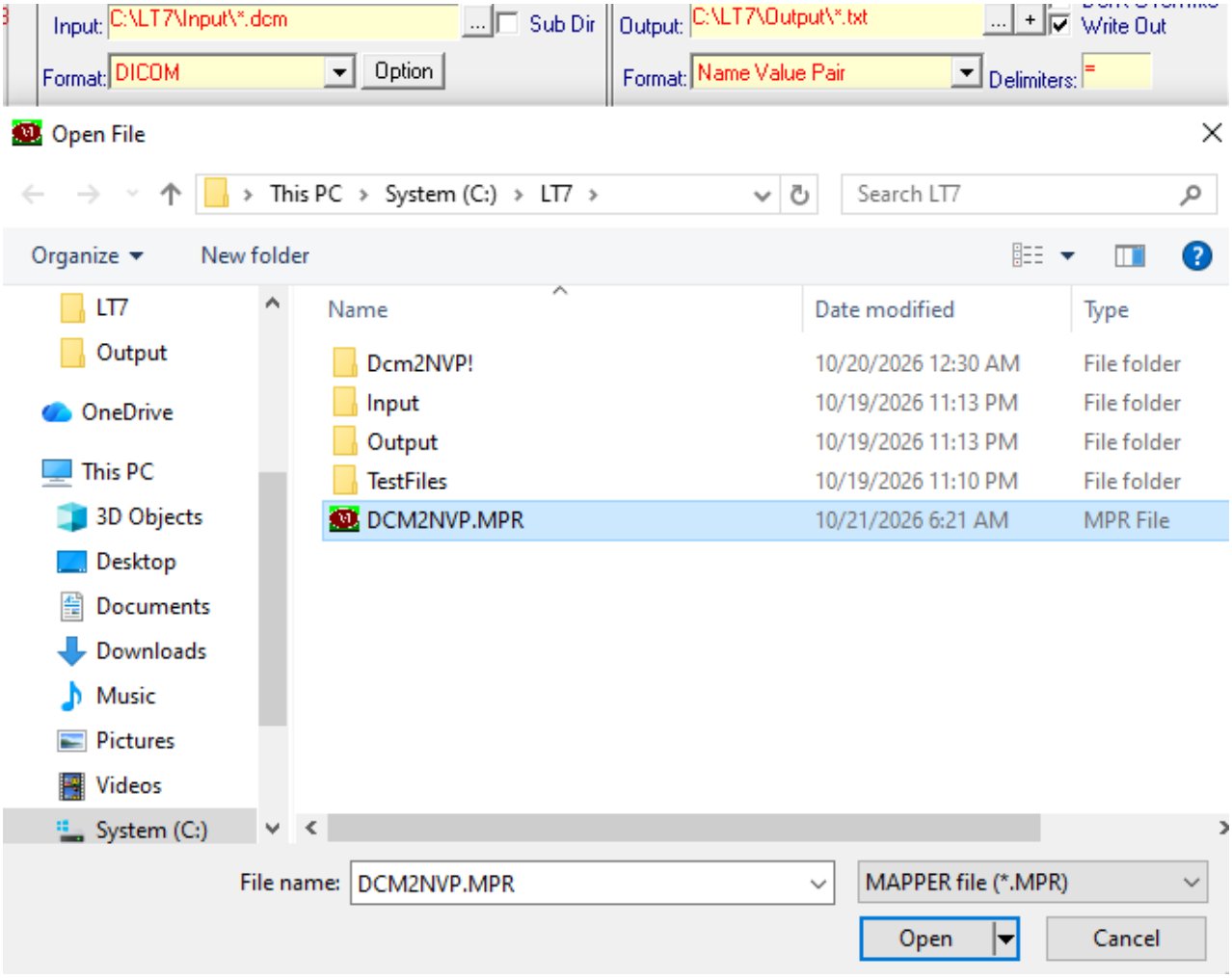
Click on check boxes under “Write Out” column of field X01_1 and X01_2 to not write out two these field values.

- Click Save button to Save the changes.

- To create a new mapper template config file or open an existing mapper, click on File menu and select the sub-menu “New→Blank” or “Open”.

