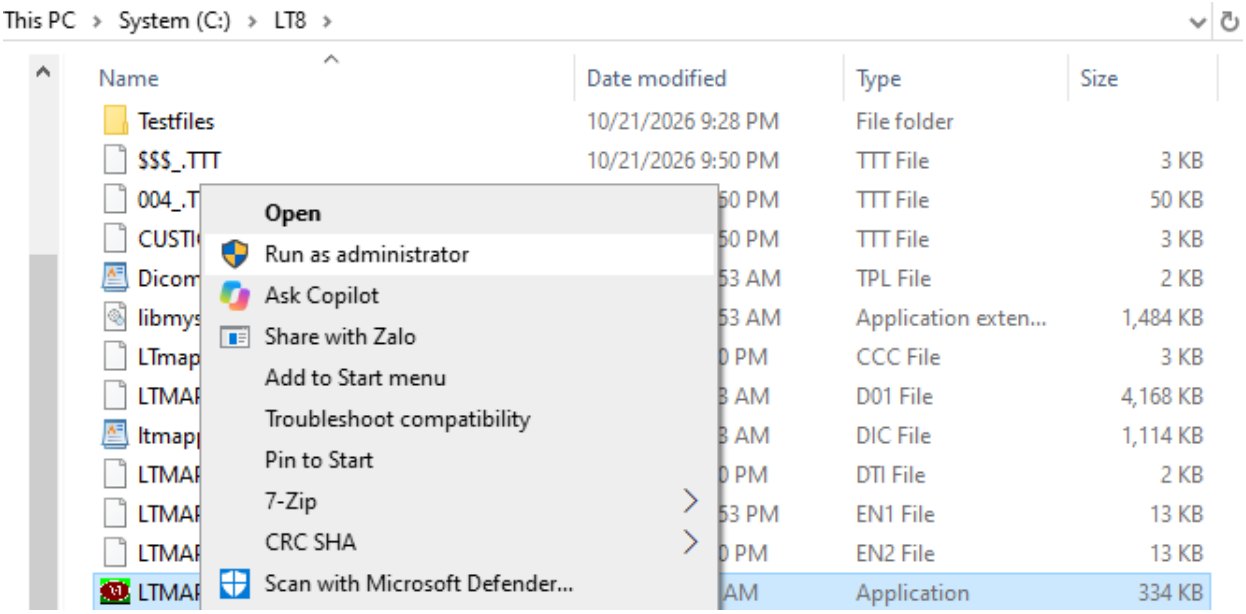
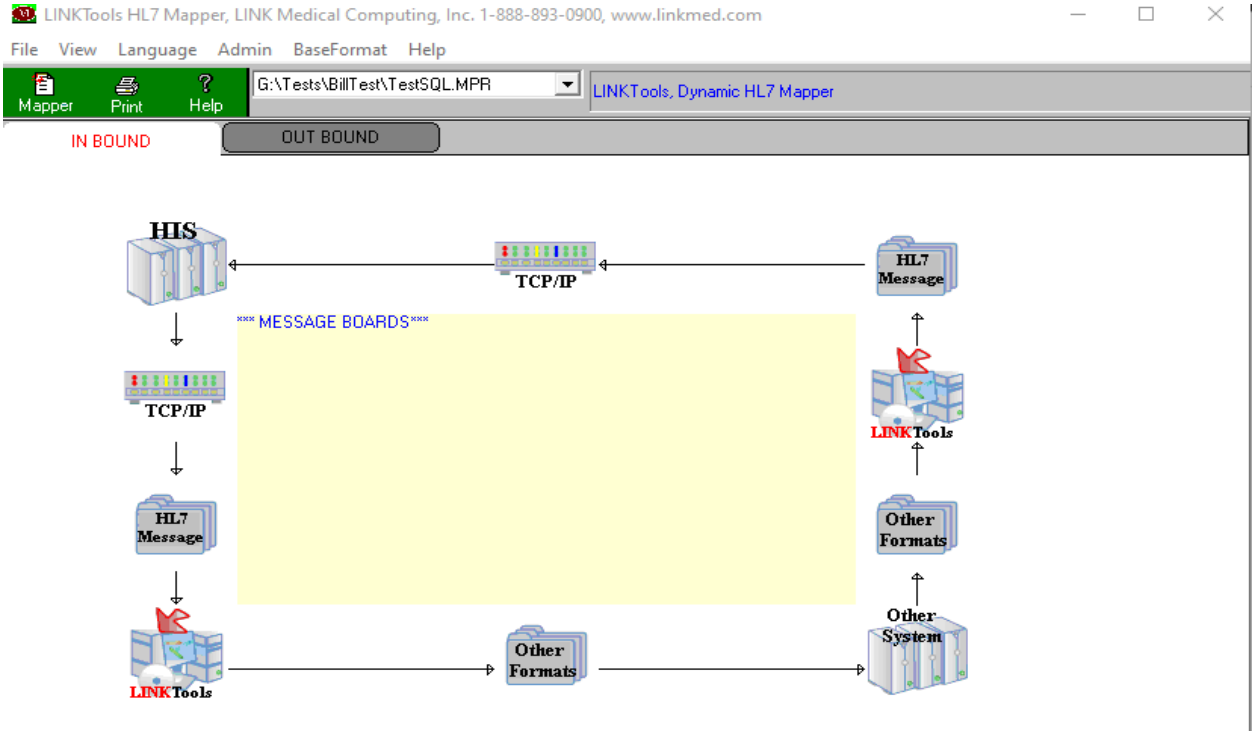
LT8 – Convert Name-Value + JPG Images to DICOM

1. Open and Configure the Dynamic Mapper.

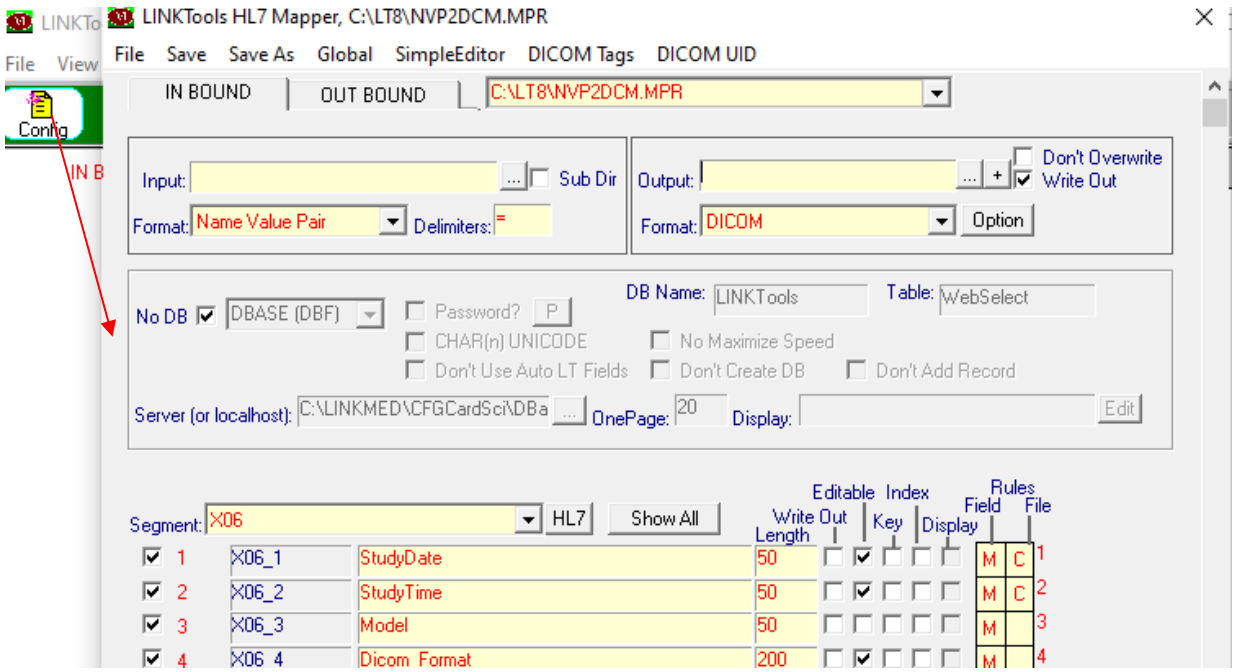
- Go to the C:\LT8 folder.
- Right-click “LTMAPPER.exe”.
- Click Run as administrator



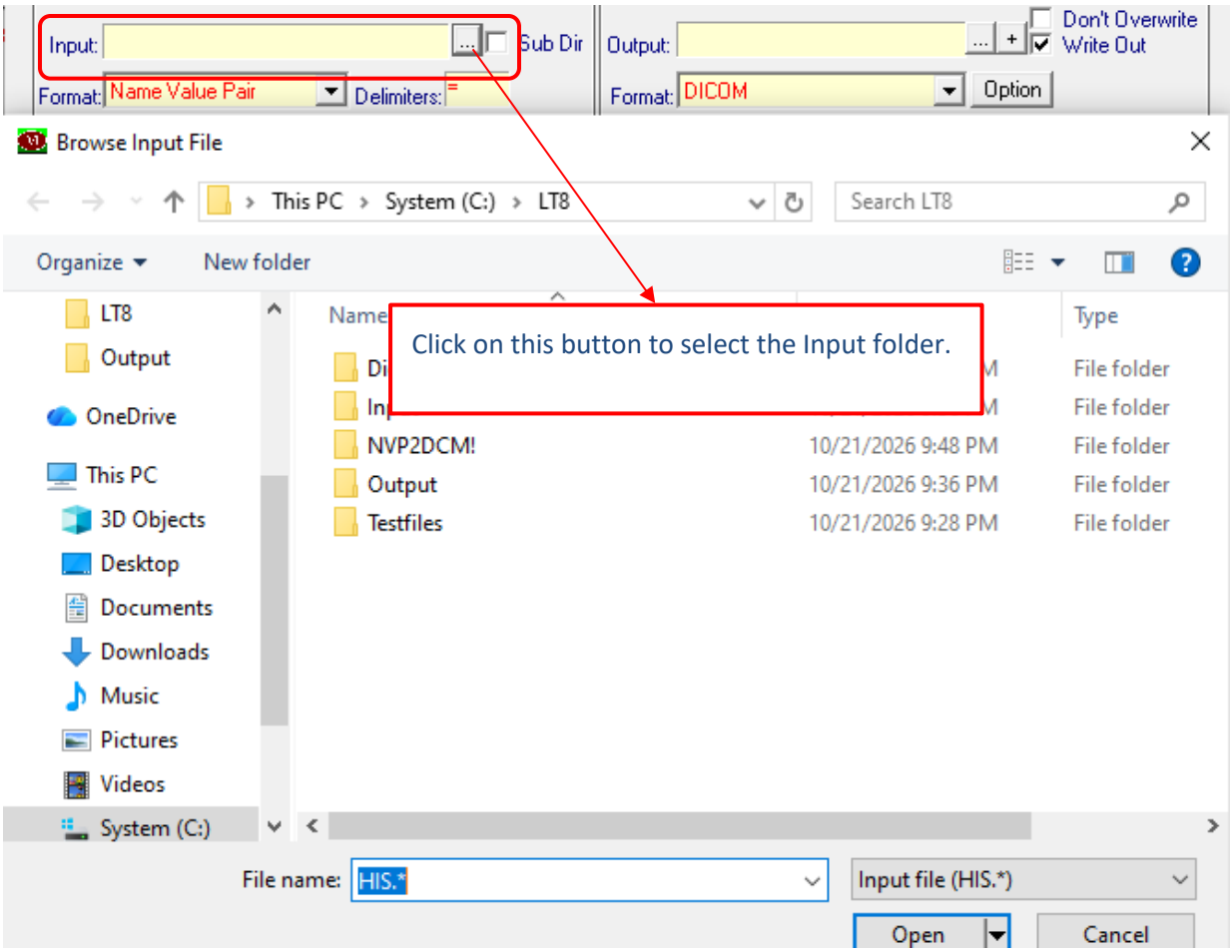
- This is the main screen of the Dynamic Mapper Application.



