

SQL

Audio Book Companion

Preston Prescott

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Chapter 1: Introduction to SQL and Databases

Table 1

SID	SName	SAge	SGender	SDepartment
1	Tom	14	Male	Computer
2	Mike	12	Male	Electrical
3	Sandy	13	Female	Electrical
4	Jack	10	Male	Computer
5	Sara	11	Female	Computer

Table 2

DID	DName	DCapacity
101	Electrical	800
102	Computer	500
103	Mechanical	500

Table 3

SID	SName	SAge	SGender	DID
1	Tom	14	Male	102
2	Mike	12	Male	101
3	Sandy	13	Female	101
4	Jack	10	Male	102
5	Sara	11	Female	102

Chapter 2: Data Types & Database/Table Creation

Table 4

DATA TYPE	FROM	TO
bigint	- 9,223,372,036,854,775,808	9,223,372,036,854,775,807
int	-2,147,483,648	2,147,483,647
smallint	-32,768	32,767
tinyint	0	255
bit	0	1
decimal	$-10^{38} + 1$	$10^{38} - 1$
numeric	$-10^{38} + 1$	$10^{38} - 1$
money	- 922,337,203,685,477.5808	+922,337,203,685,477.5807
smallmoney	-214,748.3648	+214,748.3647

Table 5

DATA TYPE	FROM	TO
Float	-1.79E + 308	1.79E + 308
Real	-3.40E + 38	3.40E + 38

Table 6

DATA TYPE	FROM	TO
Datetime	Jan 1, 1753	Dec 31, 9999
Smalldatetime	Jan 1, 1900	Jun 6, 2079
date	Stores a date like October 10, 1991	
time	Stores a time of day like 11:30 P.M.	

Table 7

DATA TYPE	FROM	TO
char	char	Maximum length of 8,000 characters. (Fixed length non-Unicode characters.)
varchar	varchar	Maximum of 8,000 characters. (Variable-length non-Unicode data.)
varchar(max)	varchar(max)	Maximum length of 231 characters, Variable-length non-Unicode data (SQL Server 2005 only).
text	text	Variable-length non-Unicode data with a maximum length of 2,147,483,647 characters.

Table 8

name
master
tempdb
model
msdb
MyDB
SchoolDB
Hospital

Table 9

name	database_id	create_date
master	1	2003-04-08 09:13:36.390
tempdb	2	2015-02-01 09:08:30.663
model	3	2003-04-08 09:13:36.390
msdb	4	2014-02-20 20:49:38.857
MyDB	5	2015-01-27 01:20:59.790
SchoolDB	6	2015-01-29 00:27:27.153
Hospital	7	2015-02-01 12:39:42.703

Chapter 3: Drop, Alter, Truncate, & Insert

Table 10

COLUMN_NAME
PatientID
PatientName
PatientAge
DiseaseDescription
PatientDOB

Table 11

COLUMN_NAME
PatientID
PatientName
PatientAge
DiseaseDescription

Chapter 4: Select, Where, & Order By

Table 12

PatientID	PatientName	PatientAge	DiseaseDescription
101	James	10	Heart Disease
150	Sarah	15	Lung Disease
245	Isaac	21	Kidney Disease
250	Mike	17	Ear Infection
301	Maria	6	Nose Injury

Table 13

PatientName	PatientAge
James	10
Sarah	15
Isaac	21
Mike	17
Maria	6

Table 14

Patient Name	Patient Age
James	10
Sarah	15
Isaac	21
Mike	17
Maria	6

Table 15

PatientID	PatientName	PatientAge	DiseaseDescription
150	Sarah	15	Lung Disease
245	Isaac	21	Kidney Disease
250	Mike	17	Ear Infection

Table 16

PatientID	PatientName	PatientAge	DiseaseDescription
245	Isaac	21	Kidney Disease
101	James	10	Heart Disease
301	Maria	6	Nose Injury
250	Mike	17	Ear Infection
150	Sarah	15	Lung Disease

Table 17

PatientID	PatientName	PatientAge	DiseaseDescription
150	Sarah	15	Lung Disease
250	Mike	17	Ear Infection
301	Maria	6	Nose Injury
101	James	10	Heart Disease
245	Isaac	21	Kidney Disease

