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| USE CASE # | UC#2 | |
| USE CASE Name | Create a Multi-Table Database | |
| ACTOR | End user | |
| Goal (1 phrase) | Successfully create a 3NF, 3 table database to store inventory, including manufacturer and supplier data. | |
| Overview and scope | This use case describes the human-computer dialog that results in a guided database creation task that creates a custom database leading to a 3NF normalized, multi-table database. | |
| Level | Primary | |
| Preconditions | User will have registered for membership, and will have logged in. User is a paid member with associated privileges. | |
| Postconditions in words (write in passive and past tense) | 3 tables will have been created by the system, auto-generating and executing the SQL to do so, and the end user will have been presented with a confirmation message and the option to enter data into one or more tables. | |
| **Trigger** | User selects create a custom database option from the user menu. | |
| **Included Use Cases** | UC#3 - Create Custom Reports, UC#4 - Create Custom Queries | |
| **Extending Use Cases** | None | |
| ***MAIN SUCCESSFUL SCENARIO* in numbered sequence**  Reference “included use cases” in this section using INCLUDE *ius\_name* | **Actor Action** | **System Action** |
| 1. Actor selects "Create Custom Database" from the Main user menu. | 2. System presents initial screen requesting the user to enter a database name. |
| 3. Actor enters the desired name for the new database. | 4. System matches the name with an existing complex database template, presents the basic layout (in tabular format), with the 3 existing tables, and asks the user if this close to what they intended. |
| 5. Actor answers in the affirmative. | 5. System presents the first table and list of attributes from which the user can select (and name) those that are relevant. System informs user that only adjectives can be added to the names, and the general nature of the attribute cannot be changed. |
| 6. Actor checks boxes next to relevant attributes, adds modifiers to the names, if necessary and clicks "Submit". | 7. System accepts attribute list and asks the user to select the primary key(s), explaining that these fields are going to be those that uniquely identify each record in the table. The system also offers help in deciding. ("Most often, in this kind of table, most people pick Record (e.g., Supplier) ID as the primary key. Is this okay with you?" |
| 8. Actor Confirms choice of PK and correctness of name modifiers. | 9. System presents the next table and list of attributes from which the user can select (and modify the name) those that are relevant. |
| 10. Actor checks boxes next to relevant attributes, adds modifiers to the names, if necessary and clicks "Submit". | 11. System accepts attribute list and asks the user to select the primary key(s), explaining that these fields are going to be those that uniquely identify each record in the table. The system also offers help in deciding. ("Most often, in this kind of table, most people pick Record (e.g., Manufacturer) ID as the primary key. Is this okay with you?" In addition, the user is asked to select a FK, and the system suggests a "usual" FK that is used to associate the tables for query purposes. |
| 12. Actor confirms system suggested choice of PK and FK, and clicks "Submit". | 13. System presents the next table and list of attributes from which the user can select (and modify the name) those that are relevant. |
| 14. Actor checks boxes next to relevant attributes, adds modifiers to the names, if necessary and clicks "Submit". | 15. System accepts attribute list and asks the user to select the primary key(s), explaining that these fields are going to be those that uniquely identify each record in the table. The system also offers help in deciding. ("Most often, in this kind of table, most people pick Record (e.g., Item) ID as the primary key. Is this okay with you?" In addition, the user is asked to select two FKs, and the system suggests the "usual" FKs that is used to associate the tables for query purposes. |
| 16. Actor confirms system suggested choice of PK and FKs, and clicks "Submit". | 17. System produces a display with the final database 3 table configuration, and asks for Actor approval. |
| 18. Actor approves by clicking "This is what I want". | 19. System generates and executes the SQL to create the database, and presents a "success" message to the Actor when finished. |
|  | 20. INCLUDE Create Custom Reports |
|  |  | 21. INCLUDE Create Custom Queries |
| ***OTHER SUCCESSFUL SCENARIOS*** (Specify any ***successful***variations of the *normal* execution path, including any extension points using  EXTEND *eus\_name*) | **Step** | **Branching Action** |
| Branching To Be Determined |  |
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| ***UNSUCCESSFUL SCENARIOS*** (*erroneous* situations*)* | **Conditions** | **Actions** |
| Error Handling To Be Determined |  |
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| Priority in scheduling | First | |
| **Frequency** | Frequently by Premium End Usres | |
| **Other non-functional requirements** | 1) This use case shall not result in the creation of a non-3NF database.  2) This use case shall be operable to novices to the database creation process, requiring no knowledge of normalization or the relational model.  3) Help shall be provided upon user request that explains everything that is going on, and the rationale for the dialog.  4) Upon submission, execution time of the generated SQL on this dialog shall not exceed 30 seconds under peak load, and users shall be informed of processing delays. | |
| **Business rules and data logic** | 1) 3NF is achieved by not presenting fields for selection to the Actor that would de-normalized the database, and by not allowing the Actor to rename existing fields so that they introduce transitive dependencies.  2) Other rules To Be Determined. | |
| **Superordinates** | N/A | |
| **Developer** | Scott P Overmyer | |
| **Creation date and last modified date** | 7/18/2011 | |
| Other Comments | This is a draft to get started on the Custom Database Creation dialog, Version 0.10. | |