

# Legacy Database Description

Application Evaluation – Student Database

Larry Bednar

July 20, 2004

## Purpose

This document provides a high-level description of existing applications used by the organization to manage data. The outline provided here will focus on characteristics that are expected to have a substantial impact on expense or complexity of modification or replacement of this application.

[LB – I've entered parenthetical comments, questions, etc. in square brackets and red-colored text like this throughout the document. Please place responses in this document in a similar fashion, but perhaps in blue-colored text, it would be VERY easy for me to review and incorporate your thoughts into the next iteration. I've found this approach to work really nicely...at least in cases where it is comfortable for both parties exchanging ideas...]

## Overview

The organization currently uses the py.fp5 application to manage information about it's programs, their effectiveness and results, and to generate reports needed by staff, funders, etc.

The current application is a FileMaker Pro application developed over a lengthy period of time by a single individual for use.

The application is composed of 45 FileMaker Pro database files. The main database for the application is the yb.fp5 database.

The application is currently hosted for multiple user access on a server using FileMaker Server software. Individual users access the information this server using the organization's local area network and copies of FileMaker Pro installed on their local personal computer.

A database design report for the application was generated using FileMaker Developer. Since this report contains a great deal of detail about the component databases, this document will only contain conclusions derived from review of that report or information that is not contained in that report.

User interface standard differ substantially from one part of the application to another, with different color schemes, different button styles, etc. being used in different locations.

Primary keys are generally of "serial number" type. Naming of primary keys is relatively consistent, but not absolutely consistent – in some cases "id", in other cases "*subject\_id*", "serial" are all used without complete consistency in application.

The application currently does not apply any type of password-moderated access restrictions, although there are indications that implementation of a password system was contemplated.

## Database Files

Each section below provides a brief description of important features of the component databases:

### ***Address.fp5***

434 record. 8 fields. No scripts. 1 layout. No relationship.

This file contains SOME of the addresses stored in the system. Addresses are also stored in the student.fp5 file (student primary address and emergency contact address).

The one layout in this database is the standard “default” FM layout – so it doesn’t appear that any direct use of this database is provided in the application at present. The student.fp5 “Contact” layouts displays/stores addresses in this file. The student.fp5 “bc\_Address” layout added during this evaluation indicates that most of the addresses stored in this database are also stored in “student.fp5” and “newadd.fp5” database.

Only about 13% of the records in this database (57 records) contain values in the “date” field, which is defined for automatic entry of the record’s creation date. These values span a period of time from 4/4/2003 to the 3/1/2004, indicating that records are being actively added to this database.

## **Data Duplication**

The student.fp5 “emergency address”, “emergency cit”, “emergency state”, and “emergency zip” fields also contain address information.

### ***assignments.fp5 (tentatively “abandoned”)***

1 record. 5 fields. No scripts. 1 layout. 1 relationship.

The single relationship is to “student.fp5”.

The field names indicate that each record is intended to store a student assignment and the score attained on the assignment.

The single layout is crude enough to indicate that it probably has never seen “production” use.

Tonia Kovtunovich confirms this file is not in current used.

### ***attendance.fp5***

17214 records. 89 fields. 41 scripts. 25 layouts. 2 relationships.

36 calculation fields. 27 summary fields. 7 global fields.

Each record represents one day’s evaluation of attendance for a student. Very similar to the “check.fp5” database, with several layouts being nearly exact copies. The “Individual Entry” layout does not have the series of “ct...” buttons provided on the similar form in the “check.fp5” database. All records in this file have been entered since 3/30/2003. All records in the “check.fp5” database were created before 2/11/2003.

Several of the layouts are reports, several specific to the Americorp program. Others summarize attendance records for individuals.

It seems that this database supplanted the “check.fp5” database for tracking of student daily attendance characteristics.

## **Apparently Unused Fields**

Excused

Excused reason

On leave

posted

***bhcd.fp5 (follow-up needed)***

10 records. 105 fields. 11 scripts. 4 layouts. 3 relationships.

Each record appears to represent a report that has been generated. BHCD stands for Bureau of Housing and Community Development. There is no defined primary key. Defined relationships to student.fp5 via “program” field hint that reports are program-based.

1 calculation field. 3 summary fields. Values entered for “date” field are all in year 2000.