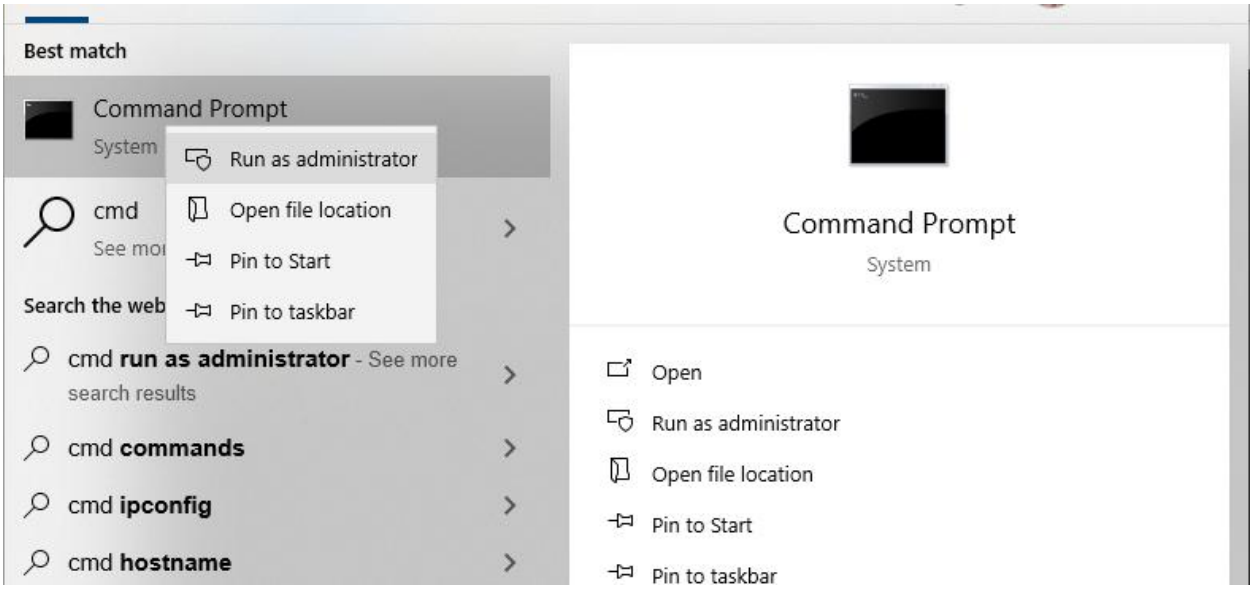


- Select New → Blank to build a new mapper config as in the beginning of this document.
- Select Open → Select the mapper “DCM3NVP.mpr” in C:\LT7 folder and click Open.

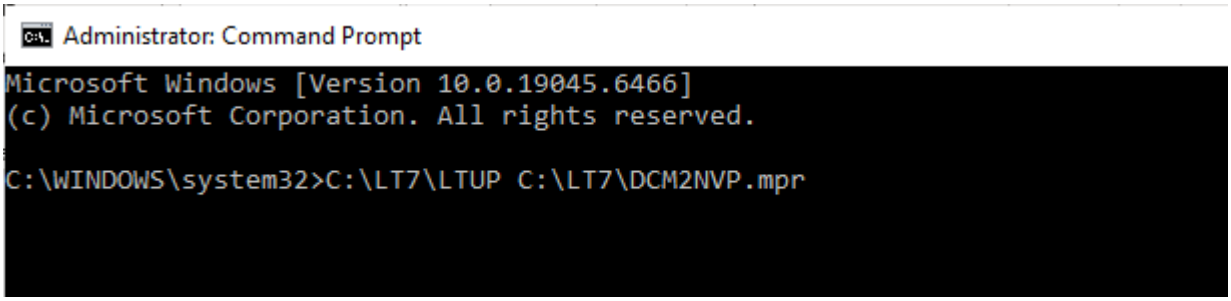


2. Run command to execute the mapper to convert the DICOM to Name Value

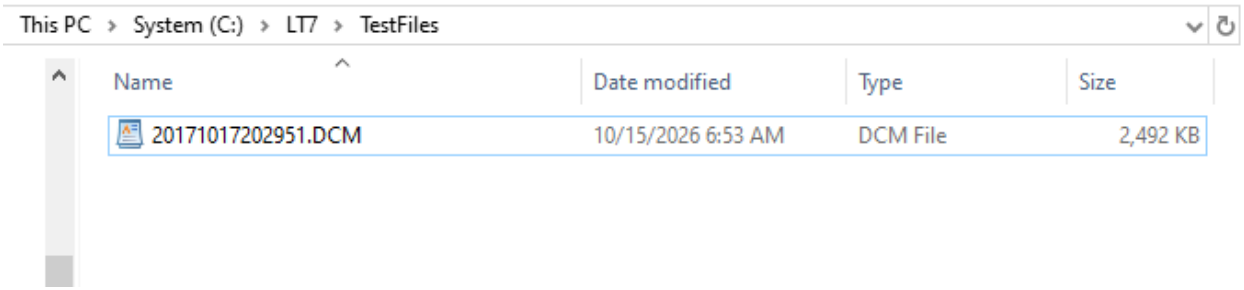
- From the Search bar, type CMD.
- Right-click on “Command Prompt” → Select Run as administrator.



