ACT EXCEL TOOL

- **Purpose**: This tool enables users to join together the Mapping, Contact and Data files to create a new i2b2Data file.

- **Assumptions:**

  - User has **manually** created Mapping file and Contact file.

  - Both the files are in valid CSV (Comma Separated Values) format. Please refer to **ACT CSV File Overview.pdf** for details on the file preparation requirements.

  - **Data File** is automatically generated by user's local i2b2 webclient. User will not make any changes to this file.

- **Instructions to use the ACT Excel Tool :**

  - Download the Excel Tool from ACT plugin. It will have 4 worksheets in it named **Mapping**, **Contact** , **Data** , **i2b2Data** respectively.

  - This tool uses Macro and requires that they be enabled. Following are instructions to enable Macro in MS Excel.
    1. Click the **Microsoft Office Button** , and then click **Excel Options**.
    2. Click **Trust Center**, click **Trust Center Settings**, and then click **Macro Settings**.
    3. Choose an options from below:
       - **Disable all macros without notification** Click this option if macros are not trusted. All macros in documents and security alerts about macros are disabled. If there are documents with unsigned macros that are not trusted, one can put those documents into a trusted location. Documents in trusted locations are allowed to run without being checked by the Trust Center security system.
       - **Disable all macros with notification** This is the default setting. Click this option if macros are to be disabled, but security alerts to be generated if there are macros present. This gives a way to enable macros on a case by case basis.
       - **Disable all macros except digitally signed macros** This setting is the same as the **Disable all macros with notification** option, except that if the macro is digitally signed by a trusted publisher, the macro can run if user has already trusted the publisher. If publisher has not been

trusted, user is notified. That way, one can choose to enable those signed macros or trust the publisher. All unsigned macros are disabled without notification.

- **Enable all macros (not recommended, potentially dangerous code can run)** Click this option to allow all macros to run. This setting makes user's computer vulnerable to potentially malicious code and is not recommended.
- **Trust access to the VBA project object model**   This setting is for developers and is used to deliberately lock out or allow programmatic access to the VBA object model from any Automation client. In other words, it provides a security option for code that is written to automate an Office program and programmatically manipulate the Microsoft Visual Basic for Applications (VBA) environment and object model. This is a per user and per application setting, and denies access by default. This security option makes it more difficult for unauthorized programs to build "self-replicating" code that can harm end-user systems. For any Automation client to be able to access the VBA object model programmatically, the user running the code must explicitly grant access. To turn on access, select the check box.

o   After macro is enabled follow the steps below.
1. Load Mapping Data.
- If there is no Mapping file move to step 2.
- Open **Mapping** worksheet in the ACT Excel Tool.
- Click on "Load Mapping Data" on top.
- Select Mapping CSV file using the File Selection dialog presented.
- "Now processing...." prompt will show in the Excel status bar while file loads. Loading may take some time.
- Mapping CSV file will be loaded into the worksheet beginning at row 7.
- User will be prompted in any of the following ways once the loading is done.
    o   In case user's file is completely empty an error prompt shows up.
    o   User's file header at row 7 should completely match with the header provided in row 6. An error prompt

shows in presence of any discrepancies in the header fields. In such scenario user is required to click on "Clear Mapping Data" button on top to clear the worksheet. User is supposed to handle any header discrepancies in Mapping file and then reload the updated file.

- o User's file should have valid data in the mandatory fields. Please refer to **ACT CSV File Overview.docx** for details on the file's mandatory fields. If user's file misses one or more such data an error prompt occurs. In such scenario user is required to click on "Clear Mapping Data" button on top to clear the worksheet. User is supposed to handle any data discrepancies in Mapping file and then reload the updated file.
- o User's file should have header and also some data in it. If only header is present in the file user gets a warning about that.
- o For all files in valid format user gets a success prompt.

- Move to step 2.

2. Load Contact Data.
   - Open **Contact** worksheet in the ACT Excel Tool.
   - Click on "Load Contact Data" on top.
   - Select Patient Contact Data CSV file using the File Selection dialog presented.
   - "Now processing...." prompt will show in the Excel status bar while file loads. Loading may take some time.
   - This will load Contact Data CSV file into the worksheet beginning at row 7.
   - User will be prompted in any of the following ways once the loading is done.
     - o In case user's file is completely empty an error prompt shows up.
     - o User's file header at row 7 should completely match with the header provided in row 6. An error prompt shows in presence of any discrepancies in the header fields. In such scenario user is required to click on "Clear Contact Data" button on top to clear the

worksheet. User is supposed to handle any header discrepancies in Contact file and then reload the updated file.

- o User's file should have valid data in the mandatory fields. Please refer to **ACT CSV File Overview.docx** for details on the file's mandatory fields. If user's file misses one or more such data an error prompt presents. In such scenario user is required to click on "Clear Contact Data" button on top to clear the worksheet. User is supposed to handle any data discrepancies in Contact file and then reload the updated file.
  - o User's file should have header and also some data in it. If only header is present in the file user gets a warning about that.
  - o For all files in valid format user gets a success prompt.
- Move to step 3.

3. Load Data.
   - Open **Data** worksheet in the ACT Excel Tool.
   - Click on "Load Data" on top.
   - Select Patient Data CSV file using the File Selection dialog presented .
   - "Now processing...." prompt will show in the Excel status bar while file loads. Loading may take some time.
   - This will load Data CSV file into the worksheet beginning at row 7.
   - User will be prompted in any of the following ways once the loading is done.
     - o In case user's file is completely empty an error prompt shows up.
     - o For all files in valid format user gets a success prompt.
   - Move to step 4.

4. Generate I2B2Data File.
   - Open **i2b2Data** worksheet in the ACT Excel Tool.

- Click on "Join Files" on top.
- This will join Patient Mapping, Contact and Data files previously selected.
- "Now processing...." will show in the Excel status bar while joining takes place. It may take some time.
- User will be prompted in any of the following ways once the joining request is processed.
    - In case any of user's file headers had discrepancies, an error message will show.
    - In case any of user's file missed some data in mandatory filed(s) an error message will show.
    - In case user's data file did not have any i2b2 numbers, as error message will show.
    - In case user's file had duplicate MRN in it, an error message will show giving a list of the duplicate MRNs.
    - In case there were no i2b2 data matching in data file and contact or Mapping file, a warning will show.
    - A success message will show on successful join of files. Once the joining is done all I2B2Data will load on this worksheet beginning at row 7.
- Click on the ""Export i2b2Data File". This will create a new excel file with all required data.
- "Export request is being processed...." will show in the Excel status bar while the new file gets created. This may take some time.
- User will be prompted after the file is generated with all required data.
- User is expected to save the final I2B2Data file for future reference.