

Fall 2013
LIB 202-13
Group Project - Database Design
September 8, 2013

ACME TOY CO.
Star Trek Collection

Group 4 Members:
Greg Reeve

Darcy Cummings

Carla García

Jesse Anderson

Jesse Koshlayachuk

Group Member Contributions:

| | |
|--------------------|---|
| Greg Reeve | <ul style="list-style-type: none">● Team leader● Created the database and setup the guest login● Authored rules and standards for some of the database fields● Helped brainstorm collection ideas● Helped write user need questions |
| Darcy Cummings | <ul style="list-style-type: none">● Authored rules and standards for some of the database fields● Authored the unit of description and record structure analysis● Helped define the required database fields● Helped brainstorm collection ideas● Helped write user need questions |
| Carla García | <ul style="list-style-type: none">● Helped organize our group work using Google Docs for both our brainstorming work and the final product● Authored the description of the intended user group and user questions● Authored rules and standards for some of the database fields● Helped define the required database fields● Helped brainstorm collection ideas● Helped write user need questions |
| Jesse Anderson | <ul style="list-style-type: none">● Authored the cover page and statement of purpose● Authored rules and standards for some of the database fields● Helped define the required database fields● Helped brainstorm collection ideas● Helped write user need questions |
| Jesse Koshlayachuk | <ul style="list-style-type: none">● Provided screenshots of the database structure and sample database records● Authored rules and standards for some of the database fields● Helped define the required database fields● Helped brainstorm collection ideas● Helped write user need questions |

Statement of Purpose:

The purpose of this database is to provide Star Trek action figure collectors access to a resource of information about a particular collection of Star Trek action figures all manufactured by ACME TOY CO. Collectors will be able to search for action figures by using multiple search fields such as character name, episode and season. This database is valuable for collectors who are curious about the history and value of a particular ACME TOY CO. Star Trek action figure.

Description of user group and their needs:

Our user group consists of Star Trek aficionados affectionately called “Trekkies” and those interested in buying and or selling Star Trek action figures of characters from the original Star Trek television series which aired from 1966 to 1969. Some users may also be interested in particular information regarding action figures from the the original Star Trek television series.

Questions this user group may ask:

- What was the original purchase price?
- What is the current market value of the action figure?
- What season number did the action figure character appear?
- What is the name of the episode where the action figure character first appears?
- Is the action figure discontinued?
- What’s the character name of the action figure?
- What year was the figure released?
- Is the figure in its original packaging?
- What is the action figure serial number?
- What is the height of the action figure?

Unit of description and record structure analysis:

We chose the action figure's character name as our unit of description based on the assumption that it would be what our users would primarily search for. We ruled out using the actor's name since it may be unknown to our users and is not pertinent to the unit itself.

We assumed that we would have a mixture of serious collectors, Star Trek fans and amateur collectors as our prime users. Due to that, the fields we chose for our record structure include basic information from the show as well as a serial number and other facts that collectors would want to know so that searches can be either specific or broad.

| Field Name | Field Value |
|-----------------------|---|
| 1. ID | An automatically generated integer by the database |
| 2. Serial Number | A number six integers long. |
| 3. Character Name | Freeform |
| 4. Season | 1, 2, 3 |
| 5. Episode Name | Freeform |
| 6. Discontinued | Boolean value |
| 7. Release Year | Integer of four numbers representing the action figure release year |
| 8. Original Packaging | Boolean Value |
| 9. Original Price | Integer of four numbers representing the action figure's original price |
| 10. Retail Value | Integer of four numbers representing the action figure's retail value |
| 11. Height | Integer of two numbers representing the action figure's height |