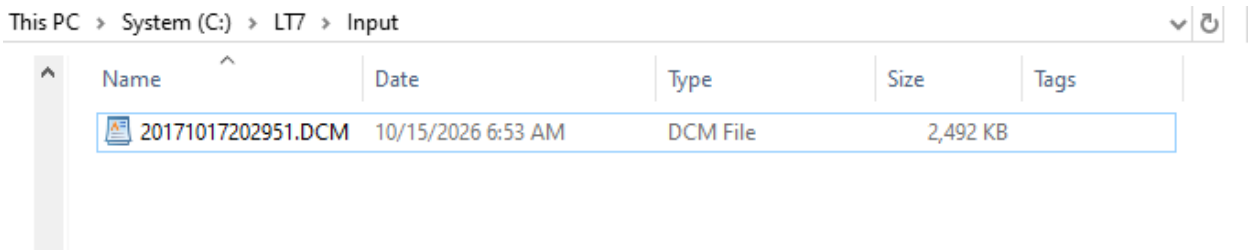
- Type or copy and paste this command line: C:\LT7\LTUP.exe C:\LT7\DCM2NVP.mpr



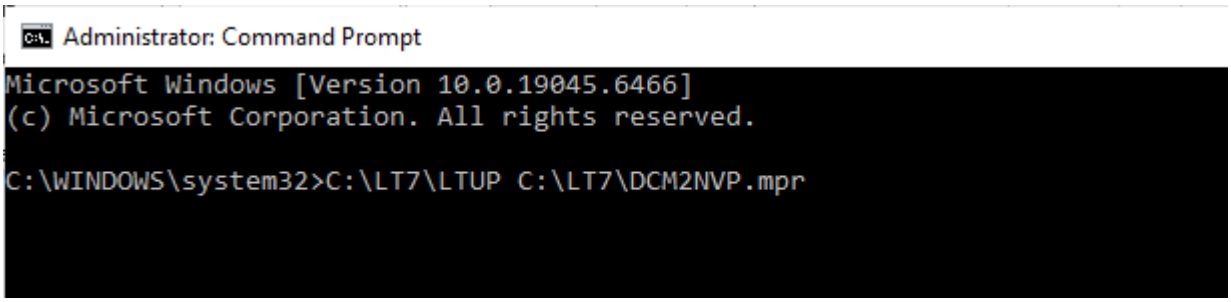
- Open Windows Explorer → Go to C:\LT7\Testfiles folder → Copy the test file in this folder.



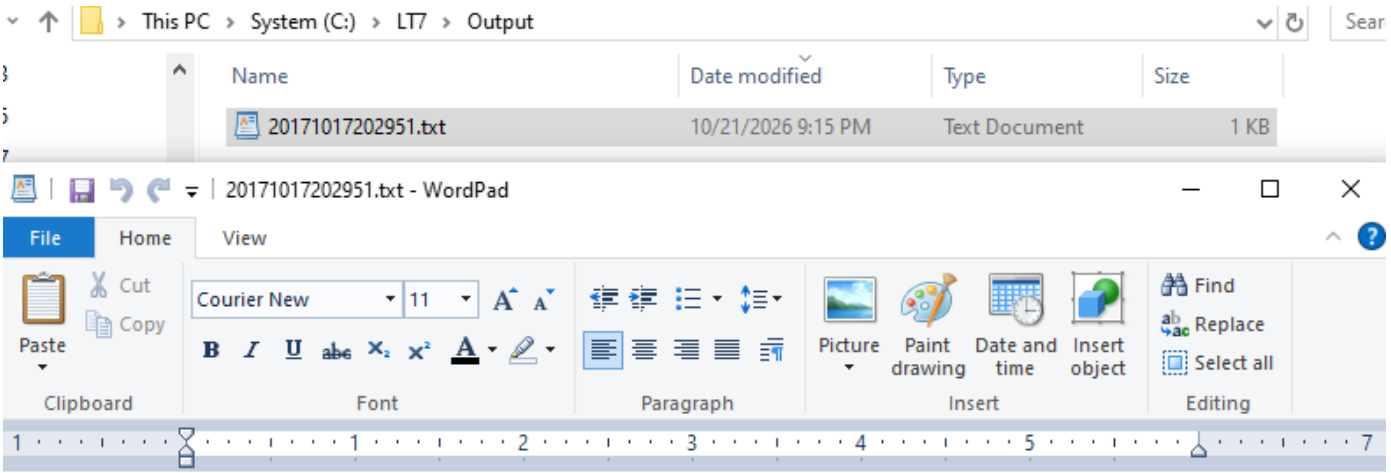
- Go to “C:\LT7\Input” folder and paste the test files.