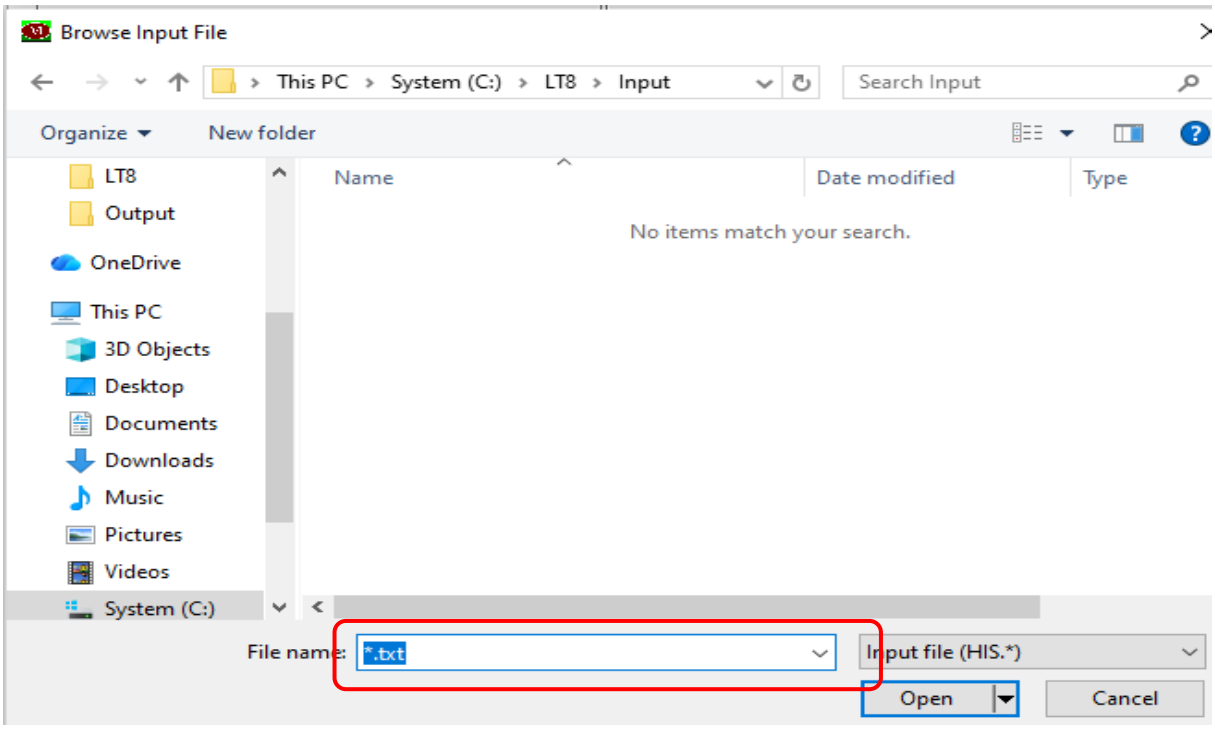
- From the main screen, click the “Config” button to open the Configuration Dialog Box.



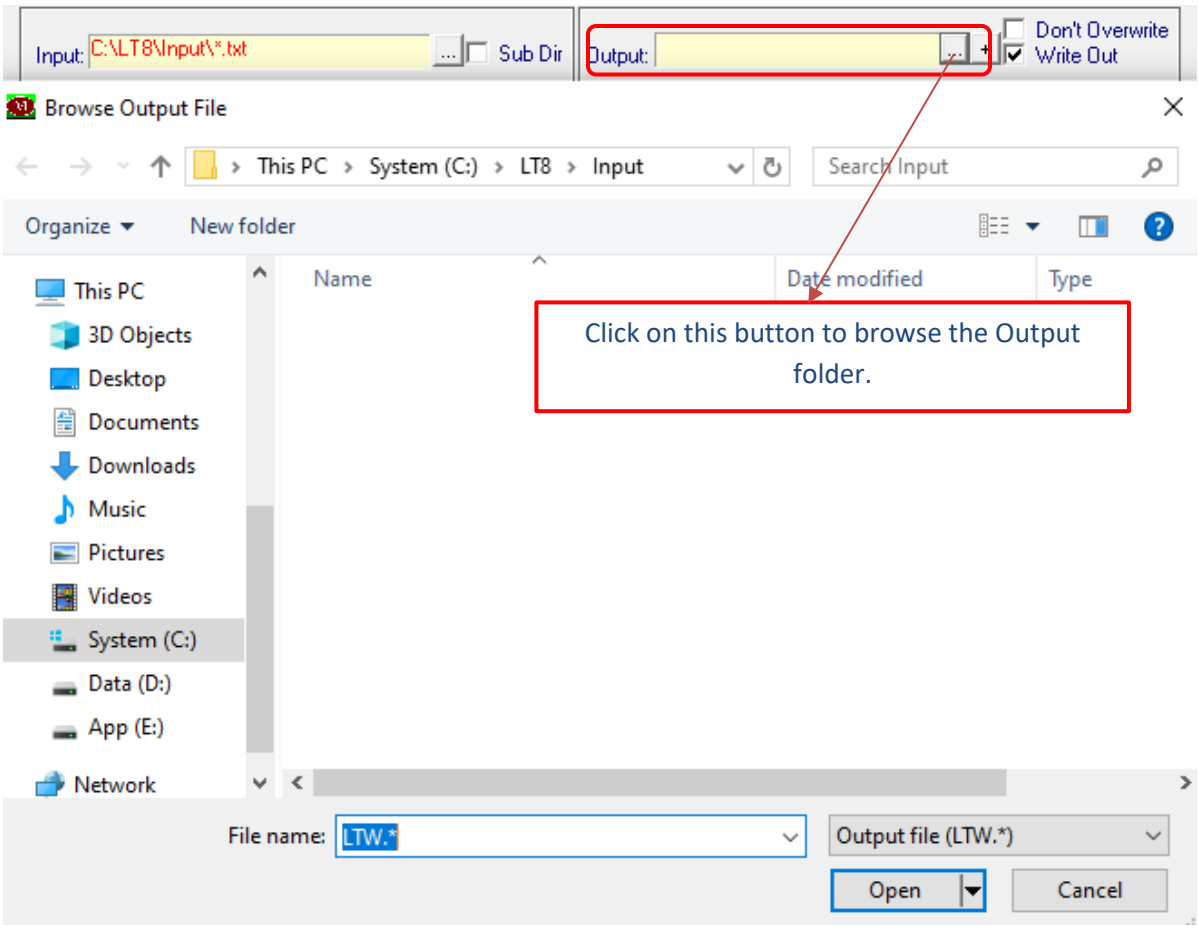
- Configure the Input file path.



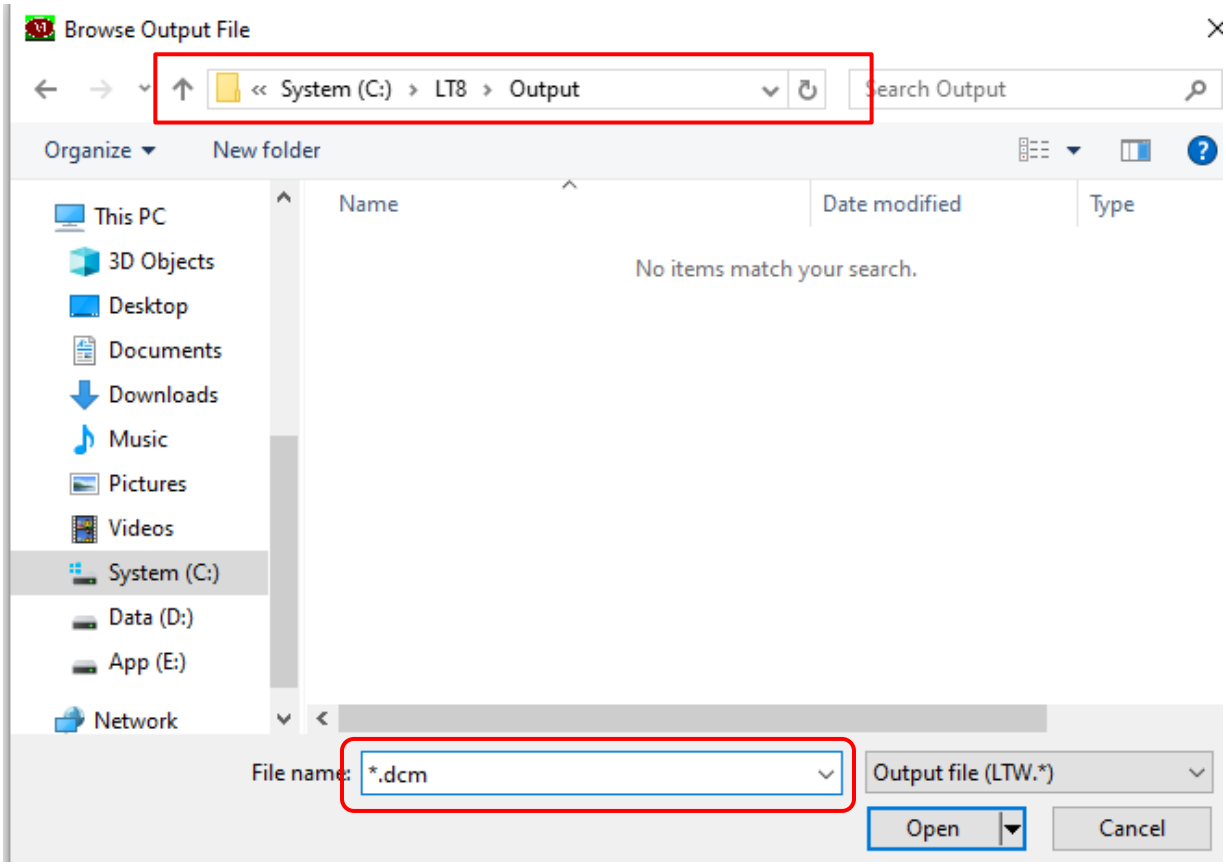
- Browse to the C:\LT8\Input folder.



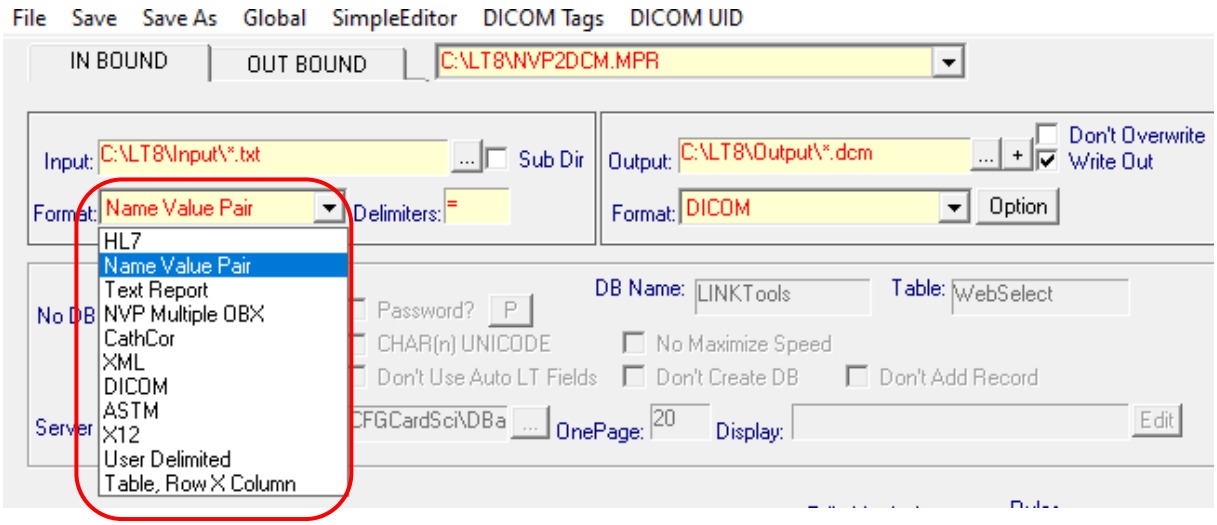
- Change the file name from “HIS.*” to “*.txt” and click Open.
- Next, select the Output folder for the interface.