Rules and Standards:

| Field | Rules and standards |
|-----------------------|--|
| 1. ID | Required field. Not repeatable. An integer value automatically generated by the database. |
| 2. Serial Number | Required field. Not repeatable. Field value: numerical, six integers long entered freeform. This is found on the back of the action figure package. |
| 3. Character Name | Required field. Not repeatable. Field value: Freeform. Determine the character name of the action figure. This information can be found on the front of the package. Enter the name of the character into the database capitalizing the first letter of every proper name. |
| 4. Season | Required field. Not repeatable. Field value: 1, 2, 3. Determine from which season the action figure came from. This information can be found on the front of the package. Enter either 1, 2 or 3 into the database. |
| 5. Episode Name | Required field. Not repeatable. Field value: Freeform. Determine which episode the action figure was first introduced. This information can be found on the back of the package. Enter the episode name into the database as it is written on the package. |
| 6. Discontinued | Required field. Not repeatable. Field value: boolean, yes or no. |
| 7. Release Year | Required field. Not repeatable. Field value: numerical. Limit: 4 integers long in the form of a year. This is found on the back of the package in the form of the copyright date. |
| 8. Original Packaging | Required field. Not repeatable. Field value: boolean, yes or no. |
| 9. Original Price | Required field. Not repeatable. Field value: numerical. Limit: 4 integers long in the form of a price. |
| 10. Retail Value | Required field. Not repeatable. Field value: numerical. Limit: 4 integers long in the form of a price. Fluctuating based on current market value. |
| 11. Height | Required field. Not repeatable. An integer value based on the action figure's height. |

Database design and sample record screenshots:

GPDD_PartA_db_structure_printout.txt

TABLES

star_trek_tos_action_figures

| | | | |
|--------------------------------|--------------|----------|--------------------------------|
| star_trek_tos_action_figure_id | int(11) | textbox | star_trek_tos_action_figure_id |
| serialnumber | int(11) | textbox | Serial Number |
| charactername | varchar(100) | textbox | Character Name |
| season | varchar(50) | list | Season |
| episodename | varchar(100) | textbox | Episode Name |
| discontinued | tinyint(4) | checkbox | Discontinued |
| releaseyear | smallint(6) | textbox | Release Year |
| originalpackaging | tinyint(4) | checkbox | Original Packaging |
| originalprice | double | textbox | Original Price |
| retailvalue | double | textbox | Retail Value |
| height | smallint(6) | textbox | Height |

RELATIONSHIPS

Chrome File Edit View History Bookmarks Window Help 87% Sun 11:46 PM Jesse

Re: GPDD Submission Pack Search Page

https://libr202.sjsu.edu/webdata_pro/student/205/cgi-bin/webdata_pro.pl?_cgifunction=user&_layout=Star%20Trek%20Action%20Figures

Click "Clear Form" then "Search" to see all records.
Enter text in any field to restrict the search to only those records which CONTAIN your text in that field.

For numeric comparisons, begin with >, <, >=, or <=
To find a range, type between lowvalue and highvalue.
Use "and" & "or" for complex searches.