All records are dated 1999 or 2000. However, the “date” field containing these values is a standard field rather than an automatically assigned “creation date” field, so the assigned values may not represent the record creation date.

***case notes.fp5 (tentatively “abandoned”)***

7 records. 20 fields. 15 scripts. 5 layouts.

Each record seems to represent notes taken by a counselor after an individual meeting with a student. Based on knowledge of organization work patterns, it seems likely these could result from the regular monthly meeting of student with their designated student advocate, or from impromptu meetings between the student and advocate that were arranged outside of regular monthly meeting schedule.

4 global fields, 5 summary fields. Some field names use special characters.

Layouts are 1 data entry layout, 1 report layout providing details for a student, 1 report layout providing details for multiple students, 1 layout providing report options for time window reported and record sorting order, 1 layout to display all fields in database (not neatly arranged).

The entered records range from 2000 to 2003.

***check.fp5 (possibly obsolete - followup needed)***

7321 records. 83 fields. 39 scripts. 22 layouts. 2 relationships.

5 text fields. 9 number fields. 3 date fields. 31 calculation fields. 6 summary fields.

Each record seems to store characteristics of an attendance entry for a single student and date. However, the field names and labels on field displays in layouts are not crystal clear, and it seems possible that this interpretation is not entirely correct.

“Serial” field is the primary key, “ID” refers to “student id” field (foreign key). “Creation date” is set to auto-enter the record creation date – most recent entry is Feb 2003, indicating that this database has not been recently used. NOTE – “Date” field is named using an SQL keyword.

“ct\_weekday” scripts set several field values, with values used depending on the day indicated in the script name. “con\_weekday” scripts also set several field values, with values used depending on the day indicated in the script name. Scripts to export data to several formats are included.

The primary layout seems to be one used to enter attendance data. Additional layouts provide reports, etc.

This file is extremely similar to, but not an exact copy of the attendance.fp5 file. Note differences in field names and number of records. All records in “attendance.fp5” were created after 3/30/2003. All records in this database were created before 2/11/2003.

The only relationships are to “student.fp5” and “yb.fp5” files.

This file seems to contain older “daily student attendance” records and has apparently been supplanted by the “attendance.fp5” database.

### ***classes.fp5***

1647 records. 17 fields. 4 scripts. 8 layouts. 1 relationship.

Each record seems to describe characteristics of a student’s participation in a single course (grade, etc.). A better name might be “student\_class”.

Several layouts are designed to be used in generation of report cards, transcripts, etc. with assistance of the “choose student” layout (which prompts the user to indicate a student to be reported).

All scripts are basically designed to assist in use of the “choose student” script, performing the user-specified “find” operation, generating the user-specified report, and then returning the user to the “menu” layout in the yb.fp5 database.

### ***comptech.fp5 (tentatively “abandoned”)***

20 records. 199 fields. No scripts. 1 layout (default). No relationships.

Seems to duplication much information provided in “students.fp5” file.

No primary key is defined.

All records entered between Feb2001 and Mar2003.

### ***contracts.fp5 (tentatively “abandoned”)***

6 records. 7 fields. 3 scripts. 4 layouts. 1 relationship.

Each record seems to represent a “behavior contract” established with an individual student. The period of the contract (start/end dates) is covered with the outcome (“expelled”, etc.). This is practically the only information stored, however, so the level of detail is not high.

Entered values for “start date” and “end date” fields are all prior to year 2003, probably indicating that this database has been abandoned, is obsolete, or was never placed into full “production” use.

Layouts and scripts comprise a simple system apparently designed simply to provide different displays of the information contained in this database.

The single relationships links to the student.fp5 database.

### ***counselors.fp5 (tentatively not used)***

1 record. 8 fields. 13 scripts. 4 layouts.

The single record is mostly empty. It appears that this file was planned to either implement or utilize some type of password protection, since one of its layouts provides a “user/password” prompt. As such, the presence of data records here has little meaning – the file functions primarily as a repository of layouts and scripts.

In addition the presence of the “menu” layout (not completed – buttons perform no actions, although scripts already present in the database seem prepared for links to these buttons) indicates that this file may have been intended as an entry point into the application. Most of the scripts seemed designed for this purpose – only starting scripts to edit data in other databases, etc.