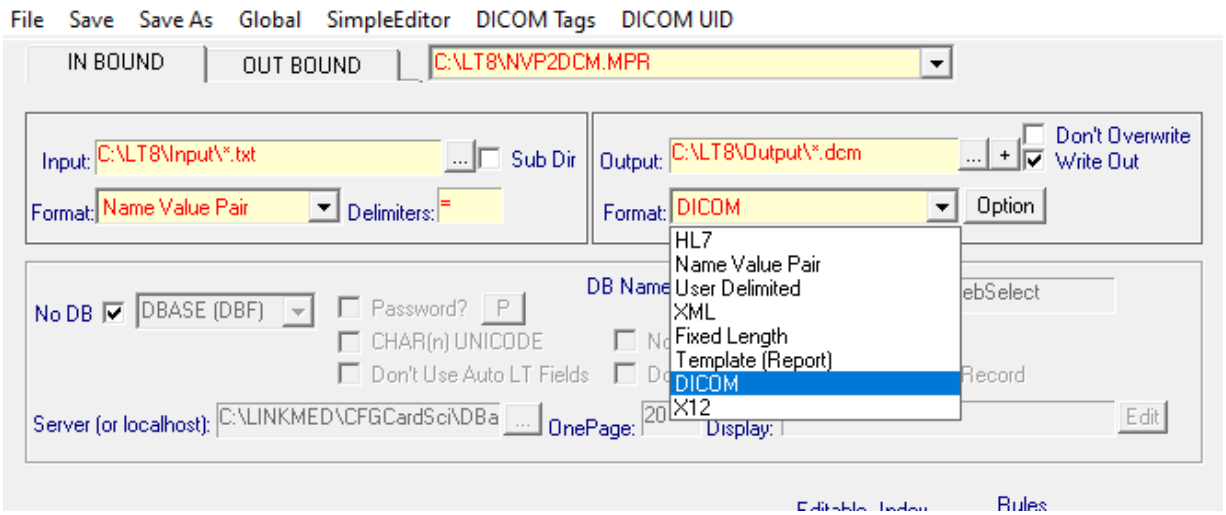
- Use the upper arrow button or click LT8 in the address bar to show all subfolders of C:\LT8, then select “Output”. The output folder is C:\LT8\Output.



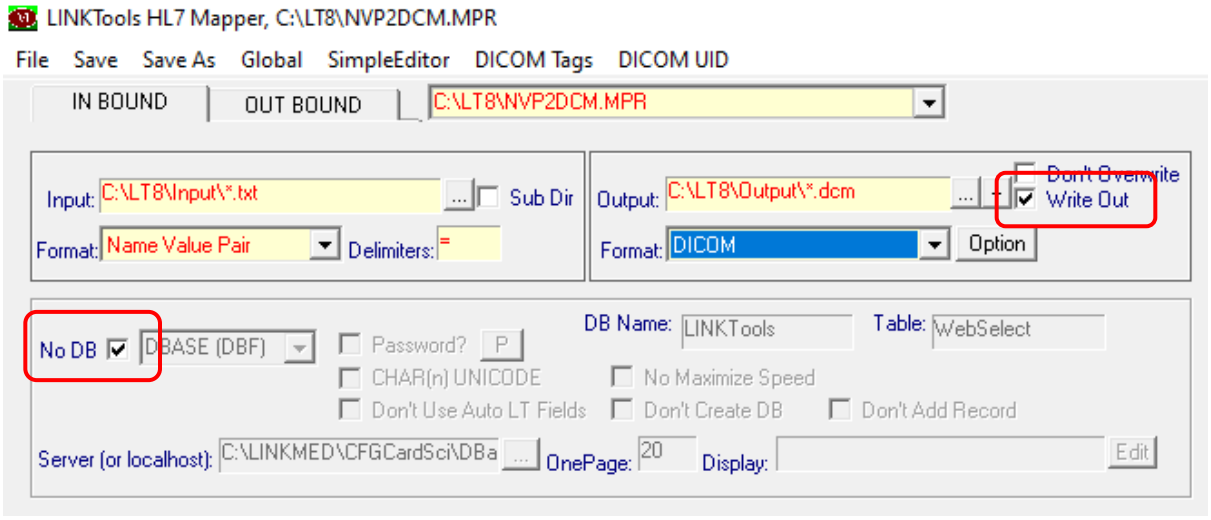
- Change the file name from LTW.* to *.dcm and click **Open**.
- You have finished configuring the Input and Output folders for the interface.
- Next, select the “**Format**” down arrow below the Input column and select “Name Value Pair” for the input format.



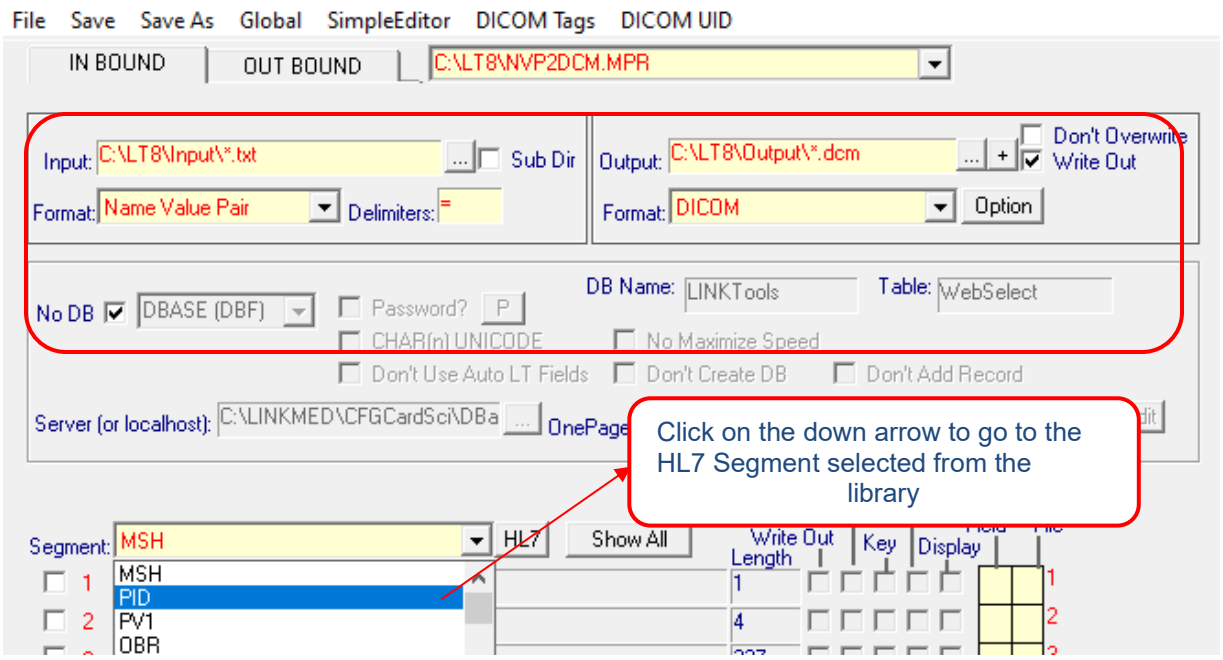
- Next, select the "**Format**" down arrow below the Output column and select "DICOM" for the output format.



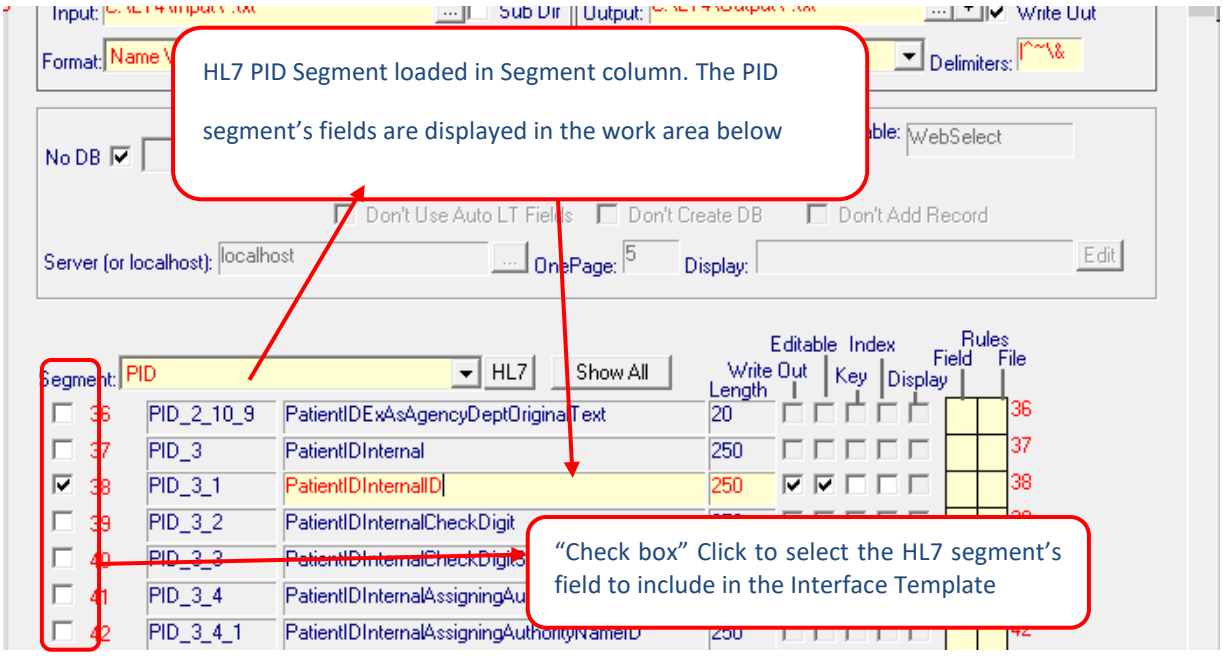
- Select the "No DB" and "Write Out" check boxes.



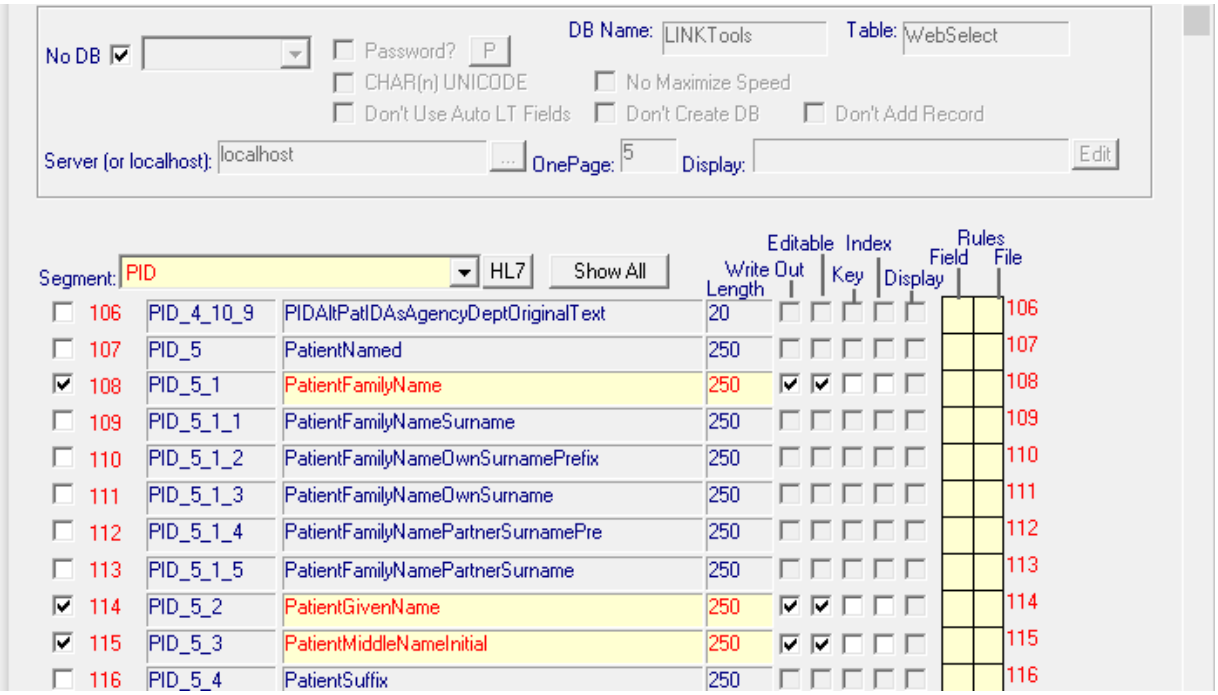
- Verify the Input, Output, Write Out, and No DB settings as shown below.