- Go to the Command Prompt and hit enter to execute the command “C:\LT7\LTUP.exe C:\LT7\DCM2NVP.mpr”.

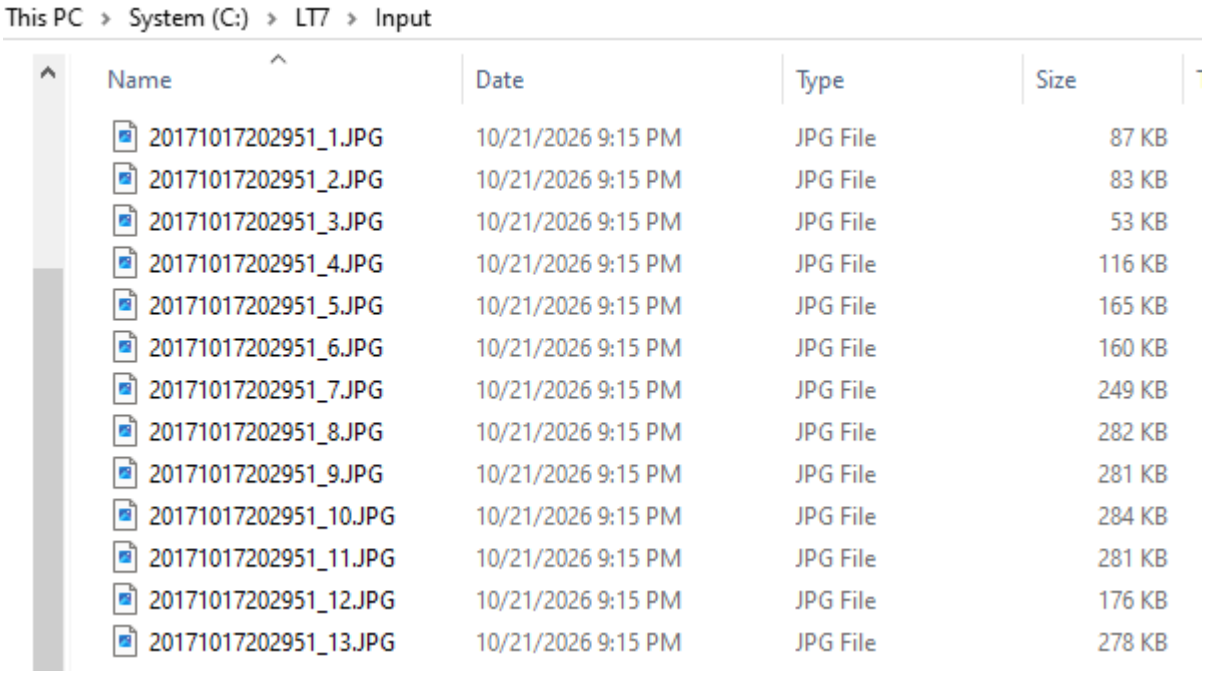


- Go to the “C:\LT7\Output” folder, you will see the output file with extension *.txt
- Open this file, you will see the content of the output file with name value pair format.