Several of the scripts in this database are structured to write records of entry into specific data areas into the “log.fp5” file.

Current users seem to have no familiarity with use of the layouts and functions provided by this file – use of passwords, etc. is completely unfamiliar to them. This file may therefore be obsolete.

### ***current.fp5 (tentatively “abandoned”)***

35 records. 198 fields. No scripts. 1 layout. No relationships.

Each record seems to represent a student currently enrolled in the program. However, dates entered on records seem to indicate this file is no longer in active use (see comments below).

There is no defined primary key. It is assumed that the “id” column is a foreign key referencing the “student.fp5” field “id”. Spot checks show that the records in this database duplicate information also held in the “student.fp5” file under the same “id” value.

Field names seem to indicate that each record represents a student about whom information is being tracked. Information includes name, history with criminal justice system, information about family, etc. There is no “creation date” field available to assist in determining whether the database is currently used. The “start date” field contains only values between 4/23/2002 and 1/27/2003. The “Status as of” field contains only dates from 5/6/2002 to 2/20/2003. These dates in combination with the small number of records would seem to indicate that the database has not been in active use.

The single layout is a “default” style layout named simply “Layout #1”. No customizations indicating regular employment as a user interface are present, and all fields are displayed in standard columnar layout in alphabetical order. The overall indication is that this layout was never used as a “production” type user interface to the application.

### ***data\_dict.fp5 (tentatively “never used”)***

5 fields. No scripts. 1 layout.

This database seems to set up to use one record to describe a single field in the application. However, only two records are present. It seems this database was never placed in full use.

### ***evaluation.fp5 (tentatively “abandoned”)***

1700 records. :52 fields. 9 scripts. 9 layouts.

Each record seems to represent an individual meeting between a student and an individual staff member implemented as one part of the regular “monthly evaluation” of students. In the “monthly evaluation”, the student meets individually with all staff members, who then compose a joint evaluation of the student’s recent work. As contrasted to the “review.fp5” database, however, this database contains the student’s scores on critical evaluation factors, as rated by the staff member.

4 calculation fields, 13 summary fields, 5 global fields.

2 layouts appear designed for data entry (essentially duplicates of one another), 2-3 layouts seem designed to prompt the user for criteria for selecting/handling records used in reports 2-3 report layouts. Some layouts seem to have been used during testing/development and then were never deleted.

Scripts are relatively simple. Generally they contain no comments indicating name of the developer, explaining mechanisms used, etc.

The “serial #” field seems to be defined as a primary key.

“id” field is a foreign key referencing the “id” primary key of “student.fp5”.

Note that the “evaluator” value list would seem to naturally list staff members recorded in the staff.fp5 database, but this is NOT the case.

Note that “date” and “creation date” fields are both defined to automatically hold the date on which the record was created. All records entered were entered prior to 10/2001.

### ***exit report.fp5 (tentatively “never used”)***

No records. 11 fields. No scripts. 1 layout.

Each record seems to provide details concerning a student’s exit from the program.

No primary key is defined.

Records in this file seem to be linked to student.fp5 records via a relationship using the “id” field.

This database was apparently never placed in service, and must represent an aborted or “draft” development attempt.

### ***exported.fp5 (tentatively “never used”)***

20 records. 10 fields. No scripts. 1 layout. No relationships.

Each record seems to represent a student whose

No primary key is defined. “Id” field apparently is *student* id.

Values of “exit date” field on all records are in early 2003, perhaps indicating that this database has not been used by the application for over a year.

### ***fbchd.fp5 (tentatively “never used”)***

[LB – Referenced by bhcd.fp5 script “snapshot”, but not provided to developer with other application files.]

### ***ged.fp5***

97 records. 30 fields. No scripts. 2 layouts. No relationships.

Each record seems to represent a student’s (perhaps multiple) GED exam results. For up to 5 GED exams, the database may record “pre”, “date”, “score” and other attributes.

No primary key is defined. The “id” field seems to implement a foreign key reference to the student.fp5 database.

The two layouts are not provided informative names (now named “layout #1”, “layout #2”), and are so little customized as to suggest little or no use.

### ***goals.fp5 (tentatively “never used”)***

0 records. 13 fields. No scripts. 1 layout.

Each record seems to represent goals established for a single student. Only “phase1” goals are currently provided.

