Team Data Makers

Database Design

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Strong Entity Sets:

Species
- Latin Name - String (Primary Key)
- Common Name - String

Hosts
- Name - String (Primary Key)

Isolates
- Name - String (Primary Key)
- Strain - String
- Freezer Location - String
- Date Frozen - DateTime
- Who Isolated - String
- Is Pyroprinted - Boolean

Pyroprints
- Date Pyrosequenced - DateTime (Primary Key)
- Isolate Region - String (Primary Key)
- Pyrosequencing Machine - String (Primary Key)
- Well Code - String (Primary Key)
- Who Pyrosequenced - String
- PCR Date - DateTime
- PCR Machine - String
- File Name - String

Primers
- Nucleotide - String (Primary Key)
- Name - String

Dispensation Sequences
- Nucleotide - String (Primary Key)
- Name - String

Weak Entity Sets

Samples
- Location - String
- Date Collected - DateTime

Histogram
- Peak Height - Number
- Compensated Peak Height - Number
- Compensation Slope 1 - Number
- Compensation Slope 2 - Number
- Compensation Slope 3 - Number
- Compensation Slope 4 - Number
- Dispensation Sequence Index - Number
- Nucleotide Letter - String

**Relationship Sets:**

**Belongs_To**
- Between: Hosts, Species
- Attributes: none
- Relationship Type: one-to-many (One species to many hosts)
- Participation constraint on Host

**Produced_By**
- Between: Hosts, Samples
- Attributes: none
- Relationship Type: one-to-many (One host to many samples)
- Participation constraint on Sample
- Identifying relationship for Sample

**Obtained_From**
- Between: Samples, Isolates
- Attributes: none
- Relationship Type: one-to-many (One sample to many isolates)
- Participation constraint on Isolate

**Produced_From**
- Between: Pyroprints, Isolates
- Attributes: none
- Relationship Type: one-to-many (One isolate to many samples)
- Participation constraint on Pyroprint

**Reverse_Primer**
- Between: Pyroprints, Primers
- Attributes: none
- Relationship Type: one-to-many (One primer to many pyroprints)
- Participation constraint on Pyroprint

**Forward_Primer**
- Between: Pyroprints, Primers
- Attributes: none
- Relationship Type: one-to-many (One primer to many pyroprints)
- Participation constraint on Pyroprint

Sequencing_Primer
- Between: Pyroprints, Primers
- Attributes: none
- Relationship Type: one-to-many (One primer to many pyroprints)
- Participation constraint on Pyroprint

Used
- Between: Pyrorints, Dispensation Sequences
- Attributes: none
- Relationship Type: one-to-many (One dispensation sequence to many pyroprints)
- Participation constraint on Pyroprint

Produced
- Between: Pyroprints, Pyrograms
- Attributes: none
- Relationship Type: one-to-one (One pyroprint to many histograms)
- Participation constraint on Pyroprint and Histogram
- Identifying relationship for Histogram