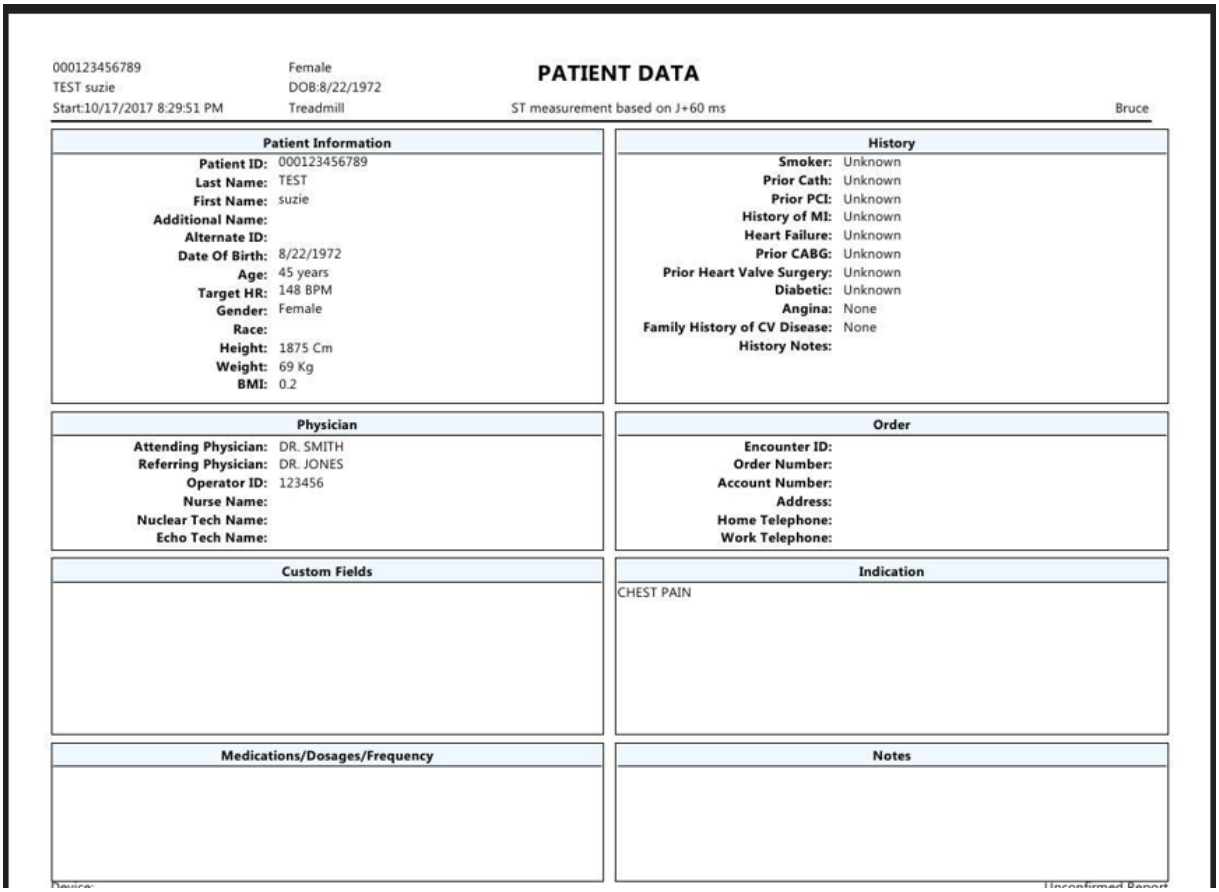

```
StudyDate=20251026
StudyTime=074900
MessageDateTime=
MessageControlID=
PatientID=000123456789
PatientName=TEST^suzie
PatientFirstName=
PatientMiddleName=
PatientDateofBirth=19722208
PatientSex=F
PatientAccountNumber=
```

- Check the content in the “C:\LT7\Output” folder, if you see the content like above image, it means you have done the correct steps.
- Check the content of “C:\LT7\Input” folder, you will see the IP images extracted from the DICOM file.



- It includes multiple-JPG files, each file is the content of one page.

- Open IPG files, the images look like below:



000123456789 Female
TEST suzie DOB:8/22/1972
Start:10/17/2017 8:29:51 PM Treadmill

PATIENT DATA

ST measurement based on J+60 ms Bruce

Patient Information

Patient ID:	000123456789
Last Name:	TEST
First Name:	suzie
Additional Name:	
Alternate ID:	
Date Of Birth:	8/22/1972
Age:	45 years
Target HR:	148 BPM
Gender:	Female
Race:	
Height:	1875 Cm
Weight:	69 Kg
BMI:	0.2

History

Smoker:	Unknown
Prior Cath:	Unknown
Prior PCI:	Unknown
History of MI:	Unknown
Heart Failure:	Unknown
Prior CABG:	Unknown
Prior Heart Valve Surgery:	Unknown
Diabetic:	Unknown
Angina:	None
Family History of CV Disease:	None
History Notes:	

