**Programming Project 2**

**Ghostbuster**

**Present to**

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**Section C**

**Problem 4: Ghostbusters Database**

*"Who're you gonna call? Ghostbusters!"*

Your database will store information for a ghost hunting company, about different supernatural events the company has been called to handle. The primary object type in your database will be an **event**. For each **event**, you should store the following properties:

• Event code: format "yyyy:nnnn", where 'yyyy' is the year the event occurred and 'n' is a digit. For example, "2012:0198" Your program should generate this code when you first create the record.

• Date and Time of Event: format "yyyy-mm-dd hh:mm", CE year. Note that *this is a different date format from some of the other projects*! You should not allow the user to modify this value once it has been entered and validated (because the event code depends on this property). Must not be in the future!

• Types of event: V (Vampire), W (Werewolf), G (Ghost), P (Poltergeist) (unseen ghost that throws objects around), Z (Zombie), P (*phi krasue*) or O (Other). A single event can have more than one type, separated by commas, e.g. "V,W,Z" for a combination of a vampire, a werewolf and a zombie.

• Date and Time of Investigation: format "yyyy-mm-dd hh:mm", CE year. *Must be later than the date and time of the event.*

• Person reporting event: first and/or last name (you must keep the space if both are entered). Allow a period (".") or an apostrophe ("'") but no other punctuation. Examples: "Joe", "Henry O'Neill", "Louis Van Arple III", "Jimmy Jones Jr."

• Phone number of person reporting the event, format "0aa-nnnnnn", where "0aa" is two or three digit city or mobile code starting with zero, and "nnnnnnnn" is six to eight digits of phone number. For example: "085-1235612", "053-230110", "02-4709088". (Note this assumes the phone number is in

Thailand.)

• Address of event: any format but *must begin with a house number.* May contain spaces, numbers, period ("."), dash ("-") or slash ("/").

• District: must be a valid district of Bangkok. You may check this, or offer a menu to select.

• Result: one of "Success", "Failure" or "Unknown"

Remember that you must check the format of each of these values when the user enters them. The key property for this database is **Event code**. You must also allow the user to search by **Event type**, **Event year**, or **District**. In each of these cases, you should display all records that match the search string. For event type, you should allow a partial match. That is, if the user searches for events of type "**V"**, this should match a "**V,W"** or "**V,Z,P"** event as well. Each event code must be unique and you must not allow the user to change the event code. Also the user may not modify date and time of an event after the record has been created.

FLOW CHAR

FLOW CHART OF THE MAIN PRGRAM  
GHOST BUSTER: ERROR 404

START

MAIN MENU

NEW RECORD

SEARCH RECORD

DELETE RECORD

EXIT PROGRAM

END

OPEN PREVIOUS FILE