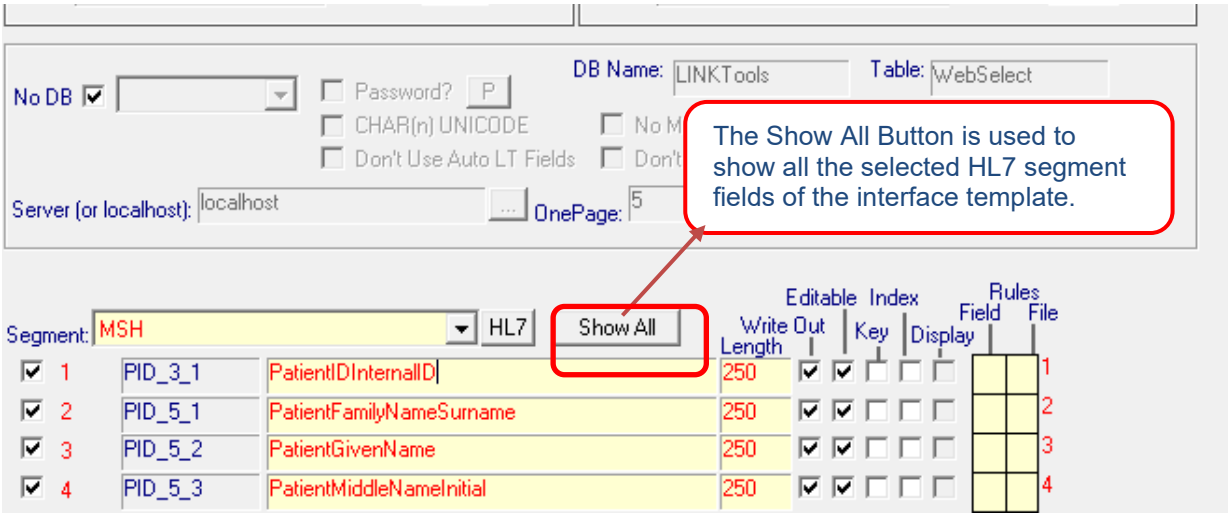
- Next, we will configure the HL7 segment's fields for the interface.
- First, we will configure the PID segment.
- Click the "Segment" down arrow and select PID. All PID segment fields will be displayed.



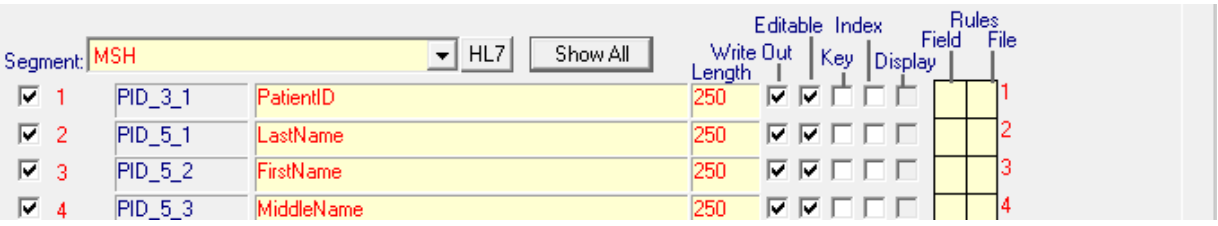
- Click on the work area and scroll up/down to go to the segment fields we need.
- Scroll down and find the segment "PID_3_1 – PatientIDInternalID" and click the check box on the left to select this field.
- Next, scroll down and select PID_5_1, PID_5_2, and PID_5_3 as shown below.



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

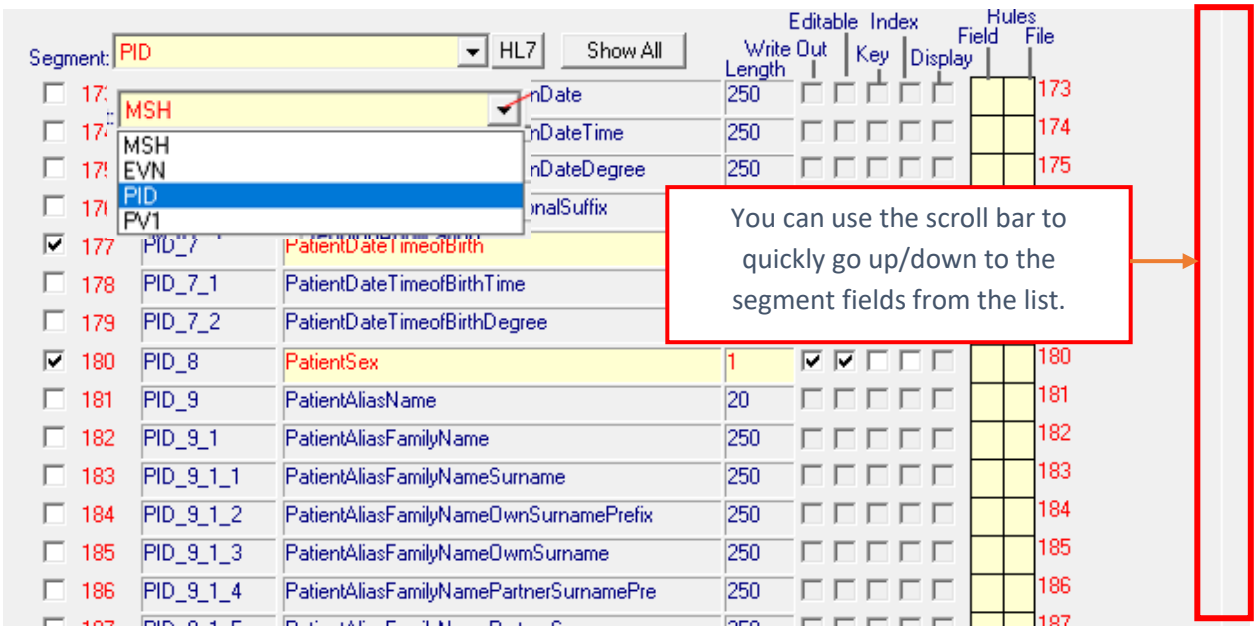


- Change the field names to match the names in the Name-Value input file.
  Click on PID_3_1 – PatientIDInternalID, change it to PatientID. This is a text box and you can copy, paste, change or delete its content.
  Next, change the PID_5_1, PID_5_2, PID_5_3 fields to LastName, FirstName, MiddleName.



- We have added four fields so far, as shown above.
- Next, click on Segment down arrow to select the PID segment again.

- The PID segment fields are displayed again. Next, select the additional PID fields for the interface.
- Scroll down and check to select “PID_7 - PatientDateTimeofBirth”, “PID_8 – PatientSex”

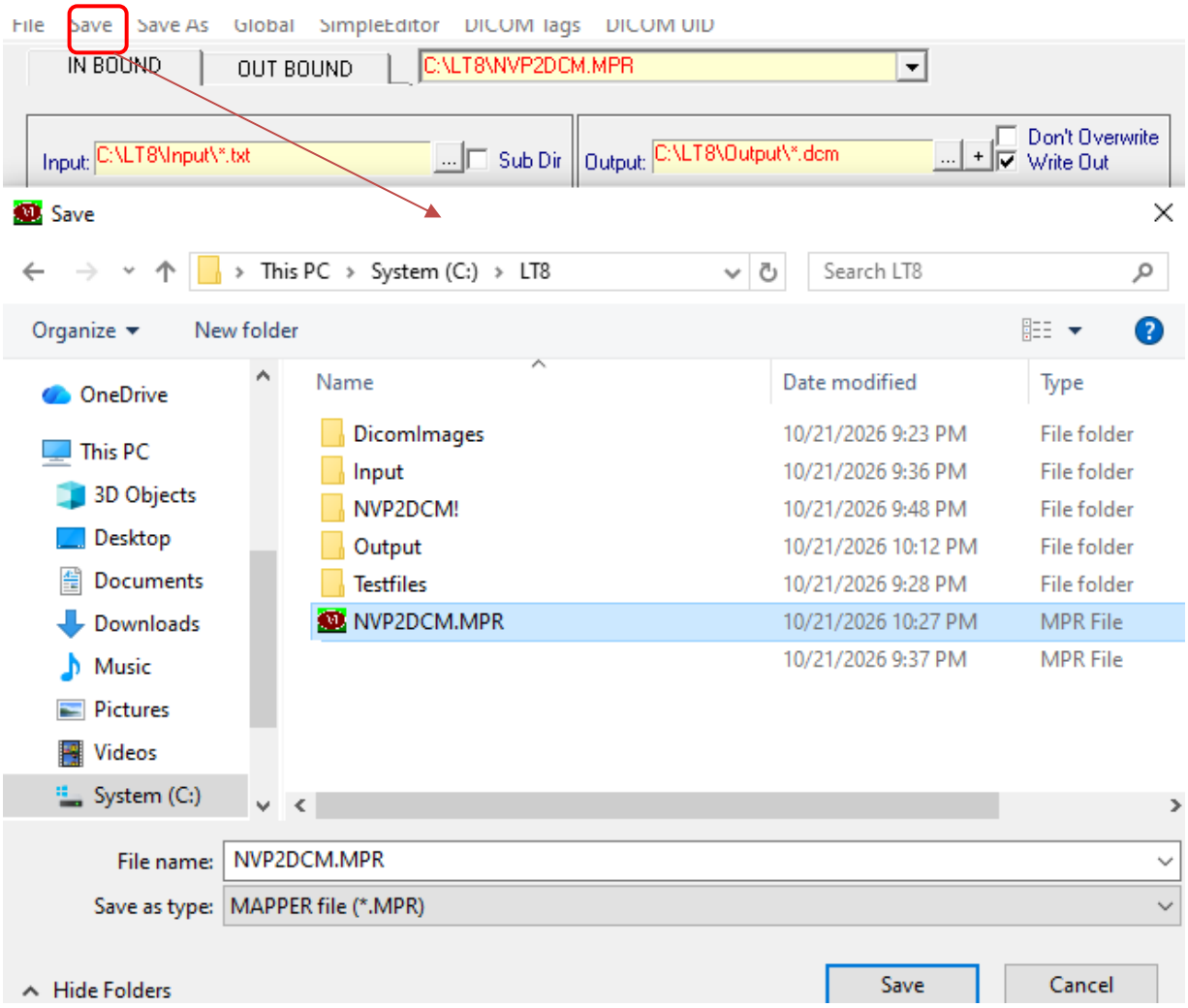


- We have a lot of fields and sub-fields for a segment so you can use the scroll bar on the right column to go up and down quickly.
- Click Show All to display all selected fields, numbered 1 through 6.



- Change the field names for the fields PID_7, PID_8.
  PID_7 = PatientBirthDate
  PID_8 = Sex

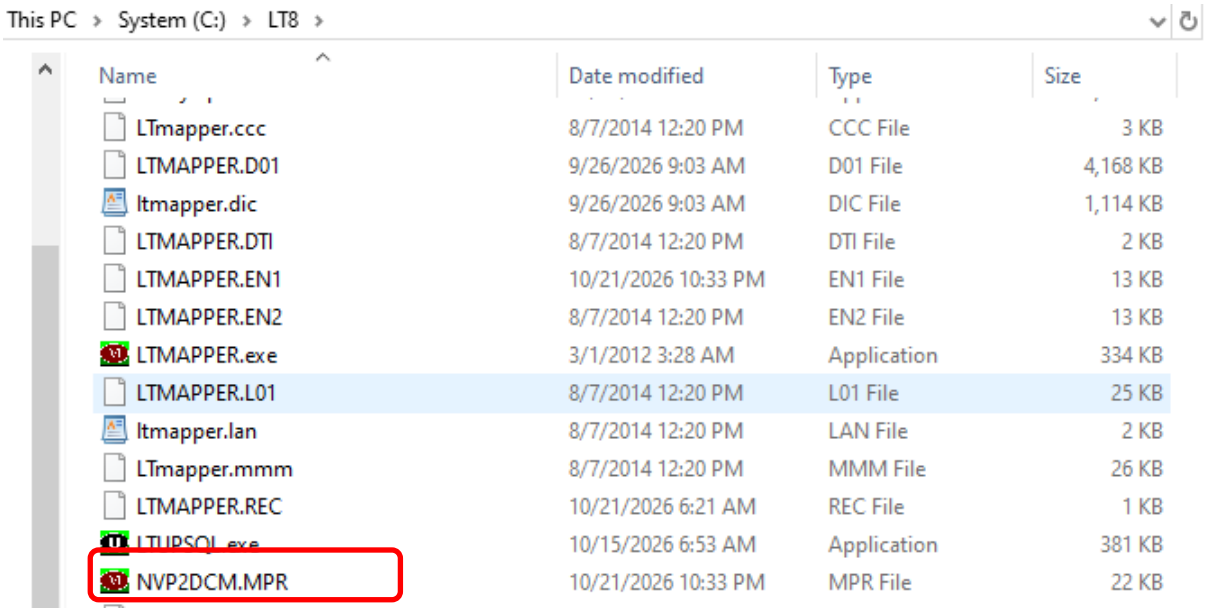
- Save the mapper template.
  Click on **Save** button from the menu bar.
  Select the folder and the file name for the mapper template.



