DAT601 ASSESSMENT ONE

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Contents

Introduction

A crucial component of building and creating information systems is data modelling. Its goal is to conceptually depict data items and the connections among them to ease stakeholder dialogue and direct system deployment. Data modeling's primary goal is to comprehend the information that a company uses and collects and to translate that comprehension into a structured manner that both technical and non-technical stakeholders can readily understand. The business procedures and regulations of an organization should be correctly reflected in a high-quality data model, which should also be responsive to changing requirements over time. Data models come in a variety of forms, such as conceptual, logical, and physical models, each having a distinct goal and amount of complexity. Conceptual models are extensive depictions.

Description of Conceptual Modelling

A structured representation of database ideas and their interactions is a conceptual data model. Establishing entities, their qualities, and relationships is the goal of developing a conceptual data model. The underlying database structure is hardly described at this level of data modelling. A conceptual data model is often created by business stakeholders and data architects.
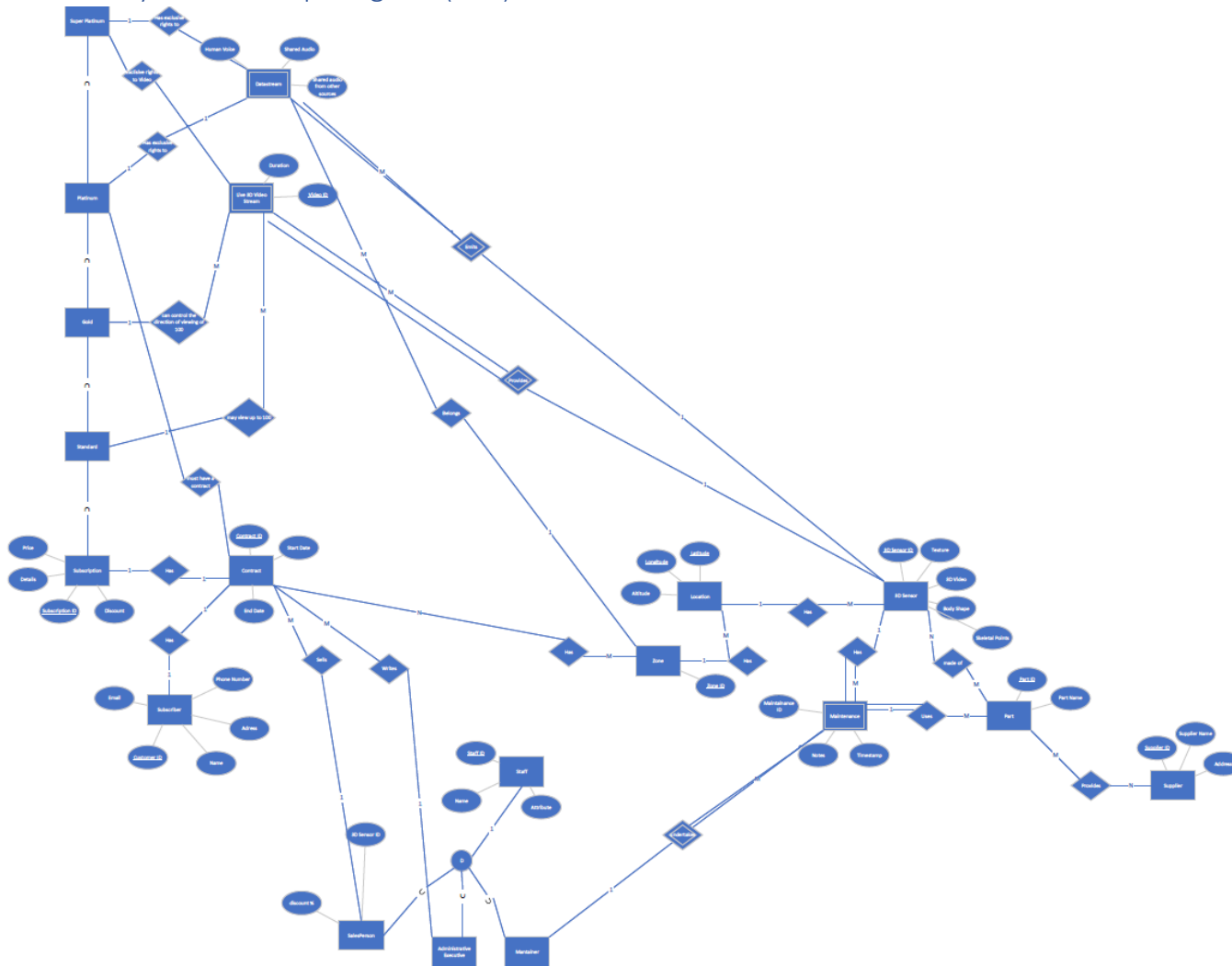
Conceptual Data Model's three fundamental tenets are:

Entities, a tangible object

Attributes of an entity are its traits or possessions.

Dependency or affiliation between two entities is a relationship.

Chen Entity-Relationship-Diagram (ERD)

Data Dictionary

Entity Name	Description	Aliases	Occurrence
Supplier	Supplies parts for the 3D Sensors	supplier	
Part	Parts for 3D Sensor	part	
Maintenance		maintenance	
3D Sensor		3dsonsor	
Staff		staff	
Maintainer		maintainer	
Administrative Executive		adminexecutive	
SalesPerson		salesperson	
Location		location	
Zone		zone	
Contract		contract	
Subscription		subscription	
Subscriber		subscriber	
DataStream		datastream	

Live 3D Video Stream		live3dvideo	
Standard		standard	
Gold		gold	
Platinum		platinum	
Super Platinum		superplatinum	

Entity Name / Relationship	Attributes	Description	Domain	Aliases	Composite	Derived	Nulls	Key?	Default Value
Supplier	Supplier ID		-	-			No	PK	
	Supplier Name		-	-			No	-	
	Address		-	-			No	-	
	Part Name		-	-			No	-	
Part	Part ID		-	-			No	PK	
	Part Name		-	-			No	-	
3D Sensor	3D Sensor ID		-	-			No	PK	
	3D Video		-	-			No	-	
	Texture		-	-			No	-	
	Body Shape		-	-			No	-	
	Skeletal Points		-	-			No	-	
Location	Latitude		-	-			No	-	
	Longitude		-	-			No	-	
	Altitude		-	-			No	-	

Entity Name / Relationship	Attributes	Description	Domain	Aliases	Composite	Derived	Nulls	Key?	Default Value
Zone	Zone ID		-	-			No	PK	
	Location	Combination of Latitude & Longitude	-	-			No	FK	
Maintenance	Maintenance ID		-	-			No	PK	
	Timestamp		-	-			No	-	
	Notes		-	-			No	-	
Staff	Staff ID		-	-			No	PK	
	Name		-	-			No	-	
	Phone		-	-			No	-	
	Address		-	-			No	-	

Assumed Business Rules (with reasoning)

Source

IBM. (2023). *What is data modeling?* IBM - United States. https://www.ibm.com/topics/data-modeling

Taylor, D. (2022, August 17). What is data modelling? Types (Conceptual, logical, physical). Guru99. https://www.guru99.com/data-modelling-conceptual-logical.html