Serial Number

Character Name

Season

Episode Name

Discontinued

Release Year

Original Packaging

Original Price

Retail Value

Height

| Serial Number | Character Name | Season | Episode Name | Discontinued | Release Year | Original Packaging | Original Price | Retail Value | Height |
|---------------|---------------------------|-----------------------|------------------------------|--------------|--------------|--------------------|----------------|--------------|--------|
| 146488 | Captain James T. Kirk | Seasons 1 and 2 and 3 | The Man Trap | 1 | 1967 | 1 | 4.99 | 102.99 | 6 |
| 655211 | Dr. Leonard "Bones" McCoy | Seasons 1 and 2 and 3 | The Man Trap | 1 | 1999 | 1 | 9.99 | 20.00 | 12 |
| 655200 | Montgomery "Scotty" Scott | Seasons 1 and 2 and 3 | Where No Man Has Gone Before | 1 | 1999 | 1 | 9.99 | 30.00 | 12 |
| 512002 | Commander Spock | Seasons 1 and 2 and 3 | The Man Trap | 1 | 1974 | 1 | 3.59 | 135.00 | 8 |
| 512007 | Klingon | Seasons 1 and 2 and 3 | Errand Of Mercy | 1 | 1974 | 1 | 3.59 | 74.99 | 8 |
| 477666 | Pavel Chekov | Seasons 2 and 3 | Amok Time | 1 | 1994 | 1 | 7.49 | 40.00 | 5 |
| 37144 | Lt. Hikaru Sulu | Seasons 1 and 2 and 3 | The Man Trap | 1 | 1968 | 1 | 5.00 | 99.99 | 6 |
| 938700 | Akuta | Season 2 | The Apple | 1 | 1969 | 1 | 5.99 | 60.00 | 6 |
| 31677 | Khan Noonien Singh | Season 1 | Space Seed | 1 | 1968 | 1 | 4.99 | 120.00 | 6 |
| 771633 | Anan 7 | Season 1 | Taste of Armageddon | 1 | 1969 | 1 | 4.99 | 46.00 | 6 |
| 335566 | Commodore Barstow | Season 1 | Court Martial | 1 | 1969 | 1 | 5.99 | 35.00 | 6 |
| 797922 | Captain Gorn | Season 1 | Arena | 1 | 1968 | 1 | 4.99 | 115.00 | 6 |
| 983467 | Captain Koloth | Season 2 | The Trouble With Tribbles | 1 | 1994 | 1 | 7.99 | 40.00 | 9 |
| 22947 | Lt. Uhura | Seasons 1 and 2 and 3 | The Man Trap | 1 | 1994 | 1 | 9.99 | 75.00 | 12 |
| 886441 | Captain James T. Kirk | Seasons 1 and 2 and 3 | The Man Trap | 1 | 1994 | 1 | 9.99 | 100.00 | 12 |
| 840377 | Dr. Brown | Season 1 | The Corbomite Maneuver | 1 | 1969 | 1 | 4.99 | 55.00 | 6 |
| 138709 | Gorgan | Season 3 | And The Children Shall Lead | 1 | 1969 | 1 | 4.99 | 25.00 | 6 |
| 295748 | Kang | Season 3 | Day of the Dove | 1 | 1974 | 1 | 5.99 | 66.00 | 6 |
| 673489 | Keel | Season 2 | The Changeling | 1 | 1974 | 1 | 5.99 | 36.00 | 6 |
| 338859 | Kloog | Season 2 | The Gamesters of Triskellon | 1 | 1974 | 1 | 5.99 | 45.00 | 6 |

Guest Login Information:

| | |
|--------------|---|
| Database URL | https://libr202.sjsu.edu/webdata_pro/student/205/cgi-bin/webdata_pro.pl |
| Username | Geoffrey.Liu@gmail.com |
| Password | libr202 |

Fall 2013
LIBR 202-13
Group Project- Database Design
Part B1
9/16/13

Group 4 Members:

Greg Reeve
Darcy Cummings
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Jesse Anderson
Jesse Koshlayachuk

Part B1:

Is the database design appropriate for the collection?

The design of this database is in some respects appropriate for the collection; descriptions were accurate and found to be helpful when searching for certain qualities. However, there are a few key attributes and rules for entering data that may make the database more user friendly. During our test of the design, our group found it was not possible to enter more than one of each cheese type and this limits the content significantly. Additionally, fields labeling the cheese as dessert or as a topping were found to be too subjective and possibly unnecessary. Given that the database was created for possible connoisseurs and chefs, it may be more appropriate for the collection to add a field that identifies more than one type of cheese (such as two different cheddars). Other field suggestions include the age, freshness, brand, region and taste (mild/ buttery/ nutty/ sweet/ tangy/ pungent) of a cheese. Additionally, it should be noted that group x's database design was thorough in terms of naming milk type and fat/calorie content.

How well do they provide for consistent description of items?

Overall the descriptions are consistent. One field that does not appear to be consistent is the "fat content" field in which most cheeses are listed as having a variable fat content "x-x%", while others are listed as "varies", but does not specify. In the "original country of origin" field, the only one that is not consistent is ricotta, which has Australia listed as its country of origin rather than Italy. Otherwise, all fields contain descriptors for their units throughout the database. However, more description would be beneficial to the users.

Is the design sufficient to meet the users' needs?