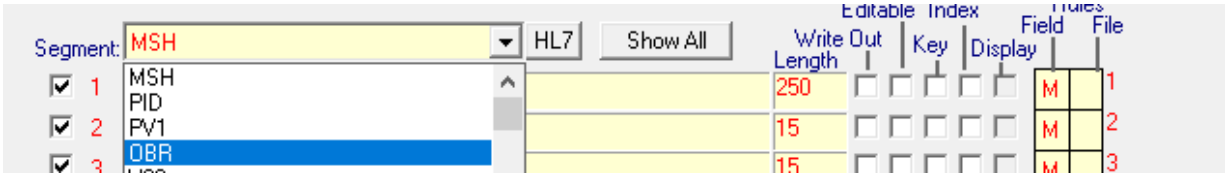
- The folder to save the file is C:\LT8
- Enter the file name “NVP2DICOM” and click Save. When the successful-save message appears, click OK.



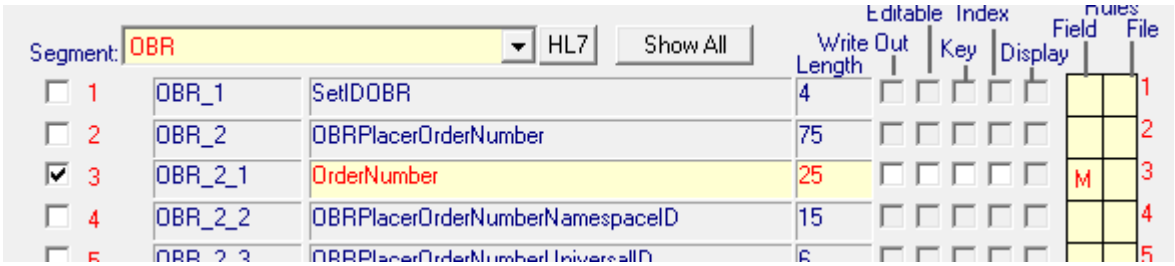
- Go to the C:\LT8 folder. You will see a mapper template named “NVP2DCM.mpr”.



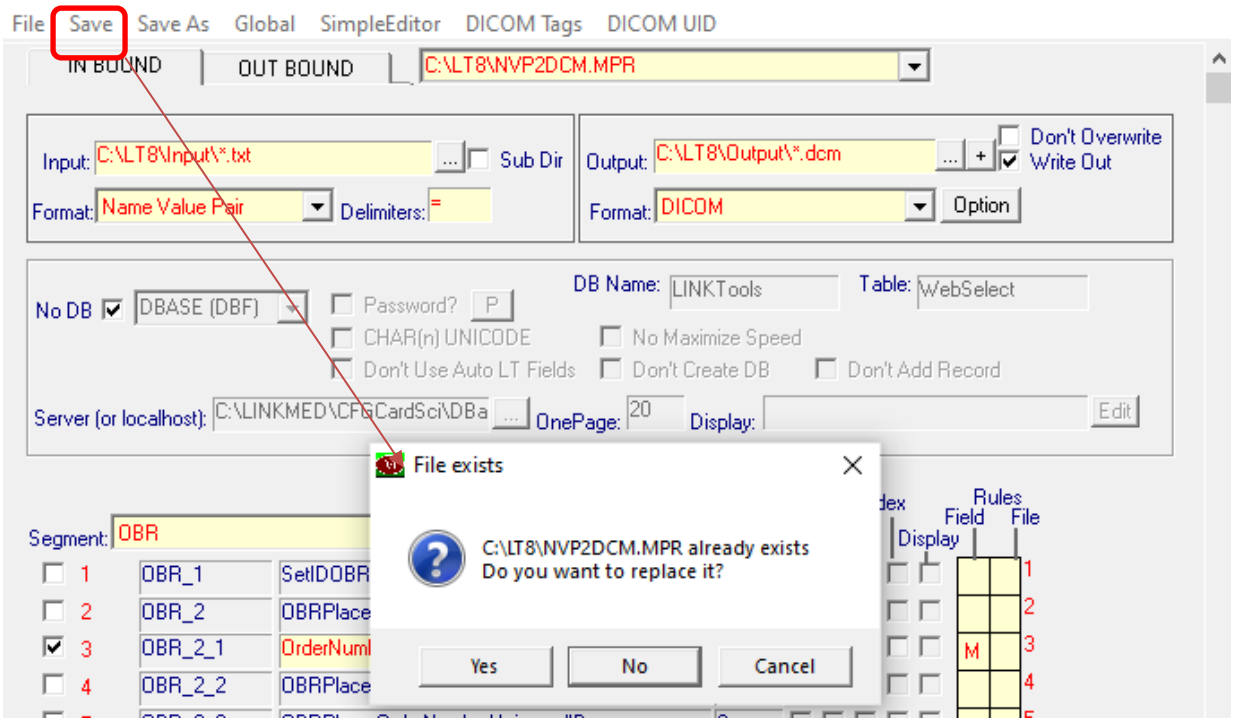
- Go back to the Mapper application to add more fields.
- Click on Segment down arrow and select OBR segment.



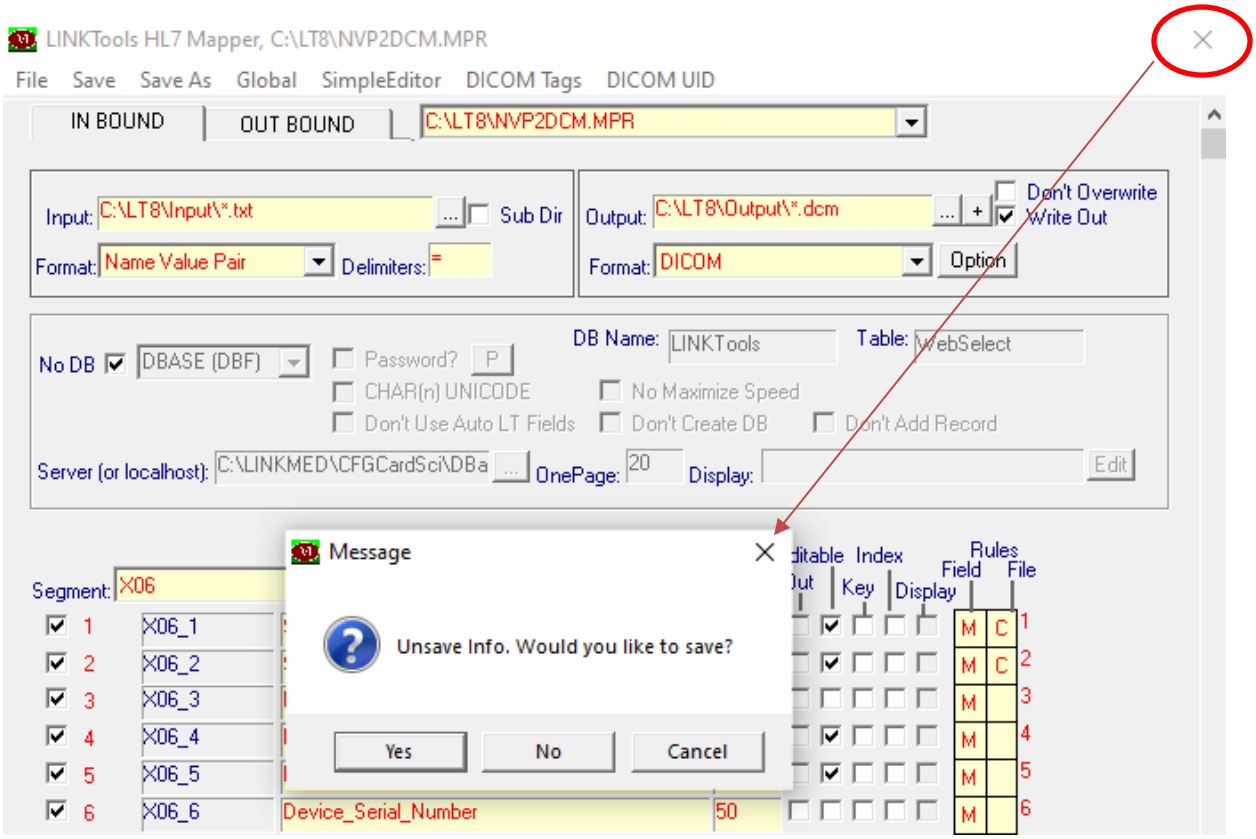
- All OBR segment's fields will be displayed.
- Checkbox check to select OBR_2_1 field.



- Rename to field name to "OrderNumber"
- Click Save button to save the change and click Yes to replace the mapper template "NVP2DCM.mpr"

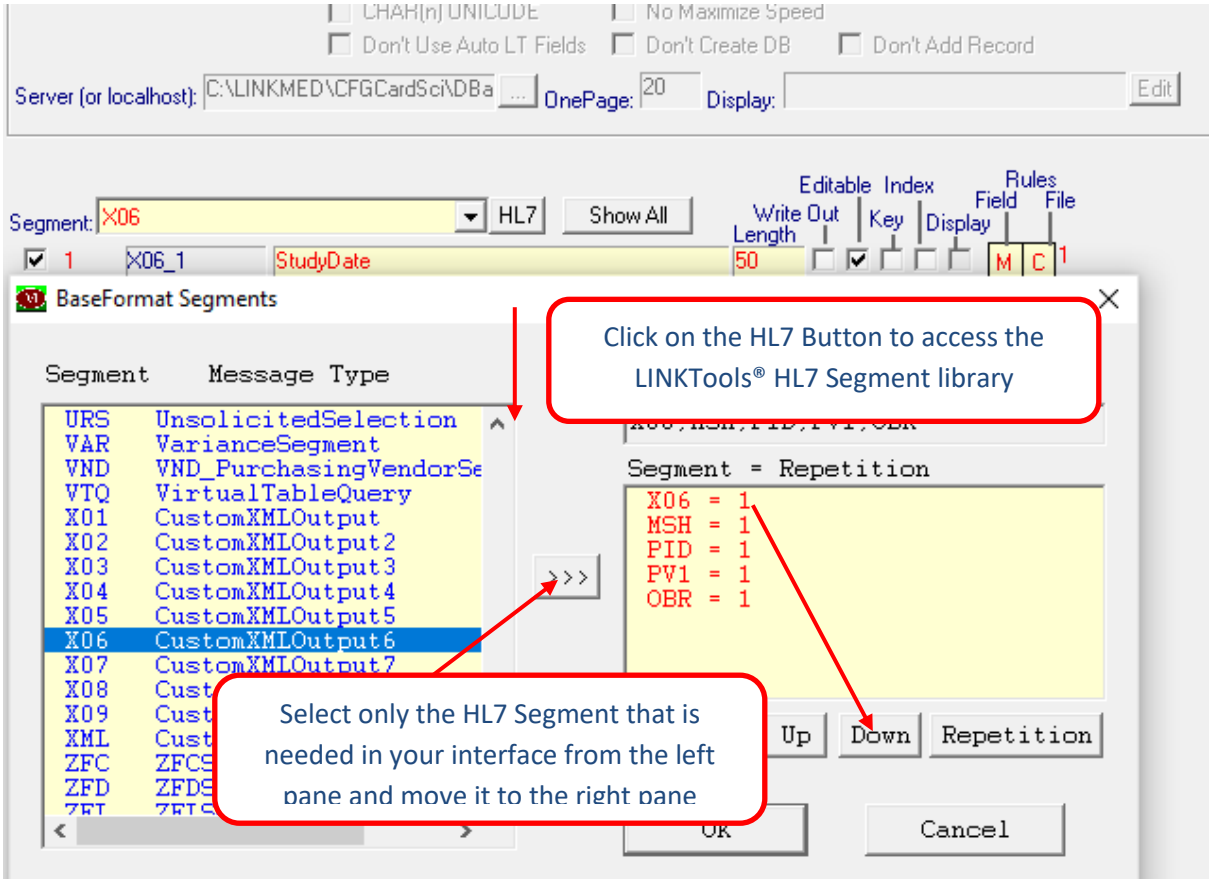


- Save the change and click Yes to replace the existing mapper template.
- After completing the configuration, close the Mapper Config box by clicking the X in the upper-right corner.
- If there are unsaved changes, a warning message will ask whether you want to save them.
- Click Save button to save the changes.