No primary key is defined. The “id” field here is a foreign key reference to the “id” field primary key of the student.fp5 file.

The only layout includes a reference to a field using the “student” relationship. The field is indicated as “missing”, which indicates that this file has probably not been used since a time when the referenced field was deleted in the student.fp5 database.

This file is probably obsolete or represents a preliminary development approach that was abandoned.

### ***gradcheck.fp5***

9708 records. 15 fields. 7 scripts. 10 layouts. 4 relationships.

Each record appears to represent a single graduation requirement established for an individual student, together with an indication of whether that requirement has been met.

No primary key defined. “Id” field appears to be a foreign key referencing the student.fp5 database.

Values of the “created” field range from April 2002 to the present.

One layout is used to indicate a student, department, etc. whose graduation requirement records are to be reported. Most other layouts are reporting layouts.

The only place apparent for editing these records is the “gradcheck” portal displayed on the “Grad CheckList” layout of the student.fp5 file – accessed using a button on the “student.fp5” “status” layout. Performing a “find” operation for all student records with any value listed in the portal indicates that these related records are present for only students with “id” value ranging from 510 to 842. No records are entered for student ids from 843 to 2123. After id value 2123, related gradcheck.fp5 records are found for students with ids up to 2234 in value.

Note that the “staff” value list would seem naturally to list staff members recorded in the staff.fp5 database, but this is NOT the case.

### ***help.fp5 (tentatively “never used”)***

2 records. 4 fields. 1 script. 2 layouts. No relationships.

Each record seems intended to hold a page in a help system for the application. The fact that there are only 2 records present makes it obvious that this idea was never completely implemented.

No primary key is defined, and no foreign keys appear to be defined.

### ***household.fp5 (tentatively “never used”)***

196 records. 74 fields. 47 scripts. 1 layout. 13 relationships.

9 calculation fields. 8 summary fields. 9 global fields. Note that the “id” field here is a primary key – this name collides with the “id” field also used as the primary key of the “student.fp5” table and used as a foreign key for the student table in many other databases. Many of the fields present in this database seem to duplicate information also held in the “student.fp5” file.

“Creation date” field contains values ranging from 1999 to 2000 only. In addition, many scripts contain “<unknown>” references to layouts. These features indicate that this file is probably abandoned or obsolete.

### ***log.fp5 (tentatively “never used”)***

76 records. 11 fields. 1 script. 2 layouts.

Each record appears to track some type of application activity performed or attempted by a user. It may be worth noting that this file is referenced by the “check password” script of the counselors.fp5 file, and that script also sets values for global fields in the log.fp5 database.

The “serial” field is defined as a primary key.

The “date” field (note this is a keyword in SQL and many other computer languages) is set to the time of record creation and all records contain values falling in the year 2000. It would appear that this file is now obsolete or abandoned.

The one script creates a new record and inserts field values from global fields. This script works in conjunction with scripts in the counselor.fp5 file to create records characterizing user actions such as the entry of a major data subject area, etc.

Only one of the layouts seems completed.

### ***newadd.fp5***

378 records. 6 fields. No scripts. 1 layout. No relationships.

Each record contains a single address.

The “id” field is defined as a primary key, colliding with use of “id” field in many other uses as “*student id*”. Creation of a new “student.fp5” layout displaying records linked by “id” value shows that in all examined cases, addresses in newadd.fp5 are also present in student.fp5. Examination of student.fp5 layouts displaying address always seem to use fields in the student.fp5 table – no instance of display of a “newadd.fp5” field was found there.

No date fields are available to assist in determining when this file was in active use.

### ***nongrads.fp5 (tentatively “never used”)***

2 records. 191 fields. 54 scripts. 76 layouts. 13 relationships.

The “id” field is defined as a primary key, conflicting with use of “id” name in student.fp5 and files using “id” as a foreign key to student. A large proportion of the fields in this file seem to duplicate information also held in the “student.fp5” file. All records in this file contain mostly blank fields.

No obsolete references to layouts or fields seem to be present in scripts.

### ***passwords.fp5 (tentatively “not used/lost”)***

[LB - This database is referenced by scripts in the counselors.fp5 database, but was not provided to the developer with the other application files.]

