**Database Assignment 1 Notes**

**Problem Statement Overview for the Teddy Bear Nursery**

- Problem Overview - Textual Description/ Summary of the company and what they require

- Example from business one carried out in class

**Additional**

Holiday booking system

Stock Control in Rooms

**Business Object Types**

Children’s records, supplier invoices, employee, the people applying for those jobs and their history as handled by the employment agency – Minimum requirements

**Business Relationship Types**

**Constraints**

Data protection act – E.g. User Groups

The teddy bear nursery is not overly concerned with constraints, just the large issues such as date’s of birth in the future, etc. Simply making sure data is valid and not violating rules.

**Dates of birth - future dates cannot break integrity**

Constraints, child cannot be over 5 years old

**E-R model**

Description of real world entities

Appropriate relationship, clearly indicated with relationship name and type

**Appropriate Relationships**

**Relationship name**

**Relationship Type** - Cardinality, optionality

**Video**

Video should be 3 minutes long

* discuss the problem statement and E-R Model

**Identification of Issues**

Reflect upon the design

* Mysql work benched forced additional design state prematurely

e.g. Link tables

* Requirements solicitation - gathering of answers and asking of questions - possible contradictions between member's of staff. Requiring judgement calls
* Employee and sub class of employee - The performance gains would be minimal when working with only a few hundred records. Not worth the added complexity to the design
* Holidays Table – Attribute for Start Date and Start Day – Prone to error so we removed start day which can be calculated.

**Identification of Highlight**

* If two parents share the same contact details, one change in the contact details changes will automatically update everyone that uses those contact details. Reducing the need for ensuring data consistency across multiple people



**Problem Statement**

The administration staff that administrate “The Teddy Bear club Nursery” database Excel/ partial database system.

* Internal database with no external interaction
* Protection of children’s details

**Object Types**

* Nursery
* Department
* Duration ( of time children stay – weekly or individual)
* Playroom
  + Room Capacity
  + Staff Available
  + Age Group
  + Staff Ratio
* Fees
* Events
* Parental Guardian
* Children
  + Name
  + Age
  + Details
  + Age GroupID
* Staff ratio
* Age Group
  + AgeGroupID
  + Age Group
* Parent Login details
* Documents
* Admin Staff
* Staff Position
* Children Age group 0-2 , when 3 they move class
* Payments Details
* Payments
* Invoices
* Dietary Requirements
* Early Years Practitioners
* Support Workers
* Activities
* Routines
* Special Care
* Vouchers

**Relationship**

* Parental Guardian has one or more Children 1:M
* Nursery consists of many departments 1:M
* Nursery consists of one or more Playrooms 1:M
* Playroom consists of one age group
* Playroom consists of one or more staff 0,1..M
* One staff member is responsible for one or more children. 0,1..3,1..5,1..8
* Early Years Practitioners to Individual Routines
* Support Workers to Individual Routines

**Constraints**

* Number of children waiting for a placement.
* Children awaiting moving into a new class
* Children not sharing the same name as the parents
* Staff ratio is constrained by Playroom
* Playroom must have an age group.
* Fee’s are constrained by Age group and Duration
* Parents with multiple children receive a discount
* When children turn 3 they may be eligible for funding from Dundee City council
* Vouchers need to be set up 3-4 days in advance of monthly fee
* Staff member to playroom
* Stop information being deleted before 7 years is up.

**Questions for Angela**

* What do you currently use your system for?
* How does the admin team use the database?
* What information is most used?
* What are the top 5 features required?
* What Hardware is currently available?
* What existing software do you use?

SQL 2008 – Plenty of bandwidth and space

* Do you have any preference of database solutions?
* What is your current method for storing data as paper hard copies? (Request a copy with data removed)
* What is your current method for storing data electronically?
* Can we use your Logo and in house colours?
* Will it be used by more than one user?
* How many machines will it be used upon?
* Is the database only for internal use?
* Do you keep a list of items that are available in each playroom ? e.g. Stock control ?
* Are children that require special care noted in the database?
* How is familes with multiple children handled? – Discounts for multiple children
* Can a staff member belong to more than one department?

**Database Requirements**

**Children’s Records**

* Record of extra days attended by children in addition to their regular weekly attendance
* Numbers of teas taken by children each day
* Monthly invoices for parents (calculating amount due from information from other records such as weekly fee, arrears, credit, teas, extra days, council funding)
* Record of parents’ childcare voucher scheme membership
* Record of fees paid by method and date / outstanding fees
* Report Lists of invoice payments made by Debit/Credit Card

Cheque

Cash

Bank transfer

Childcare vouchers (both parents)

* Report to check council funding credited to child’s account agrees with funding received from council
* Availability charts (charts by room showing vacant spaces for new children)
* Weekly report showing medication administered
* Daily sign in sheets for children by department
* Emergency contacts sheets for each child
* Plus all other forms that each room uses (eg nappy charts, food allergies, preferences)
* Report showing when children due to move up to next department

**Suppliers**

To produce reports such as:

* Register of suppliers’ information
* Register of invoices received

(could be expanded for Angie’s use to run reports on

- total outstanding invoices

* + - invoices payable by month etc

**Employees**

To produce reports such as:

* emergency contacts
* when PVG registration expires
* holiday records
* training records
* Review dates

**Data Input Forms**

**Child Details**

Name

Address

Date of Birth

Phone Numbers

Emergency Contacts

Room attending

Days of attendance

Start date

Date left nursery

Amount of deposit paid and by whom, date

Amount of deposit returned and to whom, date

etc

**Room Charges**

Room name

Daily charge

Weekly charge

Tea charge

**Invoices received**

Supplier

Invoice number

Date

Amount

etc

**Employee details**

Name

Address

Emergency Contacts

Employment start date

Date PVG registration expires

Annual review dates

Long service etc.