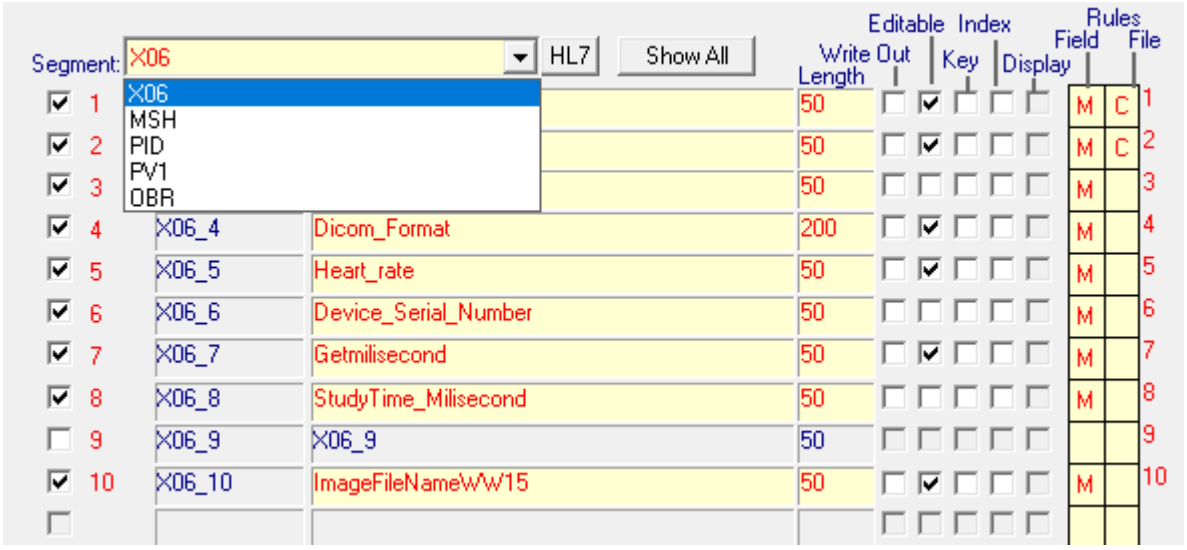
- After closing, click on **Config** button to open Mapper Config again.

Add a segment from HL7 segment library.



Add X06 segment:

- Click HL7 button, scroll down and select X06, double-click or click on >>> button to move to right panel.
  Use the Up and Down button to move the X06 from the bottom to the top, as above image.
- Click OK
- Click segment drop down list and select X06.



- Click the check boxes to select X06_1, X06_2, X06_3, X06_4, X06_5, X06_7, X06_8, X06_10.

  Change the field name for these fields:

  X06_1 = StudyDate

  X06_2 = StudyTime

  X06_3 = Model

  X06_4 = Dicom_Format

  X06_5 = Heart_rate

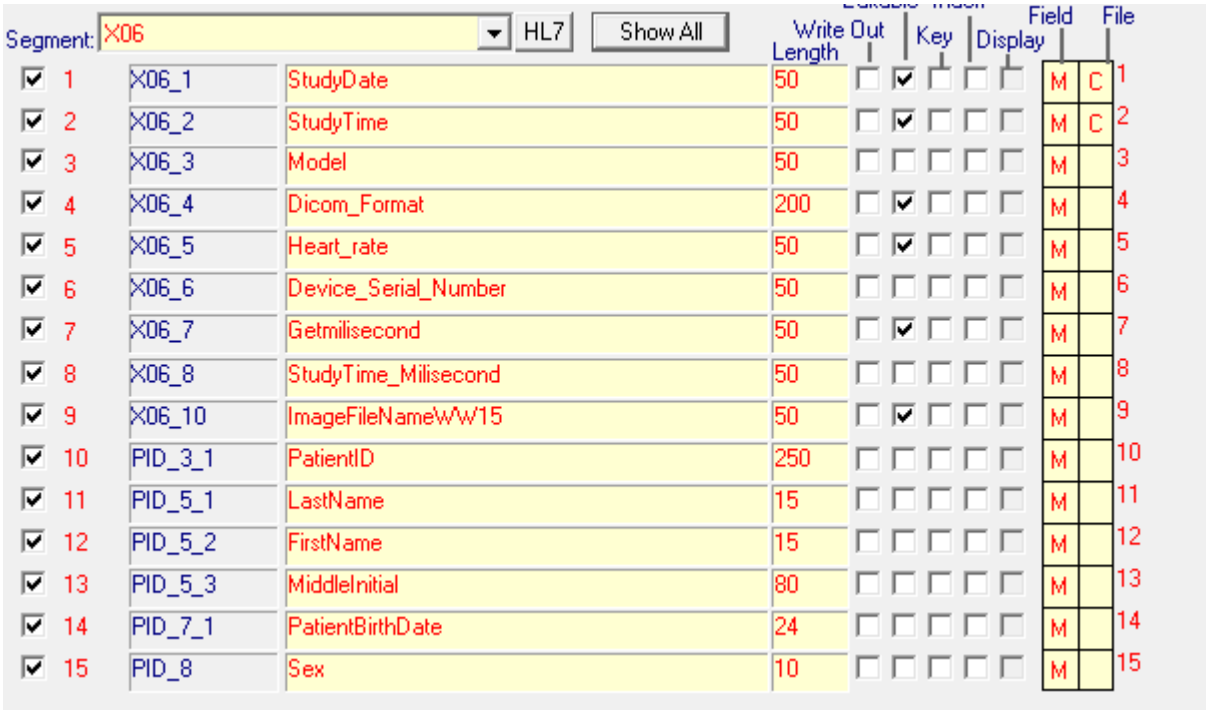
  X06_6 = Device_Serial_Number

  X06_7 = Getmilisecond

  X06_8 = StudyTime_Milisecond

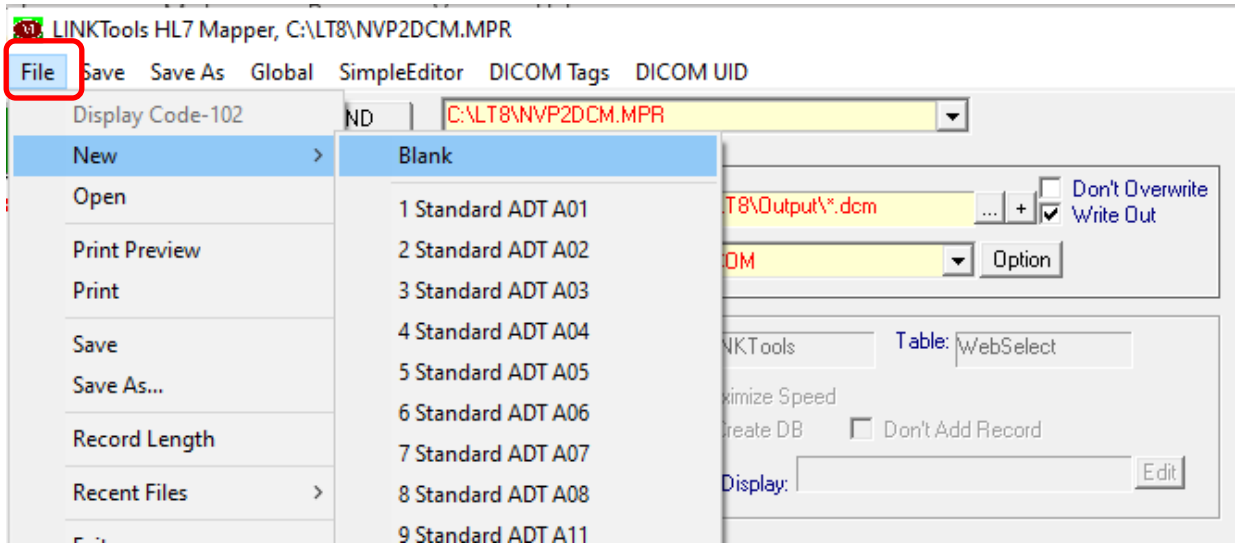
  X06_10 = ImageFileNameWW15

- Click Show All to show the fields selected.

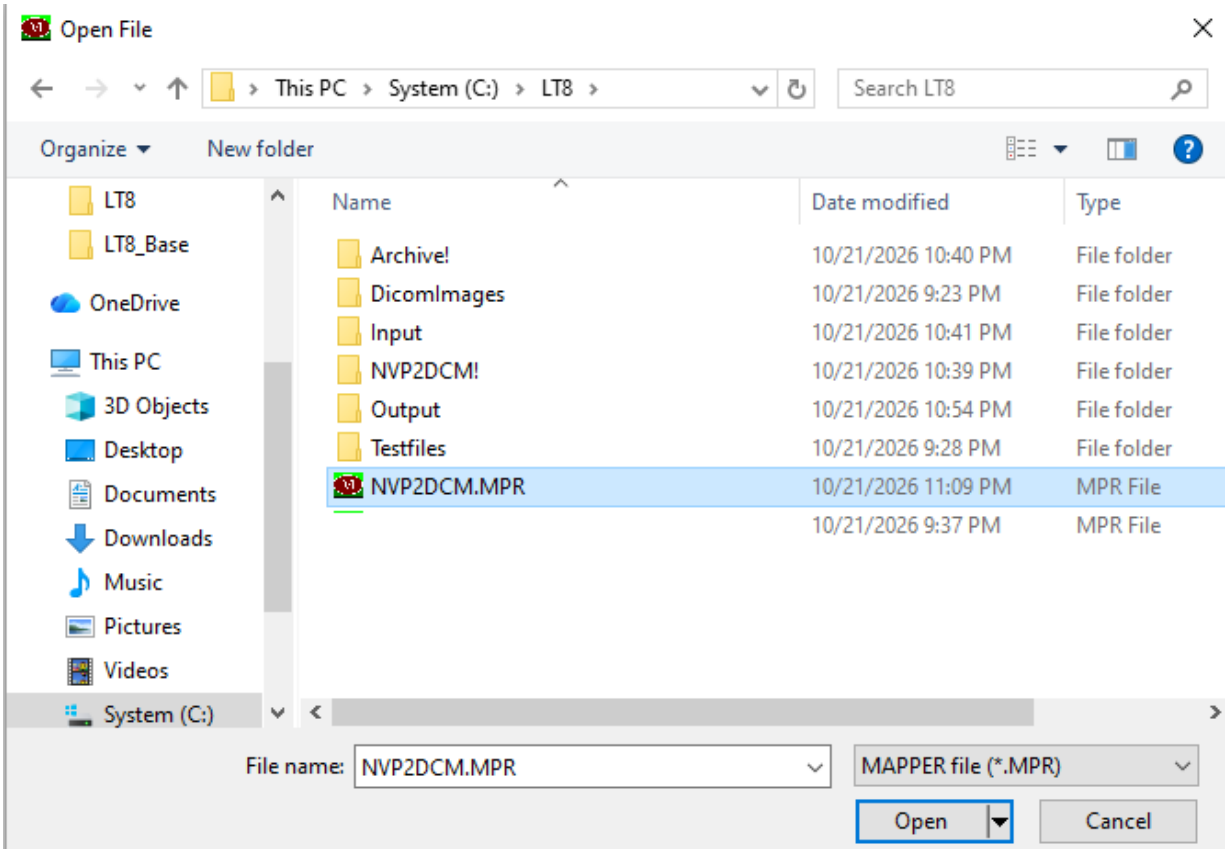


- Save the change and click Yes to replace the existing mapper template.