Physician

Attending Physician:	DR. SMITH
Referring Physician:	DR. JONES
Operator ID:	123456
Nurse Name:	
Nuclear Tech Name:	
Echo Tech Name:	

Order

Encounter ID:	
Order Number:	
Account Number:	
Address:	
Home Telephone:	
Work Telephone:	

Custom Fields

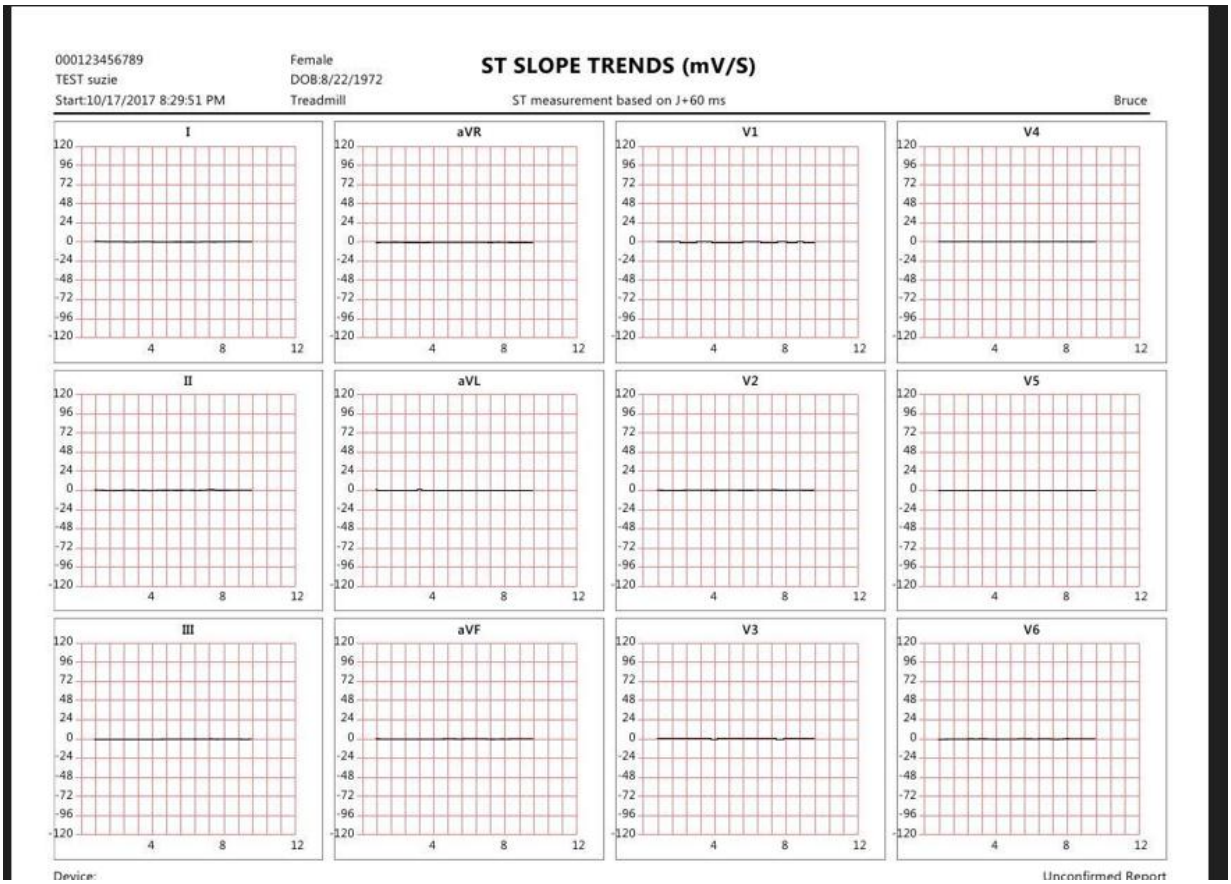
Indication

CHEST PAIN

Medications/Dosages/Frequency

Notes

Device: Unconfirmed Report



000123456789 Female
TEST suzie DOB:8/22/1972
Start:10/17/2017 8:29:51 PM Treadmill

ST SLOPE TRENDS (mV/S)

ST measurement based on J+60 ms Bruce

Device: Unconfirmed Report