CSC 289 Design Update 2/7/2019 Weber,Warburg,Cook

Update/Rationale for change: input sources limited to/include DSS and Police. DSS needs an automated system and has primary responsibility for child welfare. The Police are less spread out and have fewer possible nodes than the school system.

***Introduction***: This proposal is inspired by a September 24, 2017 article in the Fayetteville Observer Times, “Could They Have Been Saved: North Carolina has paid a steep price for the failures of its child welfare system” by Greg Barnes. A newspaper investigation found more than 120 children have died in the state within a year of their parents or caregivers being referred to a DSS (department of social services) agency. A 2015 federal evaluation found that NC failed all 14 outcome and performance measures for child welfare. Among the findings were that many cases were closed prematurely while safety concerns remained. In CC (Cumberland County) DSS failed in 72% of cases to visit a home within the required 7-day timeframe of substantiated abuse or neglect. Another study commissioned by the state found DSS offices lacking in oversight and accountability. A shocking revelation was “DSS agencies have a hard time-sharing information with one another because most still log reports on paper rather than using a computer system.” “State officials say they expect to convert the DSS agencies to a computerized system called NC FAST, but they have been saying that since at least 2002.” In a follow up article published December 3rd, 2017, the case of Shaniya Davis, murdered at the age of 5, is reviewed. Her case highlighted a lack of communication between the police, school system and DSS. This “fatal flaw” is not uncommon. While there are many factors to be addressed, a good automated system would go a long way towards making it possible to share information in a timely fashion, address accountability and make tracking a case efficient.

***Problem Set***: A paper system hinders accessibility/sharing information, tracking cases and accountability/follow-up. Information is gathered from many different sources but not put together to paint a more complete picture of a case. Potential sources include: DSS, Police, Schools, hospitals, the court system and early child care facilities. Keywords: sources, case.

***Goal***: To create a working prototype that:

1. Allows sensitive data to be entered, stored and updated about an individual at risk by identified sources (DSS and Police). (task)

2. Has a DB (database) that securely shares information (generates an alert message) with identified sources simultaneously for the purposes of:

a. determine if an individual is popping up on the radar of more than one source (cross-reference by name, date of birth, address, etc.)

b. enhance timely coordinated response and accountability by making all sources aware of reports on an individual as the report is input. (time stamp)

c. allows users to put information in and display information out for the purposes of tracking individuals and cases, coordinating response efforts.

***Desired Outcome***: Increase efficiency of child protection systems by enhancing timeliness of tracking cases, accountability through shared information, a more complete timely picture of what is happening to an individual at risk resulting in a measurable decrease in child deaths/injury and suffering.

***Prototype Description***:

Authenticate users- stored in DB, accept input and updates, generate alert messages (stored procedure?), allow queries to retrieve information to track cases. All inputs to have a timestamp and be displayed with output. Logon/Logoff timestamped. Alert Message Acknowledgements to be timestamped (see AlertMessage Class). Application/DB accessible from multiple different physical machines and locations. User friendly dashboard. Dashboard functions include: Logon/logoff, enter information (add/update or create new record), display information (generate a report from a query), automatically display alert messages without user action (first event upon login).

***Identified Objects/Classes/Entities***: (source and school become fields in other classes)

User

Case

IndividualAtRisk

SocialWorker

CareGiver

Perpetrator

NoteComment (possible checklist (drugs, nutrition, health/mental conditions, physical environment danger) with text comments)

AlertMessage

Report/Query???? Is this an object?

UML Diagrams

Class name: **User**

Fields: -userID, primary key (int)

-lastName (str)

-firstName(str)

-source(str)(DSS or Police)

-username(str)

-password(str)

Methods: +log-on (with timestamp)

+log off(with timestamp)

+addInfoToExistingCase (this class will interact with the case class and possibly all of the)

+updateExistingCase (other classes aggregated under the case class)

+createNewCase

+generateReport/query \*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **Person** (abstract super-class)

Fields: -personID (int, not null) (primary key)

-lastName(str)

-firstName(str)

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **individualAtRisk** (inherits from Person)

Fields: -dateOfBirth (date)

-socialSecurityNumber(str)

-address(str)(street,city,town,state,zip)(may include more than one address if a person is living with separated family members, etc)

-telephoneNumbers(str)(may include several numbers)

-school(str)(should we have fields for teacher name, school telephone?)

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **SocialWorker**  (inherits from Person)

Fields: -source(str) (DSS or Police)

-telephone (str)(several ie. Cell, work, home)

-officeLocation(str)

-user (Boolean)(is the social worker a “user” on the system yes/no)

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **Caregiver**  (inherits from Person)

Fields: -dateOfBirth (date)

-socialSecurityNumber(str)

-relationship(str)(relationship to the individual at risk)

-address(str)( street,city,town,state,zip)(may include more than one address if a person is living with separated family members, etc)

-telephone(str)(may include several numbers ie. Work, cell, home,etc.)

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **Perpetrator**  (inherits from Person)

Fields: -dateOfBirth (date)

-socialSecurityNumber(str)

-relationship(str)(relationship to the individual at risk)

-address(str)( street,city,town,state,zip)(may include more than one address if a person is living with separated family members, etc)

-telephone(str)(may include several numbers ie. Work, cell, home,etc.)

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **Note**

Fields: -timeStamp (? timestamp)

-user (person who entered the note) (int, userID from user table)

-noteText (str) (the body of the note)

-subject (individualAtRisk (object type))

-conditionsCheckBox (?)

Description of conditionsCheckBox: Statement: “Please check the boxes that are relevant to the individual at risk and provide details in the note text.” Followed by:

\_\_\_ Substance concern (i.e.. substance related legal action past or pending, drug paraphernalia in home)

\_\_\_ Health condition (please identify if this refers to the individual at risk or someone else)

\_\_\_ Mental Health condition (please identify if this refers to the individual at risk or someone else)

\_\_\_ Nutrition

\_\_\_ Clothing

\_\_\_ Weapons

\_\_\_ Hygiene of the home

\_\_\_ Other

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **Case** (aggregates other classes (“has a” relationships))

Fields: -individualAtRisk (primary key)

-socialWorker

-careGiver

-perpetrator

-note

Methods: +setters and getters \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Class name: **AlertMessage**

Fields: -message

-user1

-user2

-acknowledgement

Description: An alert message object is automatically generated when a user from DSS and a user from the Police enter data about the same individual at risk. The message consists of a case object with its data displayed in the message. Remember that a case object includes a note object and that a note includes data about the person who entered the note. This will allow the users to contact each other. The alert message will open upon login and precede any other action by the user. The message will not expire or permit further action until the user checks the box saying that they have read the alert message. The acknowledgement will be bound to the user and timestamped. Do I need to create an acknowledgement class/object/entity?

\_\_\_ I acknowledge having received and read this message.

Methods: +generate alert message and acknowledgement

+display to user (on login)

+verify acknowledgement and bind to user and timestamp

+store event

+message expires

+???setters and getters???\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*END\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*