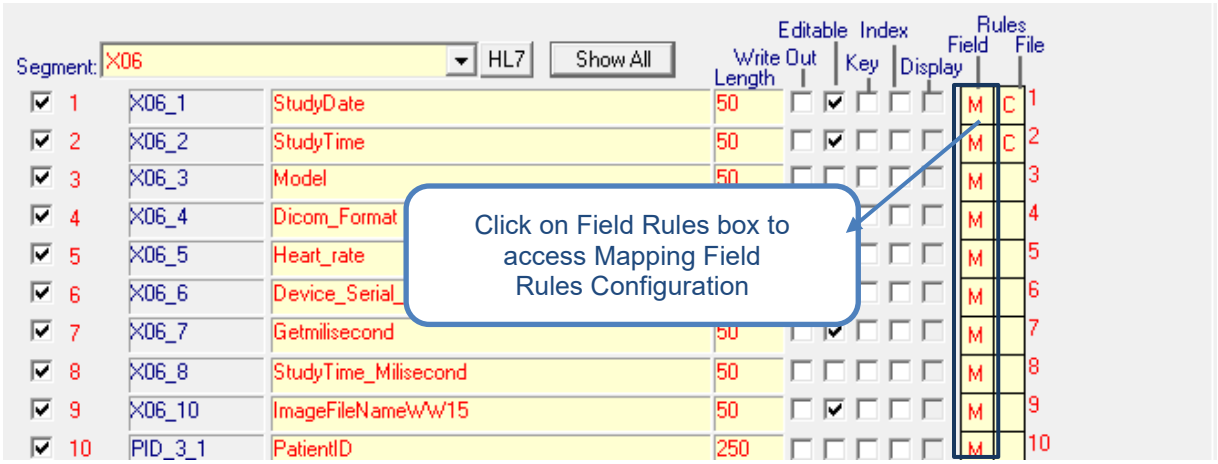
- To create a new mapper template configuration file or open an existing mapper, click the File menu and select “New → Blank” or “Open”.



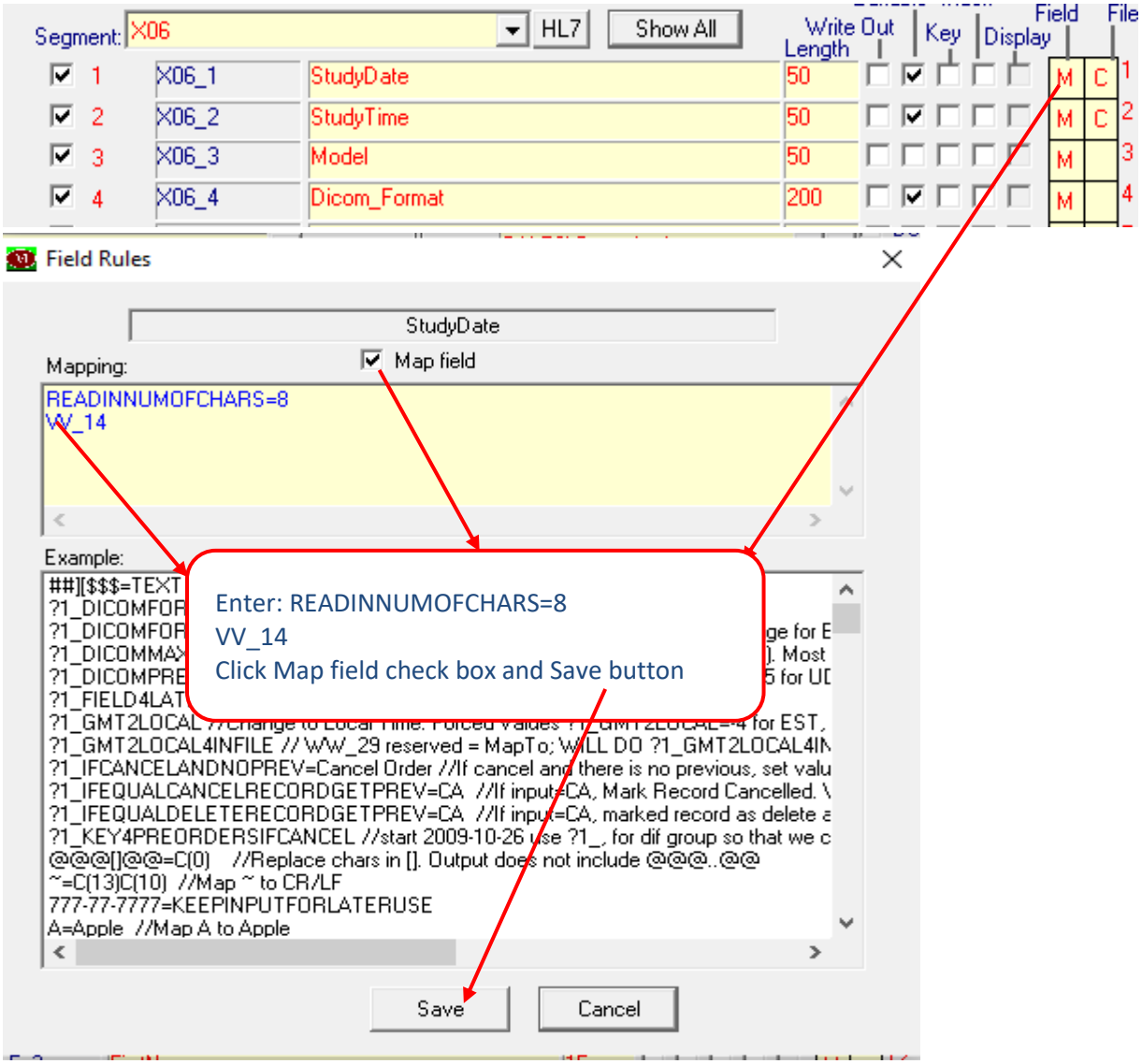
- Select New → Blank to build a new mapper configuration as described at the beginning of this document.
- Select Open → select “NVP2DCM.mpr” in the C:\LT8 folder → click Open.



- Click Show All to show selected fields.



- Configure the values for the selected fields.



- X06_1 – StudyDate:
  Click the Field Rules box, enter below content in the text box, check “Map field” check box and click Save button.
  READINNUMOFCHARS=8
  VV_14

  Repeat the same steps to add values for the X06 fields below.
- X06_1 – StudyTime:
  Enter below content in the text box, check “Map field” check box and click Save button.
  READINUNTILCHAR=C(13){?C(13)C(10)
  SKIPNUMOFCHARS=8
  IFLENLESSTHANSUFFIX[6]=0
  VV_15

- X06_3 – Model:
  Click on Field Rules → Enter phrase “VV_7” in the text box, check “Map field” check box and click Save button.

- X06_4 – Dicom_Format:
  Enter below content in the text box, check “Map field” check box and click Save button.
  ?1_DICOMMAXBYTES2TX=28660
  ?1_DICOMPRESENTCONTEXT=5
  rem1.2.840.10008.5.1.4.1.1.3.1 //5=0x5 MULTI
  rem1.2.840.10008.5.1.4.1.1.7 //29=0x1D Secondary Image
  rem1.2.840.10008.5.1.4.1.1.7.4 //111=x6F Multi-frame

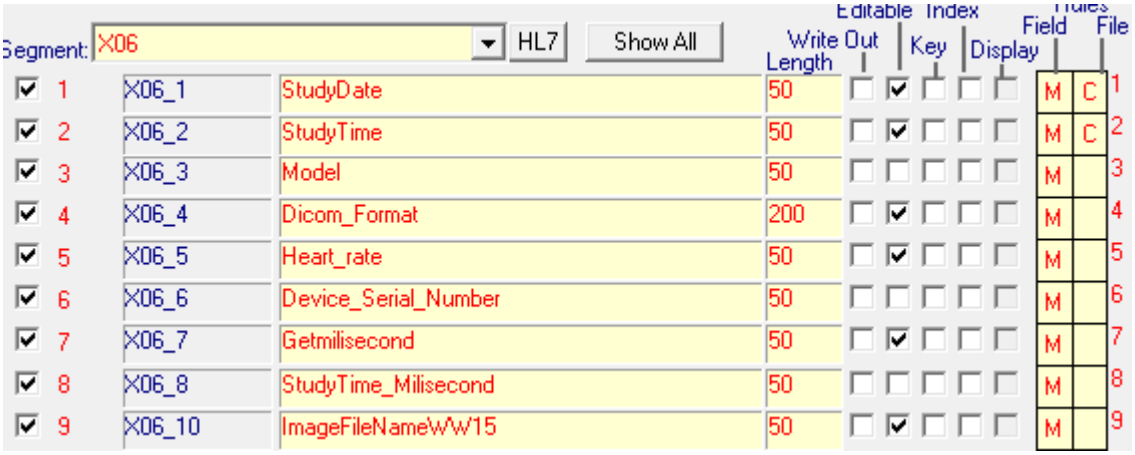
- X06_5 – Heart_rate:
  Click on Field Rules → Enter phrase “VV_10” in the text box, check “Map field” check box and click Save button.

- X06_6 – Device_Serial_Number:
  Click on Field Rules → Enter phrase “VV_11” in the text box, check “Map field” check box and click Save button.

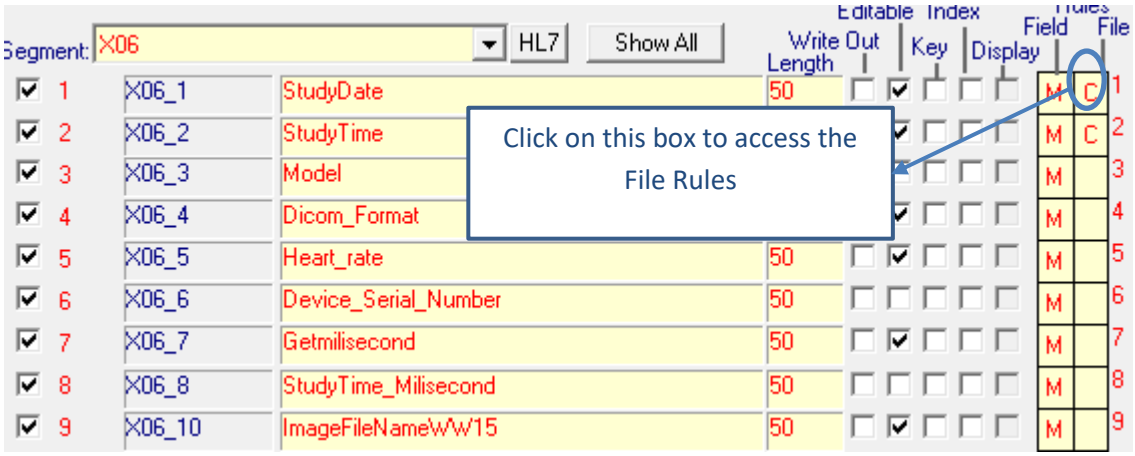
- X06_7 – Getmilisecond:
  Click on Field Rules → Enter below content in the text box, check “Map field” check box and click Save button.
  DontCare=IN_OUT_DT_YYYYMMDDhhmmssmls
  GETCHARS=R:3
  VV_9
- X06_8 – StudyTime_Milisecond:
  Click on Field Rules → Enter below content in the text box, check “Map field” check box and click Save button.
  GETVV=VV_15VV_9
  VV_9

- X06_10 – ImageFileNameWW15:
  Click on Field Rules → Enter below content in the text box, check “Map field” check box and click Save button.
  DontCare=INPUTFILENAMENOEXT
  WW_15

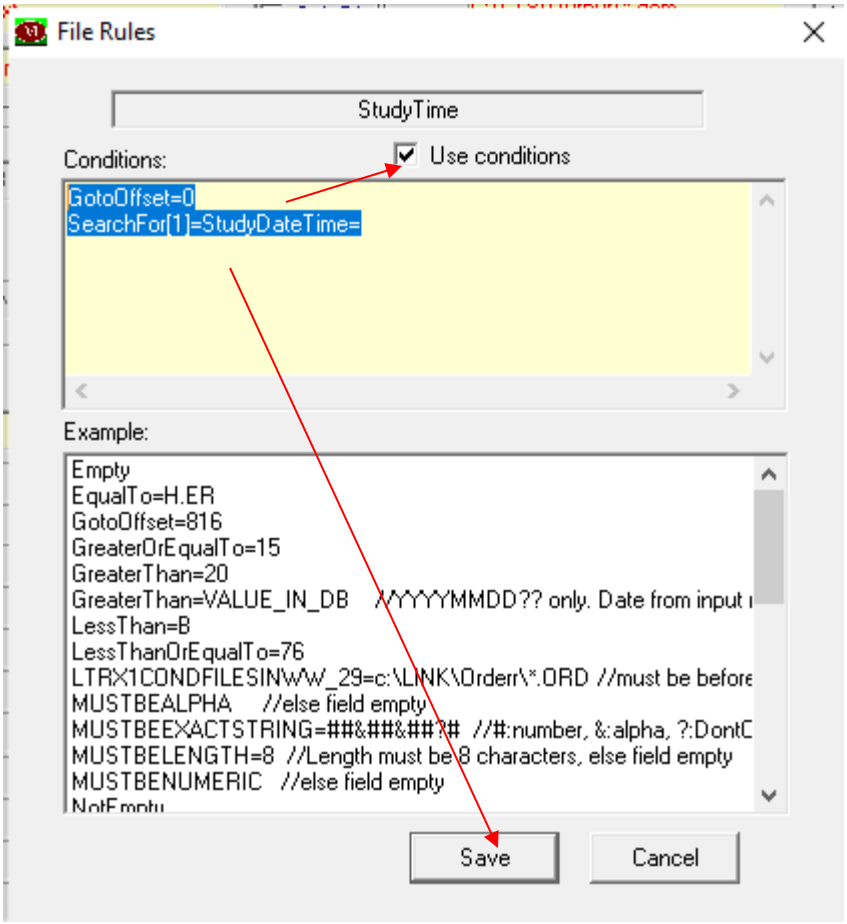
- Click Save button and click Yes to save the changes.
- All fields that have Field Rules will be marked with the letter M.



