

Elamo Automobile Repair Data Dictionary	Assumptions:
	1) All repairs will have have an initial deposit by customer
	2) All monetary amounts will be whole numbers (integers)
	3) Part Quantity on Hand can be zero if the shop has no parts left
	4) Vehicle VINs have 17 characters (according to Google)
	5) All repairs will require at least one part
	6) All repairs will require time for a skill utilized
	7) All repairs will require time for an equipment utilized

CUSTOMER

Name	Data Type	Constraints	Key	Description	Example Value
Customer ID	bigint	NOT NULL, > 0	PK	Unique identifier for a customer	12345
Customer Name	varchar(50)	NOT NULL		First and last name of a customer	William Brock
Customer Phone Number	char(10)			Mobile phone number of a customer	4086497452
Customer Address	varchar(250)			Home address for a customer	500 El Camino Real, Santa Clara, CA 95053

AUTOMOBILE

Name	Data Type	Constraints	Key	Description	Example Value
Automobile VIN	char(17)	NOT NULL	PK	Unique vehicle identification number for an automobile	3FADP4AJ2EM100154
Automobile Year	char(4)			Year in which the automobile's model was produced	2010
Automobile Make	varchar(30)			Make of the automobile	Ford
Automobile Model	varchar(30)			Model of the automobile	Fusion
Customer ID	bigint		FK	Customer associated with an automobile; unique identifier for a customer	12345

REPAIR

Name	Data Type	Constraints	Key	Description	Example Value
Repair ID	bigint	NOT NULL, > 0	PK	Repair ID for each automobile	12345
Repair Description	varchar(1000)			Description of actual repair for automobile	Broken tail light was replaced
Repair Initiation Date	date			Date for initiation of repair for automobile	11/18/2016
Repair Deposit Amount	integer	> 0		Deposit made by customer for automobile repair	100
Repair Completion Date	date			Date for completion of repair for automobile	11/20/2016
Repair Total Amount	integer	> 0		Total cost for repair of automobile	500
Customer ID	bigint		FK	Customer associated with a repair for automobile; unique identifier for a customer	12345
Automobile VIN	char(17)		FK	Automobile VIN associated with automobile being repaired; unique vehicle identification number for an automobile	3FADP4AJ2EM100154
Repair Estimate ID	bigint		FK	Estimate ID associated with repair for automobile; unique identifier for a repair estimate	12345

REPAIR ESTIMATE

Name	Data Type	Constraints	Key	Description	Example Value
Repair Estimate ID	bigint	NOT NULL, > 0	PK	Unique identifier for a repair estimate	12345
Repair Estimate Description	varchar(1000)			Description of proposed repair for an automobile	Broken tail light will be replaced
Repair Estimate Amount	integer	> 0		Estimated cost for repair of an automobile	250
Repair Estimate Completion Date	date			Date for completion of repair estimate for an automobile	11/16/2016
Requesting Customer ID	bigint		FK	Requesting customer associated with a repair estimate; unique identifier for a customer	12345
Automobile VIN	char(17)		FK	Automobile VIN associated with a repair estimate; unique vehicle identification number for an automobile	3FADP4AJ2EM100154
MEmployeeID	bigint		FK	Manager associated with a repair estimate; unique identifier for a manager	12345
Approving Customer ID	bigint		FK	Approving customer associated with a repair estimate; unique identifier for a customer	12345

PART

Name	Data Type	Constraints	Key	Description	Example Value
Part ID	bigint	NOT NULL, > 0	PK	Unique identifier for a part	12345
Part Description	varchar(1000)			Description of a part	LED headlight bulbs
Part Unit Cost	integer	> 0		Cost for a unit of a part	25
Part Quantity on Hand	integer	> -1		Quantity of a part currently in possession by autoshop	3

EQUIPMENT

Name	Data Type	Constraints	Key	Description	Example Value
Equipment ID	bigint	NOT NULL, > 0	PK	Unique identifier for an equipment	12345
Equipment Description	varchar(1000)			Description of an equipment	Manual safety release from two sides
Equipment Manufacturer	varchar(50)			Manufacturer of an equipment	Snap-on Industrial
Equipment Model	varchar(75)			Model of an equipment	10 Ton Hydraulic Benchtop Stop Press

SKILL

Name	Data Type	Constraints	Key	Description	Example Value
Skill ID	bigint	NOT NULL, > 0	PK	Unique identifier for a skill	12345
Skill Name	varchar(30)			Name of a skill	Engine mechanic
Skill Description	varchar(max)			Description of a skill	Applying paint and finishes to the exterior of an automobile

