**CS276 Aaron Flager, Term Project Part 1**

**CAMP KIRBY**

Camp Kirby is a location near Bow, WA, where group events are hosted. It's central purpose is to host a summer camp where kids, ages 6-17, learn leadership and outdoor skills while having a fun summer adventure. Camp runs over the course of several weeks, usually five and a training week, with a different theme each week. The organization that runs these events is the nonprofit Samish Council branch of Camp Fire USA.

Maintaining camper and staff information from year to year is a consistent problem. Every year is basically starting from zero, requiring staff and campers to fill out forms they've filled out every year. The most significant issue with this is inconsistent medical or certification information, which can carry over from previous years, but often has no concrete data is available to confirm.

In addition, accolades in the form of badges, beads, or patches are earned and kept from year to year. Currently, acknowledgment of a prior accomplishment is not recorded anywhere and only physical evidence of the award is able to be used. There has been a push to try to convert campers into full fledged regular members of their local Camp Fire clubs, but without any data on their accomplishments, they're often receiving little or no credit for what they earned during their camp experiences.

The physical storage of prior years records has been lost several times due to flooding that occurs on the island. Transportation of the records has been complicated, due to the quantity of files to be transferred and an inconsistent filing method that is changed from year to year.

A database will solve the following problems:

* Transportation and copies of the data will be easily managed by electronic transfer, rather than awkward physical copies of the information.
* Inconsistencies of data between years will be more easily recognized and dealt with. Safety improved because of this.
* Provides a clear and consistent method of organizing information.
* Error corrections will not cause conflicts in recorded data between various physical copies.
* Consistency of data between different eras of staff management.
* Prevents the situation of not being able to recognize camper accomplishments because we lack a record of prior accolades.
* Consistent record of staff/camper medical information and registration numbers that will be consistent between the camp office and registration.

The database will be utilized by the camp director, the recruitment organizer, program manager, camp chef, and office registration. The database will be used to determine any medical or activity restriction issues that may be present for a camper/staff. It will be available as a record of past accolades that a camper may have earned, so that they have an electronic method of evidence for their accomplishments. It can also be used to organize meals, restricting certain options to prevent allergy problems during those weeks it may be an issue.

**BUSINESS RULES**

\* Campers will be assigned to at least one, but possibly several, staff for a weekly session. A Cabin Counselor will often have several campers assigned to them, but program staff may have no directly assigned campers.

\* Campers can receive accolades, such as badges/beads/certificates. A camper may start not having any accolades, but is likely to earn several of them. Accolades may be earned by many campers, but some accolades may not yet be earned by any camper.

\* Each camper must have at least one caregiver assigned to them to contact in case of an issue arising. The caregivers must have a phone number we can reach them at.

\* Campers can only be a part of one Camp Fire club at a time, though they are not required to belong to a club.

\* Each staff member must be assigned to a position. Some staff may hold more than one position at a time, such as Program Director and Archery Instructor.

\* A position will require, at bare minimum, First-Aid/CPR certification. Additional certifications will often be necessary for cooking and program staff.

\* Staff will all have at least one certification, as every staff member must have current CPR/First-Aid training. Several staff members will have additional necessary certifications.

\* Staff may work different positions during different weeks. One week they may need to be a Cabin Counselor, the next they are the Arts and Crafts Coordinator. They will always have at least one position they are assigned to. Some weeks may have no staff working in a particular position.

\* Some activities may be restricted for the camper or staff member. This may be due to a medical condition, but could also be due to religious reasons or individual personal concerns. Often campers or staff have no restrictions, but when they do they usually have several restricted activities. An entry may be made for a restricted activity that doesn't exist yet.

\* Medical information is recorded for every camper and staff member. There may be no medical information that requires specific attention, but some staff or campers have numerous conditions that we need to be aware of.

\* Several staff/campers will have similar medical conditions. The database should record a brief description of each condition. Each allergy should be recorded as a separate condition. It is allowable to store information on conditions that no staff/camper is currently affected by.

\* Each week will likely have between 8 and 16 cabin groups, though may have more. All weeks, even half weeks, will have at least one cabin group assignment.

**DATA DICTIONARY:**

**CERTIFICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| CertID | PK | Y | Y | Number | 10 | Unique Identifier |
| StaffID | FK | Y | Y | Number | 10 | Foreign Identifier |
| PositionID | FK | Y | Y | Number | 10 | Foreign Identifier |
| CertName |  |  | Y | Varchar | 25 | Name of Certification |
| CertDesc |  |  |  | Varchar | 260 | Description of Certification |
| CertInquiryPhone |  |  |  | Varchar | 25 | Contact phone number for certification questions |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| CertID | Y |  |  |
| StaffID |  |  |  |
| PositionID |  |  |  |
| CertName |  |  |  |
| CertDesc |  |  |  |
| CertInquiryPhone |  |  |  |

**Business Rules:**

\* Description of certifications is not required for each certification.

\* Phone number used to contact for inquiries about certifications is provided when possible, but not required.