### ***phone.fp5***

506 records.. 4 fields. No scripts. 1 layout (default). No relationships.

Each record represents a phone number associated with an individual student.

No primary key is defined. The “student\_id” appears to be foreign key to the student.fp5 database.

Stores some of the phone numbers stored/tracked in the application. Phone numbers are also stored in the student.fp5 file (student primary contact phone number and emergency contact phone number). In some cases, one student has multiple records associated in this database.

## Time of Use

Values stored in the “date” field (defined for auto-entry of “record creation date”) indicates that records have been entered between 5/2003 up to the current date. All records in this file have a creation date value assigned.

## Data Duplication

The “bc\_Phone” layout added for data examination during this evaluation shows that a great many of the phone numbers stored in this database are also stored in the student.fp5 “phone number” field.

## Data Issues

In many records the use of “notes” and “phone\_number” fields is reversed. This does not seem to correspond to a particular period of use, etc. as these records are dispersed throughout the range of creation dates represented by records in this database.

The student.fp5 “emergency phone” field seems to contain information that is typically NOT stored in this database.

## ***review.fp5***

2411 records. 13 fields. 8 scripts. 9 layouts. 3 relationships.

Each record seems to represent an individual meeting between a student and an individual staff member implemented as one part of the regular “monthly evaluation” of students. In the “monthly evaluation”, the student meets individually with all staff members, who then compose a joint evaluation of the student’s recent work. As contrasted to the “evaluation.fp5” database, however, this database contains the free-text notes/comments of the staff member from those individual meetings.

No primary key is defined. “Id” field appears to be a foreign key referencing the “id” primary key of the “student.fp5” database. Note however that “id” in this database is a text field – it is defined as a number field in most other locations in the application.

“Department” field does not have a value entered on any record.

“Date” field indicates records have been created from 01Jan2003 to the present.

Most layouts seem designed for reporting, one layout seems to be designed specifically for data entry.

Scripts are simple in purpose: two are used to find/remove records with blank “notes” values; several are used to initiate reports.

Only a relatively small number of records in this database contain “Id” values matching those occurring in the “evaluation.fp5” database.

All records in this database were entered in 2003 and 2004.

## ***software.fp5 (tentatively “never used”)***

2 records. 8 fields. No scripts. 1 layout. No relationships.

Each record seems to represent a software product that has been licensed or purchased, including the name, serial number, installation key, etc.

The single layout is still named “layout #1” and contains no customizations indicating production use as a data entry form. This fact, together with the small number of records seems to indicate this file is not a part of the application being examined, and also was never placed into full “production” use.

No primary key or foreign keys are defined.

Note the field “serial” here indicates a software product serial number, as opposed to the frequent use of this label to indicate a primary key within other databases in the “student-tracking” application.

### ***staff.fp5***

13 records. 6 fields. 3 scripts. 2 layouts. No relationships.

Each record appears to characterize a single present or former staff member.

The “staff\_id” field is defined as a primary key.

Scripts and layouts are very basic and straightforward.

### ***stathist.fp5***

1565 records. 7 fields. 3 scripts. 3 layouts. 1 relationship.

Each record seems to represent a change in student status.

The “serial” field is defined as a primary key. “Id” field is a foreign key referencing the “student.fp5” field “id”. Note however, that this field is defined as a text field as opposed to the “student.fp5” “id” field, which is a number field.

Value lists for “status:old” and “status:new” fields are obtained from “status” field of “status codes.fp5” database.

“Effect date” field indicates records have been entered from 1998 to the present.

### ***status codes.fp5***

12 records. 2 fields. 1 script. 1 layout. No relationships.

Each record seems to define a code used to indicate the status of a potential, current, or former student in programs.

These codes are used in value lists for “stahist.fp5” database fields.

### ***student.fp5***

493 records. 204 fields. 70 scripts. 105 layouts. 53 value lists.

Approx 25 calculation fields, approx 20 summary fields, approx. 12 global fields. Fields sometimes named using special characters. “Else...” field names are not particularly clear indications of contents. “Creation date” field contains values from November 1999 to the present.

Script names use special characters. In some cases, more than one script share the same script name. In at least some cases, script names do not obviously indicate the actions performed by the script.