PART CONSUMPTION

Name	Data Type	Constraints	Key	Description	Example Value
Part ID	bigint	NOT NULL	PK	Part associated with consumption for a repair; unique identifier for a part	12345
Repair ID	bigint	NOT NULL	PK	Repair associated with part consumption; unique identifier for a repair	12345
Part Consumption Date	date			Date in which the part was utilized for automobile repair	11/18/2016
Part Quantity Consumed	integer	> 0		Quantity of part utilized for an automobile repair	2

PART QUANTITY REQUIRED

Name	Data Type	Constraints	Key	Description	Example Value
Repair Estimate ID	bigint	NOT NULL	PK	Repair estimate associated with the quantity of a part required; unique identifier for a repair estimate	12345
Part ID	bigint	NOT NULL	PK	Part associated with the quantity of a part required; unique identifier for a part	12345
Part Quantity Required	integer	> 0		Quantity of a part required to complete the repair of an automobile	3

LABOR ESTIMATE

Name	Data Type	Constraints	Key	Description	Example Value
Repair Estimate ID	bigint	NOT NULL	PK	Repair estimate associated with the technical skill required; unique identifier for a repair estimate	12345
Skill ID	bigint	NOT NULL	PK	Technical skill associated with the skill hours calculated for an automobile repair estimate; unique identifier for a skill	12345
Skill Hours Required	integer	> 0		Estimated time (in a number of hours) for usage of technical skill for an automobile repair estimate	1

EQUIPMENT HOURS REQUIRED

Name	Data Type	Constraints	Key	Description	Example Value
Repair Estimate ID	bigint	NOT NULL	PK	Repair estimate associated with the estimated time for equipment usage; unique identifier for a repair estimate	12345
Equipment ID	bigint	NOT NULL	PK	Equipment associated with the estimated time for equipment usage; unique identifier for an equipment	12345
Equipment Hours Required	integer	> 0		Estimated time (in a number of hours) for usage of equipment for a repair estimate	3

MANAGER

Name	Data Type	Constraints	Key	Description	Example Value
MEmployee ID	bigint	NOT NULL, > 0	PK	Unique identifier for a manager employee	12345

POSSESS

Name	Data Type	Constraints	Key	Description	Example Value
Skill ID	bigint	NOT NULL	PK	Skill ID associated with possession of a skill by a technician; unique identifier for a technician; unique identifier for a skill	12345
TEmployee ID	bigint	NOT NULL	PK	Technician associated with possession of a skill; unique identifier for a technician employee	12345

LABOR UTILIZED

Name	Data Type	Constraints	Key	Description	Example Value
Repair ID	bigint	NOT NULL	PK	Repair associated with shift information; unique identifier for a repair	12345
TEmployee ID	bigint	NOT NULL	PK	Technician associated with a shift; unique identifier for a technician employee	12345
Shift Start Date and Time	datetime			Shift start date and time for a repair	11/19/2016 11:00 AM
Shift End Date and Time	datetime			Shift end date and time for a repair	11/19/2016 1:00 PM

EQUIPMENT UTILIZED

Name	Data Type	Constraints	Key	Description	Example Value
Equipment ID	bigint	NOT NULL	PK	Equipment associated with resource utilization for a repair; unique identifier for an equipment	12345
Repair ID	bigint	NOT NULL	PK	Repair associated with utilization of equipment; unique identifier for a repair	12345
Equipment Check in Date and Time	datetime			Check-in date and time for an equipment	11/19/2016 11:30 AM
Equipment Check out Date and Time	datetime			Check-out date and time for an equipment	11/19/2016 12:30 PM
TEmployee ID	bigint		FK	Technician associated with utilization of equipment; unique identifier for a technician employee	12345

SUPERVISE

Name	Data Type	Constraints	Key	Description	Example Value
Repair ID	bigint	NOT NULL	PK	Repair associated with the supervision from a manager; unique identifier for a repair	12345
MEmployee ID	bigint	NOT NULL	PK	Manager associated with supervision of a repair; unique identifier for a manager employee	12345

EMPLOYEE

Name	Data Type	Constraints	Key	Description	Example Value
Employee ID	bigint	NOT NULL, > 0	PK	Unique identifier for an employee	12345
Employee Name	varchar(50)			Name of an employee	John Sound
Employee Phone Number	char(10)			Phone number of an employee	6194639304
Employee Date of Hire	date			Hire date for an employee	12/05/2003
Employee Type	char(1)			Type for employee for distinction between technician and employee	T

TECHNICIAN

Name	Data Type	Constraints	Key	Description	Example Value
TEmployee ID	bigint	NOT NULL, > 0	PK	Unique identifier for a technician employee	12345