**POSITION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| PositionID | PK | Y | Y | Number | 10 | Unique Identifier |
| PositionName |  | Y | Y | Varchar | 25 | Name of Position |
| PositionDesc |  |  | Y | Varchar | 600 | Description of Position |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| PositionID | Y |  |  |
| PositionName |  |  |  |
| PositionDesc |  |  | Must be more than 50 characters |

**Business Rules:**

\* Description of each position is required. To ensure adequate description must be more than 50 characters in length.

**STAFF**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| StaffID | PK | Y | Y | Number | 10 | Unique Identifier |
| PersonID | FK | Y | Y | Number | 10 | Foreign Identifier |
| StaffPhone |  |  | Y | Varchar | 25 | Staff phone number |
| StaffAddress |  |  |  | Varchar | 100 | Staff mailing address |
| StaffEmail |  |  |  | Varchar | 60 | Staff email |
| CampNickname |  |  |  | Varchar | 25 | Nickname used by staff member during camp |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| StaffID | Y |  |  |
| PersonID |  |  |  |
| StaffPhone |  |  |  |
| StaffAddress |  |  |  |
| StaffEmail |  |  |  |
| CampNickname |  | Muffins |  |

**Business Rules:**

\* CampNickname may not be determined until the end of pre-camp, and as such is allowed to be blank until the staff member chooses a nickname. Each staff will have an assigned nickname used during camp, such as “Fuzzy”, “Sphinx”, “Skippy”, etc. This is often the name the staff know each other by during camp season. For amusement, staff are called “Muffins” until they choose a name.

**MEDICAL\_CONDITION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| ConditionID | PK | Y | Y | Number | 10 | Unique Identifier |
| ConditionName |  | Y | Y | Varchar | 25 | Condition name |
| ConditionDesc |  |  | Y | Varchar | 600 | Condition description |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| ConditionID | Y |  |  |
| ConditionName |  |  |  |
| ConditionDesc |  |  | Must be more than 50 characters |

**Business Rules:**

**\*** Each condition must be categorized by a different name.

\* Description of each condition must be provided. To ensure adequate description it must be more than 50 characters in length.

**ASSIGNED**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| AssignedID | PK | Y | Y | Number | 10 | Unique Identifier |
| StaffID | FK | Y | Y | Number | 10 | Foreign Identifier |
| CamperID | FK | Y | Y | Number | 10 | Foreign Identifier |
| WeekID | FK | Y | Y | Number | 10 | Foreign Identifier |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| AssignedID | Y |  |  |
| StaffID |  |  |  |
| CamperID |  |  |  |
| WeekID |  |  |  |

**Business Rules:**

N/A

**PERSON**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| PersonID | PK | Y | Y | Number | 10 | Unique Identifier |
| PersonName |  | Y | Y | Varchar | 50 | First Middle Last name |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| PersonID | Y |  |  |
| PersonName |  |  |  |

**Business Rules:**

N/A

**RESTRICTED\_ACTIVITIES**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| RestrictedActID | PK | Y | Y | Number | 10 | Unique Identifier |
| RestrictedActName |  |  | Y | Varchar | 25 | Name of activity to be restricted |
| RestrictedActDesc |  |  |  | Varchar | 600 | Description of activity to be restricted |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| RestrictedActID | Y |  |  |
| RestrictedActName |  |  |  |
| RestrictedActDesc |  |  |  |

**Business Rules:**

N/A

**RESTRICT\_ACT\_INFO**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| RestrictedInfoID | PK | Y | Y | Number | 10 | Unique Identifier |
| PersonID | FK | Y | Y | Number | 10 | Foreign Identifier |
| RestrictedActID | FK | Y | Y | Number | 10 | Foreign Identifier |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| RestrictedInfoID | Y |  |  |
| PersonID |  |  |  |
| RestrictedActID |  |  |  |

**Business Rules:**

N/A

**MEDICAL\_INFORMATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| MedInfoID | PK | Y | Y | Number | 10 | Unique Identifier |
| ConditionID | FK | Y | Y | Number | 10 | Foreign Identifier |
| PersonID | FK | Y | Y | Number | 10 | Foreign Identifier |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| MedInfoID | Y |  |  |
| ConditionID |  |  |  |
| PersonID |  |  |  |

**Business Rules:**

N/A

**WORK**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| WorkID | PK | Y | Y | Number | 10 | Unique Identifier |
| PositionID | FK | Y | Y | Number | 10 | Foreign Identifier |
| StaffID | FK | Y | Y | Number | 10 | Foreign Identifier |
| WeekID | FK | Y | Y | Number | 10 | Foreign Identifier |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| WorkID | Y |  |  |
| PositionID |  |  |  |
| StaffID |  |  |  |
| WeekID |  |  |  |

**Business Rules:**

N/A

**CAMPER**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| CamperID | PK | Y | Y | Number | 10 | Unique Identifier |
| PersonID | FK | Y | Y | Number | 10 | Foreign Identifier |
| CamperName |  |  | Y | Varchar | 50 | First Middle Last name |
| CamperAge |  |  | Y | Int | 3 | Age of camper |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| CamperID | Y |  |  |
| PersonID |  |  |  |
| CamperName | Y |  |  |
| CamperAge |  |  | Must be greater than 3, less than 150 |

**Business Rules:**

\* Campers will be over the age of 3 and under the age of 150. Age must be recorded so we can verify which cabin assignments are appropriate.