- Stay on the X06_1 – StudyDate:
  Click on the File Rules box next to the Field Rules box
  Enter the following content, check the “Use conditions” check box and click Save.
  GotoOffset=0
  SearchFor[1]=StudyDateTime=



- X06_2 – StudyTime:
  Click on the File Rules box next to the Field Rules box.
  Enter the following content, check the “Use conditions” check box and click Save:
  GotoOffset=0
  SearchFor[1]=StudyDateTime=



Select the “Use conditions” check box and click Save.

- Configure the PID segment’s fields:

- PID_3_1 – PatientID:
  Click on Field Rules, enter phrase “VV_1” in the text box, check “Map field” check box and click Save button.

- PID_5_1 – LastName:
  Click on Field Rules, enter phrase “VV_2” in the text box, check “Map field” check box and click Save button.

- PID_5_2 – FirstName:
  Click on Field Rules, enter phrase “VV_3” in the text box, check “Map field” check box and click Save button.

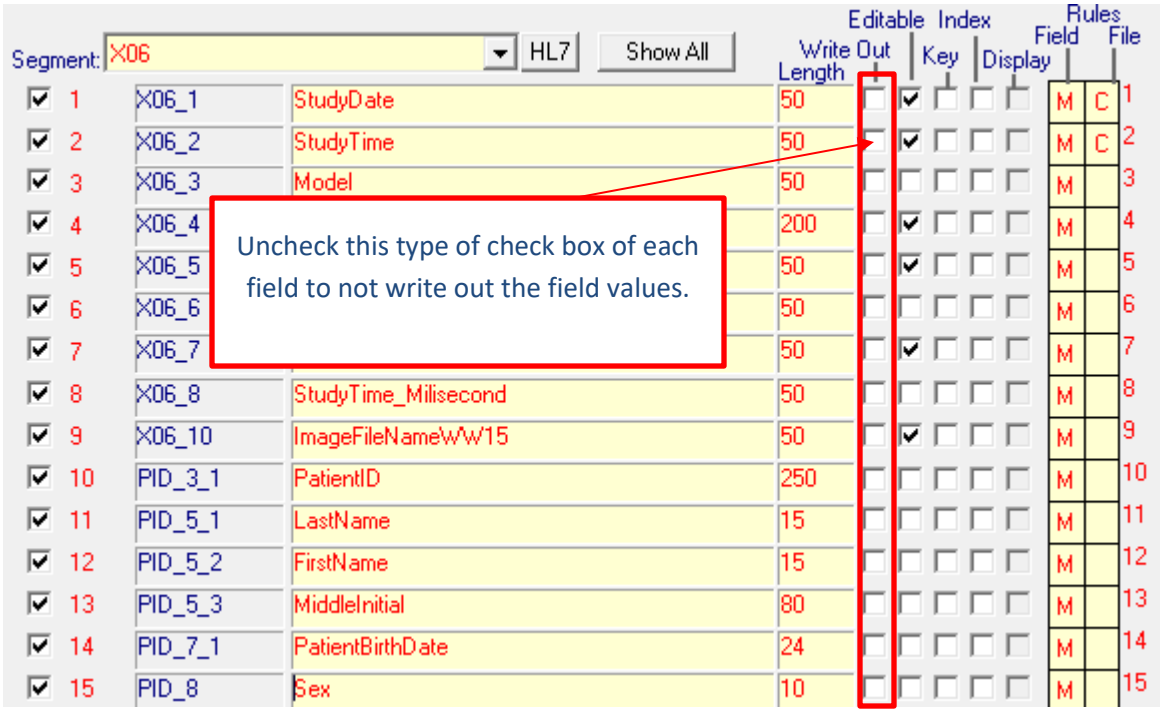
- PID_5_3 – MiddleInitial:
  Click on Field Rules, enter below content in the text box, check “Map field” check box and click Save button.
  GETVV=VV_2^VV_3
  VV_4

- PID_7_1 – PatientBirthDate:
  Click on Field Rules, enter phrase “VV_5” in the text box, check “Map field” check box and click Save button.

- PID_8 – Sex:
  Click on Field Rules, enter phrase “VV_6” in the text box, check “Map field” check box and click Save button.

- OBR_2_1 – OrderNumber:

  Click on Field Rules, enter phrase “WW_3” in the text box, check “Map field” check box and click Save button.



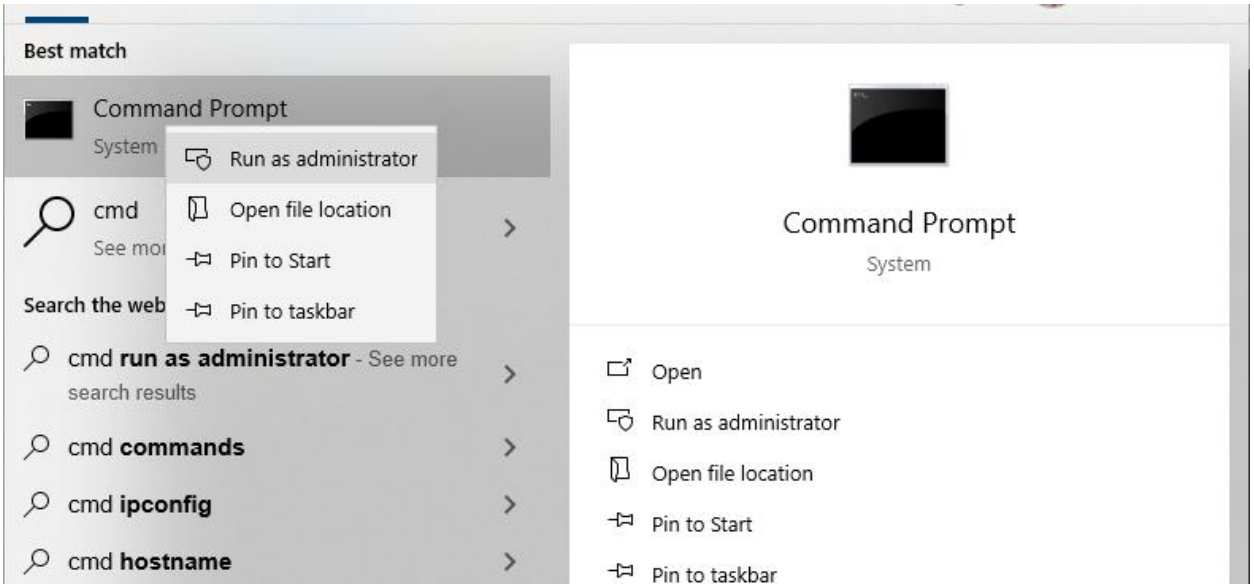
  Click on check boxes under “Write Out” column of each field to not write out the field values.

  By default, all the fields are selected and marked as write out.

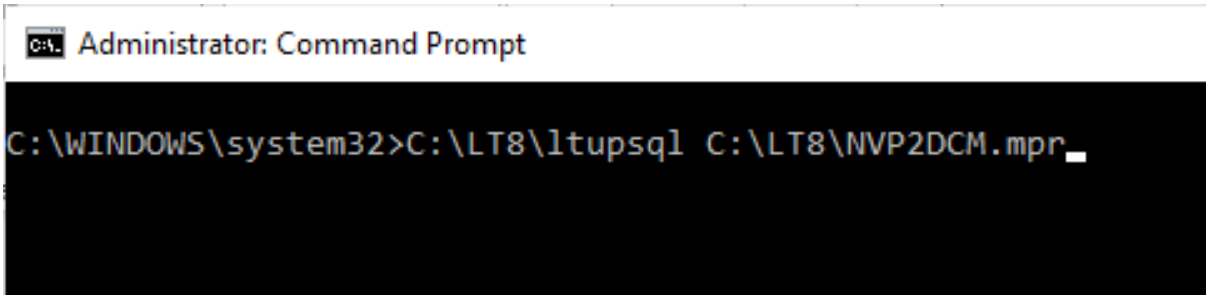
- Save the mapper template again and close the Dynamic Mapper Application.

2. Run the command to execute the mapper and convert Name-Value + JPJ Images to DICOM

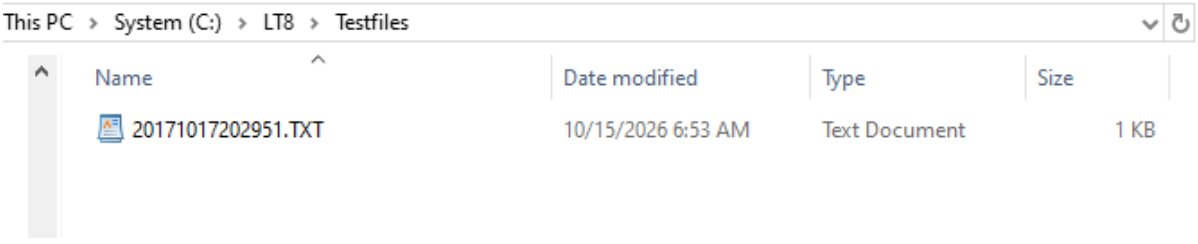
- From the Search bar, type CMD.
- Right-click “Command Prompt” → select Run as administrator.



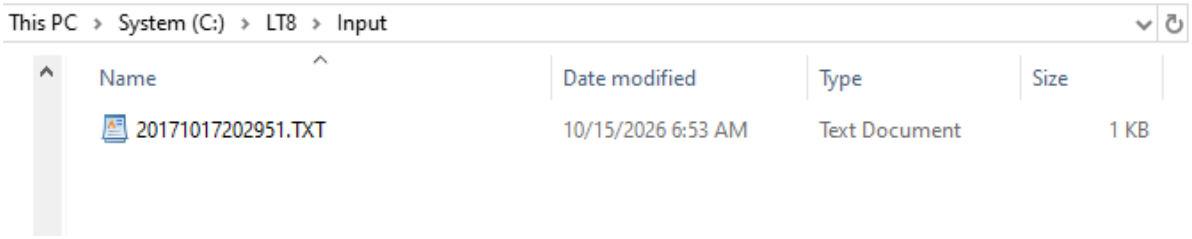
- Type or copy and paste this command line: C:\LT8\LTUPSQL.exe C:\LT8\NVP2DCM.mpr



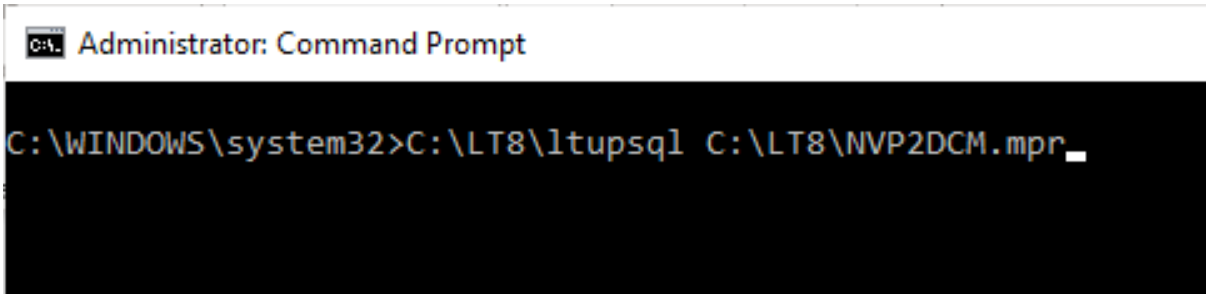
- Open Windows Explorer → go to C:\LT8\Testfiles → copy one or both test files from this folder.



- Go to the C:\LT8\Input folder and paste the test files.



- Go to the Command Prompt and press Enter to execute the command “C:\LT8\LTUPSQL.exe C:\LT8\NVP2DCM.mpr”.



- Go to the C:\LT8\Output folder. You will see an output file with the *.DCM extension.