Use of “id” field as a join field in relationships with remote tables seems problematic, since the field name “id” does not in itself indicate which table is referenced. For instance, it may not be clear that the field “id” in the “address”, “evaluation”, “goals” or “student\_pics” database refers to a linked row of the “student” table (i.e. it contains a “student id” value). “Id” values do not cover a continuous range, but exhibit substantial gaps around 320 (approx 80 missing values) and around 900 (approx 140 missing values).

The “goals” relationship is never referenced in the current file. This may indicate that the goal.fp5 file was never completed or is obsolete. It seems likely that the goal.fp5 file would have represented an enhanced state of development for the current storage of “goal” information within the student.fp5 file.

## **Address Details**

The student.fp5 “bc\_Address” layout added during this evaluation indicates that most of the addresses stored in this database are also stored in “address.fp5” and “newadd.fp5” databases.

The “address” relationship is used only on the “Contact” and “Contact list” layouts. Both these layouts display information from “address.fp5” records in portals. Neither layout is referenced by any scripts. The “contact” layout, however, is currently reached by use of the “contact” button located on several of the primary data entry forms for this database.

The “residence” field displayed on the “contact” layout does not directly relate to any specific address stored in related records of the “address.fp5” database, although the layout’s use of the field might imply this to a user.

Note that there appears to be no layout that allows entry of information into the student database’s internal address fields for a student’s home address. The portal display on the “contact” layout apparently was originally a display of these internal fields, with the “displayed field” later changed to reference fields accessible through the relationship defined for the current portal in which they are displayed. This results in the confusing situation where the field displays are labeled with the field names from the student database, but actually display the fields in the related “address” database.

Despite the fact that no layout appears to allow entry of data into the student database “home address” fields, these fields generally have information stored in them that corresponds to the information available on one of the related address records. As of 20Jul2004, the mechanism that writes this information is not understood.

In some of the last-entered records, address information in related records of the “address.fp5” database is more complete than information stored directly in the student.fp5 database.

### ***student pics.fp5***

382 records. 4 fields. 2 scripts. 8 layouts.

Each record seems intended to store a picture of an individual student for a specified school year. However, most records do not have a picture inserted.

No primary key is defined. The “id” field seems to be a foreign key referencing the student.fp5 database.

Most layouts are apparently test layouts used in development and then never deleted. The only layouts that seem to be completed are two that provide the front and backside of student ids.

### ***student work.fp5 (tentatively “abandoned”)***

1 record. 2 fields. No scripts. 1 layout (default layout). No relationships.

No primary key is defined. The “student\_id” field is defined as text, whereas the “student.fp5” database primary key “id” is a number field.

The two fields in this database are not named in a fashion that allows an easy guess as to what each record represents (names: “student\_id”, “part”). In addition, because not even a single record has

values filled in, there is no way to really guess the intent here. It does seem that this database was never placed into “production” use.

### ***tabe test.fp5***

415 records. 8 fields. 2 scripts. 5 layouts. 2 relationships.

Each record seems to contain the result of one test result for an individual student. Quick visual checks seem to indicate that most individuals represented in this database have two records present.

No primary key is defined. The “id” field is an apparent foreign key to the student.fp5 database.

“Date” field contains values from 1998 to Jan 2004.

Scripts and layouts seem primarily to be designed to implement reports.

### ***Template\_gradcheck.fp5***

81 records. 7 fields. 6 scripts. 3 layouts. 1 relationship.

Each record seems to list a candidate graduation requirement. The “active” field accepts “Y” values indicating which set of requirements are currently in effect. A “date inactive” field present in the database contains no values. The “date” field indicates the creation date of records, all of which fall in 2002/2003.

Note the “date” and “creation” fields are both specified to contain the “creation date” for a record.

This database provides no capacity to store a history of prior graduation requirements – only the “current state” requirements are represented... those used to establish requirement records for newly enrolled students.

### ***violation table.fp5***

30 records. 3 fields. 3 scripts. 3 layouts. No relationships.

Each row represents a code used to classify a student violation??

The first record seems to actually contain headings rather than data values themselves – as if the data had just been imported from an Excel spreadsheet where the first row contained the column names.

The database appears to function as a “lookup table” for codes entered in records of another database, however, the “violation code” is in all but one record a number. Typically such a column would be defined as a primary key, but no uniqueness of values is enforced on this column.