**WEEK**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| WeekID | PK | Y | Y | Number | 10 | Unique Identifier |
| WeekName |  | Y | Y | Varchar | 50 | Name of week according to schedule, ex: “2016 season, week 5” |
| WeekBeginDate |  |  | Y | Date |  | Day of camper arrival |
| WeekEndDate |  |  | Y | Date |  | Day of camper departure |
| WeekTheme |  |  |  | Varchar | 50 | Theme for the week |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| WeekID | Y |  |  |
| WeekName |  |  |  |
| WeekBeginDate |  |  |  |
| WeekEndDate |  |  |  |
| WeekTheme |  |  |  |

**Business Rules:**

\* Weeks begin on the day the campers arrive, which is their first over-night visit. Weeks end on the day the children are picked up by their caregivers.

\* Not every week must have a theme.

\* Weeks can be entered into the database before they occur, to establish the theme and set up registration. Hence, no constraint for the date being before today's date is necessary.

**CAMP\_FIRE\_CLUB**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| ClubID | PK | Y | Y | Number | 10 | Unique Identifier |
| CamperID | FK | Y | Y | Number | 10 | Foreign Identifier |
| ClubName |  |  | Y | Varchar | 50 | Name of Camp Fire club |
| ClubPhone |  |  |  | Varchar | 25 | Contact phone for club |
| ClubEmail |  |  |  | Varchar | 50 | Contact email for club |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| ClubID | Y |  |  |
| CamperID |  |  |  |
| ClubName |  | Samish Council |  |
| ClubPhone |  | (555) 555-5555 |  |
| ClubEmail |  | samish.council@campfire.com |  |

**Business Rules:**

\* If the camper has no club they belong to then the activities they enjoy through Camp Kirby qualify them to be recorded as if they were a member of the Samish Council Camp Fire organization, so we can set that as their club by default.

**CAREGIVER**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| CaregiverID | PK | Y | Y | Number | 10 | Unique Identifier |
| CamperID | FK | Y | Y | Number | 10 | Foreign Identifier |
| CaregiverName |  |  | Y | Varchar | 50 | Name of caregiver |
| CaregiverPhone |  |  | Y | Varchar | 25 | Contact phone for caregiver |
| CaregiverAddress |  |  |  | Varchar | 260 | Mailing address for caregiver |
| CaregiverEmail |  |  |  | Varchar | 100 | Email for caregiver |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| CaregiverID | Y |  |  |
| CamperID |  |  |  |
| CaregiverName |  | CPS Skagit County |  |
| CaregiverPhone |  | (555) 444-4444 |  |
| CaregiverAddress |  | Skagit County Address, Bow, WA, 55555 |  |
| CaregiverEmail |  | cps.skagit@childcare.gov |  |

**Business Rules:**

\* At least one caregiver point of emergency contact is necessary for every camper.

\* Many of our campers are processed through the foster care system. In those cases where we do not have an emergency contact, we can utilize the child protective services available in Skagit county.

**ACCOLADE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| AccoladeID | PK | Y | Y | Number | 10 | Unique Identifier |
| AccoladeName |  |  | Y | Varchar | 50 | Name of accolade |
| AccoladeCategory |  |  |  | Varchar | 50 | Category of accomplishment, ex: “outdoor living skills” |
| AccoladeDesc |  |  |  | Varchar | 600 | Description of accolade |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| AccoladeID | Y |  |  |
| AccoladeName |  |  |  |
| AccoladeCategory |  |  |  |
| AccoladeDesc |  |  |  |

**Business Rules:**

N/A

**EARNED**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| EarnedID | PK | Y | Y | Number | 10 | Unique Identifier |
| AccoladeID |  |  | Y | Number | 10 | Foreign Identifier |
| CamperID |  |  | Y | Number | 10 | Foreign Identifier |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| EarnedID | Y |  |  |
| AccoladeID |  |  |  |
| CamperID |  |  |  |

**Business Rules:**

N/A

**CHANGELOG**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Column | Key | Unique | Not Null | Data | Size | Description |
| Name |  |  |  | Type |  |  |
| ChangeLogID | PK | Y | Y | Number | 10 | Unique Identifier |
| CLUser |  |  | Y | Varchar | 25 | User Logged In |
| CLSystemDate |  |  | Y | Number | 10 | Date of Change |
| OldValue |  |  |  | Varchar | 600 | Previous Values |
| NewValue |  |  |  | Varchar | 600 | New Values |
| TypeOfChange |  |  | Y | Char | 1 | Insert/Update/Delete |
|  |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Needs | Default | Check Constraints |
| Name | Index | Value |  |
| ChangeLogID | Y |  |  |
| CLUser |  |  |  |
| CLSystemDate |  |  |  |
| OldValue |  |  |  |
| NewValue |  |  |  |
| TypeOfChange |  |  |  |

**Business Rules:**

\* Changes recorded automatically when using insert, update, or delete procedures.