**CrueleanBee - Integrity Constraints / Issues & Bugs / Special Effort Group A**

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**Integrity Constraints**

All Foreign Keys and Primary Keys were created at the time of database creation. Please see DatabaseCreationCode.doc.

Primary Keys were autonumeric and indexed with no duplicates.

**General Key:**

COL–Indexed for no duplicates

COL-Indexed with duplicated being okay

| **Column** | **Table** | **Index Notes** |
| --- | --- | --- |
| PrintOrderID | Apparel\_Item | Yes (Duplicates OK) |
| ArtworkOrderID | ArtWortLocation | Yes (Duplicates OK) |
| LocationID | ArtWortLocation | Yes (Duplicates OK) |
| CustomerID | ArtworkOrder\_Project | Yes (Duplicates OK) |
| WorkLogID | contains | Yes (Duplicates OK) |
| TaskID | contains | Yes (Duplicates OK) |
| ArtworkOrderID | EmployeeWorkLog | Yes (Duplicates OK) |
| EmployeeIF | EmployeeWorkLog | Yes (Duplicates OK) |
| Apparel\_ID | has | Yes (Duplicates OK) |
| SizeCode | has | Yes (Duplicates OK) |
| ColorID | has\_base\_color | Yes (Duplicates OK) |
| Apparel\_ID | has\_base\_color | Yes (Duplicates OK) |
| ArtworkOrderID | includes | Yes (Duplicates OK) |
| Material\_ItemID | includes | Yes (Duplicates OK) |
| ArtworkOrderID | PrintOrder | Yes (Duplicates OK) |
| ArtworkOrderID | uses | Yes (Duplicates OK) |
| ColorID | uses | Yes (Duplicates OK) |
| ArtworkLocationID | EmployeeWorkLog | Yes (Duplicates OK) |
| ColorID | Apparel\_Item | Yes (Duplicates OK) |

**Validation Rules address to the database:**

**General Key:**

TABLE – “EndDate” > “StartDate”

| **Column** | **Table** | **Validation Notes** |
| --- | --- | --- |
| DateApproved | ArtworkOrder\_Project | [DateApproved]<=[ScheduledPrintDate] |
| SchelduledPrintDate | ArtworkOrder\_Project | SchelduledPrintDate > OrderDate |
| DateDelivered | PrintOrder | [Date Delivered] <= [DueDate] |
| ApparelOrderDate | PrintOrder | ApparelOrderDate >= PrintOrderDate |
| Art\_SlideDate | PrintOrder | Art\_SlideDate >= Art\_FilmDate |
| PrintDate | PrintOrder | PrintDate > PrintOrderDate |
| DueDate | PrintOrder | DueDate > ArtSlideDate |
| DateCompleted | EmployeeWorkLog | DateCompleted > StartDate |

**Issues/Bugs**

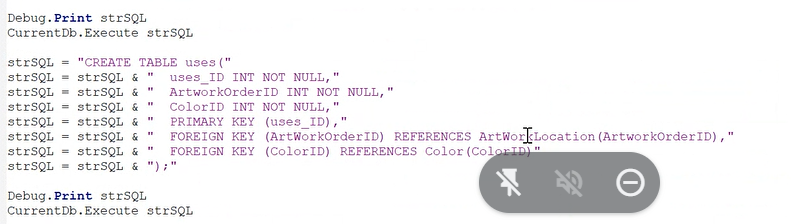
We did take note that special characters such as a slash will not be allowed to be included in the Table name and other objects. An Underscore is the best convention to use. ERD plus had an option to generate basic table creation code in the form of SQL which made this process easier but a thorough review was needed to purge all errors/bugs.

AutoNumbered Keys was a primary issue to deal with. They were essential in the translation of weak entities and relationship entities to database tables. We took the name of the Table and added a column in the code to say Table + ID which will be auto-numbered. We could tell in the code when we would have to do this when the table has two foreign keys or the primary key is made up of two attributes.

We created sample data in excel and divided up tables to populate. But Importing data from Excel to Access proved to be a challenge. The issue lied with data types and the auto numbered keys throwing off the wizard program with error messages even though the data was populating into the table. Looks like the issue was with the range the wizard would take for data. It found empty rows.

**Special Effort**

1. Creating tables via code took some time. But once we were able to see the patterns on the setup in visual basic, it took less time on each table creation.
2. The attribute called Number in the “has” relationship table, was renamed to Number\_units in order to solve a syntax error. (FIX ERD)
3. We need to reference a stable attribute not a FK in one table to another FK in another.
4. We then realized we needed to change our DataBaseCreation code to specify data types as it would be quicker to create the setup. Access wanted relationships to be removed to update the data types manually.
5. Delete any derived attributes that made it into the relational database. We will use queries to create these calculations later. (TotalPrice in ArtworkOrder\_Project)\*
6. Logging Changes to be done with the ERD.
7. We dedicated a Team Member to make the basic forms to add buttons that link to all the queries/forms/reports after.
8. We brainstormed query/report ideas and then separated out tasks to each team member.



**ERD Changes Log**

1. Employee table we add a first name and last name column
2. Customer table we added a first name / last name column
3. Art work order - project table we got rid of the total price column
4. Apparel-Item got rid of Total Blank price that is a derived attribute
5. Apparel-Item Added Apparel Type
6. Includes removed cost and Revenue from the table since they are derived
7. Material get rid of whole table not needed
8. Relation of Worklog and location was already in erd
9. PriceCharged field added to Apparel\_Item
10. ArtWorkLocationID in use is only LocationID, ERD has no relationship.
    1. Change Column Name