The field “consequence” is blank on 28 of the 30 records in this database.

### ***violations.fp5 (CONTINUE HERE)***

700 records. 13 fields. 8 scripts. 5 layouts. 4 relationships.

Each record represents a “violation” recorded for an individual student by a staff member. Violations are categorized using the codes defined in the “violation table.fp5” database.

No primary key is defined. “Id” field is a foreign key referencing the “student.fp5” file’s “id” column, despite being a text field (the student.fp5 “id” field is a number).

“Layout #1” seems to be the only layout designed for general data entry use. One layout is used to select records for reporting. “Layout #5” seems to simply list all fields for use by developers, etc.

***xgrad\_address.fp5***

1 record (incomplete). 8 fields. No scripts. 1 layout (default). No relationships.

No primary key defined. "Student\_id" is probably designed as a foreign key referencing the "id" field of the "student.fp5" database, but there is no relationship defined using this field.

***Xgrad\_education.fp5***

4 records. 5 fields. No scripts. 1 layout (default). No relationships.

No primary key defined. "Student\_id" is probably designed as a foreign key referencing the "id" field of the "student.fp5" database, but there is no relationship defined using this field.

***Xgrad\_employment.fp5***

10 records. 24 fields. No scripts. 1 layout (default). No relationships.

No primary key defined. "Student\_id" is probably designed as a foreign key referencing the "id" field of the "student.fp5" database, but there is no relationship defined using this field. Only 3 of the 10 records has a "student\_id" value entered. Only 1 of the 10 records has both a start and end date entered. All records were entered during a 6 month period in 2003 (May-Nov).

***Xgrad\_phone.fp5***

1 record (empty). 4 fields. No scripts. 1 layout (default). No relationships.

No primary key defined. "Student\_id" is probably designed as a foreign key referencing the "id" field of the "student.fp5" database, but there is no relationship defined using this field.

***Xgrad\_regular\_contact.fp5***

7 records. 22 fields. 2 scripts. 2 layouts. 1 relationships.

No primary key defined. "Student\_id" is probably designed as a foreign key referencing the "id" field of the "student.fp5" database, but there is no relationship defined using this field.

All records entered were created between May and December 2003.

***xgradcheck Copy.fp5***

5048 records. 15 fields. 6 scripts. 10 layouts. 4 relationships.

Extremely (not exactly) similar to the "gradcheck.fp5" file. Layouts and fields are exact copies.

However, note the differing number of records. Also, the "gradcheck.fp5" file has an additional script ("print\_current")

***xgrads.fp5***

248 records. 14 fields. 10 scripts. 5 layouts. 6 relationships.

Each record seems to represent a graduate of the program.

No primary key is formally defined, but it appears that the "student\_id" field serves a similar function. The "student\_id" field is also a foreign key referencing the student.fp5 database.

Records in this file contain "start date" values ranging from 2000 to early 2003. No formally defined "creation date" field is defined.

***Yb\_exit\_why.fp5 (tentatively “never used”)***

3 records. 2 fields. No scripts. 1 layout (default). No relationships.

No primary key defined. It seems likely the “id” field is a foreign key referencing the student.fp5 database.

Data too sparse to immediately comprehend intended use.

***yb.fp5***

10 records. Approx 9 fields (approx 4 globals), 85 scripts. 9 layouts.

Most fields are blank in all records of this database. This seems to indicate that records in this database are not used for storing information content. The file instead seems to serve mainly as the “main switchboard” for the application. The only fields that contain differing data in different rows is the “pics” field, which contains a different photo on each record.

A variety of naming conventions for script is used, no discernable ordering of scripts is used to organize them. Special characters of various types are used in script names. In some cases, more than one script has the same name. Overall, naming patterns are obvious, but inconsistent.

Script typically contain a small number of script steps, and contain no comments indicating date of creation, purpose, or explanation of mechanisms applied or reasons for using those mechanisms. The developer in many cases did insert “Enter browse mode” script steps, which is generally considered good FM scripting practice. Some scripts contain references to layouts now deleted – which means that these scripts are either obsolete or broken. There is no obvious change in script construction approach from earliest- to last-developed scripts, although these scripts are all short enough that such evolution might not be in strong evidence.

All layouts are either “switchboards” or “report selection criteria specification” layouts.