**Hashing Guide**

This application cleans, combines and hashes patient identifiers using sha512 algorithm. It runs locally without connecting to the web service.

Patient Identifiers - patient id, first name, last name, date of birth, and SSN (if available).  
The hashed combinations are:

1. first name + last name + dob + last 4 ssn
2. last name + first name + dob + last 4 ssn
3. first name + last name + dob
4. last name + first name + dob
5. first name + last name + Transposed dob + last 4 ssn
6. first name + last name + Transposed dob
7. first name 3 initial characters + last name + dob + last 4 ssn
8. first name 3 initial characters + last name + dob
9. first name + last name + dob + 1 day + last 4 ssn
10. first name + last name + dob + 1 year + last 4 ssn

Output 1 - a sql table crosswalk with site id, patient id, patient id hash and above hashes.  
Output 2 - a csv file with site id, patient id hash and above hashes.

**Please remember - patientid has to be unique**

**For batch script users:**

1. Enter servername, databasename, table name, column names etc in the config file
2. Run the hash\_setup.bat to set up stored procedures and functions that clean, normalize, combine and hash the data (this is one time activity)
3. If you are a site, run hash\_run\_site.bat to generate a table and a csv file with the hashed values (run it as many times as you want to create the hashes)

If you are a registry, run hash\_run\_registry.bat to generate a table with the hashed values (run it as many times as you want to create the hashes)

1. Review the Log folder for any errors
2. If you are a site, review the Output folder for csv file containing hashes

**For SQL only script users:**

1. Edit HashSetup.sql $(schema) with appropriate database.schema
2. Run the edited query to set up stored procedures and functions that clean, normalize, combine and hash the data (this is one time activity)
3. Edit InsertintoHash.sql
4. Replace $(Database), $(sourceTable), $(patientid), $(name1), $(name2), $(dob) with appropriate database, table and field names respectively
5. Keep $(ssn)=0 if do not want to include SSN, else replace with appropriate field name
6. Replace $(patientidSeed) with any random 30 characters and $(salt) with project based salt/key
7. Run the edited query to generate sql table with hashes
8. If required, use the outputted hash table to generate csv file