After analyzing the database design in regards to the needs of its intended users, it was found that the information provided in the database is sufficient enough to meet most of the needs of its users. *A Collection of Cheese* provides valuable information such as name of cheese, fat content, price per pound, type of milk used and country of origin.

However, as this database has a large user group and intends to appeal to a wide audience of cheese consumers, it is possible that there are a few key pieces of information missing from this database that would be helpful and important for connoisseurs to have access to. Upon first examination of their user's needs, group x stated in their report, "Consumers, gift buyers, and chefs might want more information about a particular type of cheese for a recipe, gift purchase, or to pair with a particular food or wine." While group x did not use these attributes in their database, their initial assumptions were correct.

When analyzing this broad user group it was determined that most users of this database would be interested in knowing what wines and meats are complementary to each cheese. Group x explored the idea of pairing wine and cheeses when discussing possible questions their users might seek to answer with this database. "What types of cheeses go well with red wine?" is one of the questions that was discussed by group x, but pairing cheese with wine was not addressed in this database. It was not explained in the report why this attribute was overlooked. The field that designates a cheese as a dessert cheese is the only field that dealt with cheese pairing.

Attaching each cheese to a popular recipe would have been a helpful field as well. The group stated in their report that, "Even though we believe there would be interest in linking to favorite cheese recipes, based on time constraints, we have chosen not to include that option in this project." Example

recipes are important tools for the intended user group and a work around should have been found to accommodate this information.

Overall group x was effective in creating a database that initially will satisfy most of the information needs of its broad user group, however the database should be revised to include wine pairing, meat pairing, and recipe/popular uses fields. The group should also consider narrowing the scope of their user group so that their database has more focus. If the user group were more defined there would be no need for a patron survey.

How well do they accommodate exceptions?

Group x has done a fine job of accommodating exceptions within the categories they have created. Upon further consideration, a few exceptions have come to mind. The situations that were not accommodated were those dealing with textures, regions, and the price range.

An exception that was not accommodated was cheeses that have various textures. For example, mozzarella can be soft and semi-hard depending on its freshness and the type of milk from which it's made. Swiss cheeses also vary in texture. Perhaps if more records were created, a user would have yielded these results given that only one field was required in order to search for results. As it is, though, it appears that a cheese is limited to one texture.

Another exception is a result of the absence of a field. Cheeses can differ greatly based on region and there seems to be a need for this field. Due to the evolution of cheeses, it seems more prudent to rename the field "Original Country of Origin" to "Country of Origin" and include another field, perhaps a subfield, entitled "region". For example, cheddar cheese, in general, is originally from England but Americans have created their own distinct cheddars according to region. These include but

are not limited to “Wisconsin”, “Vermont”, “Tillamook”, etc. Even cheeses in England vary according to region. Swiss cheeses are also similar in that they vary according to region.

Group x did well in creating text boxes for color of cheeses with the same name since various colors did yield results. They also did well in creating records for cheeses that melt well and have a price point. However, the pricing field is challenging to manage as there are cheeses that can cost well up to \$50 per pound but their field is limited to \$20 per pound. While text boxes were generally helpful, it would have been more user friendly to create a range of values for the “calories per ounce” field.

Were the design rules adequately implemented and enforced in their WebData Pro implementation?

We had the following observations and suggestions for the database design field rules and standards and how those rules are enforced in the WebData Pro database:

- The display type for each field is described well (text field, checkbox, comment, number field, list etc).
- In the database there are 17 fields but only 10 rules listed. For a cataloger who needs to understand what each field means and what can be entered into those fields, split out each rule for each field rather than grouping them together. For example, instead of grouping type of milk into one rule, include the actual field names for each milk type represented in the database along with the rules for that field.
- What are the expected lengths for fields using a text box as the display type? Are these lengths long enough to account for possible field values?
- In addition to specifying the rule of what the display type is for each field (text box, list, check

box etc.), include a rule defining where the information for that field can be found. The cataloger should understand from the field rules what goes into each field and where to get that information from the item.

- For each field specify whether the field is required or not. Some fields make sense as required fields (e.g. cheese name) and others may not be needed (e.g. comments).