Chapter 5: SQL Operators I

Table 18

PatientID	PatientName	PatientAge	DiseaseDescription
101	James	10	Heart Disease
150	Sarah	15	Lung Disease
245	Isaac	21	Kidney Disease
250	Mike	17	Ear Infection

Table 19

PatientID	PatientName	PatientAge	DiseaseDescription
101	James	10	Heart Disease
245	Isaac	21	Kidney Disease
301	Maria	6	Nose Injury

Table 20

PatientID	PatientName	PatientAge	DiseaseDescription
150	Sarah	15	Lung Disease
245	Isaac	21	Kidney Disease

Table 21

PatientID	PatientName	PatientAge	DiseaseDescription
101	James	10	Heart Disease
150	Sarah	15	Lung Disease
301	Maria	6	Nose Injury

Chapter 6: SQL Operators II

Table 22

PatientID	PatientName	PatientAge	DiseaseDescription
101	James	10	Heart Disease
105	Joseph	26	Heart Disease
150	Sarah	15	Lung Disease
156	Julian	31	Lung Disease
245	Isaac	21	Kidney Disease
247	Margret	29	Heart Disease
250	Mike	17	Ear Infection
259	Russ	47	Ear Infection
301	Maria	6	Nose Injury
318	Candice	42	Ear Injury

Table 23

PatientID	PatientName	PatientAge	DiseaseDescription
156	Julian	31	Lung Disease

Table 24

PatientID	PatientName	PatientAge	DiseaseDescription
105	Joseph	26	Heart Disease
156	Julian	31	Lung Disease
247	Margret	29	Heart Disease

Table 25

PatientID	PatientName	PatientAge	DiseaseDescription
101	James	10	Heart Disease
105	Joseph	26	Heart Disease
156	Julian	31	Lung Disease
247	Margret	29	Heart Disease

Table 26

PatientID	PatientName	PatientAge	DiseaseDescription
150	Sarah	15	Lung Disease
156	Julian	31	Lung Disease
245	Isaac	21	Kidney Disease
250	Mike	17	Ear Infection
259	Russ	47	Ear Infection
301	Maria	6	Nose Injury
318	Candice	42	Ear Injury

Table 27

PatientID	PatientName	PatientAge	DiseaseDescription
156	Julian	31	Lung Disease
259	Russ	47	Ear Infection
301	Maria	6	Nose Injury
318	Candice	42	Ear Injury

Table 28

PatientInfo	PatientID	PatientAge	PatientName	DiseaseDescription
111	101	10	James	Heart Disease
131	105	26	Joseph	Heart Disease
165	150	15	Sarah	Lung Disease
187	156	31	Julian	Lung Disease
266	245	21	Isaac	Kidney Disease
276	247	29	Margret	Heart Disease
267	250	17	Mike	Ear Infection
306	259	47	Russ	Ear Infection
307	301	6	Maria	Nose Injury
360	318	42	Candice	Ear Injury

Chapter 7: Aggregate Functions, Delete, & Update

Table 29

First3Ages
10
26
15

Table 30

Last3Ages
47
42
31

Table 31

PatientNameUpper
JAMES
JOSEPH
SARAH
JULIAN
ISAAC
MARGRET
MIKE
RUSS
MARIA
CANDICE

Table 32

PatientNameLower
james
joseph
sarah
julian
isaac
margret
mike
russ
maria
candice

Chapter 8: Relationships & Join Queries

Script 1

```
Create Database School

Use School
Go

CREATE TABLE Student
  (StudID int PRIMARY KEY NOT NULL,
   StudName varchar(50) NOT NULL,
   StudentAge int NULL,
   StudentGender varchar(10) NOT NULL,
   DepID int NULL)

CREATE TABLE Department
  (DepID int PRIMARY KEY NOT NULL,
   DepName varchar(50) NOT NULL,
   DepCapacity int NULL)

ALTER TABLE Student ADD CONSTRAINT StudDepRel FOREIGN KEY ( DepID) references
Department(DepID)

INSERT INTO Department Values
(1, 'English', 100),
(2, 'Math', 80),
(3, 'History', 70),
(4, 'French', 90),
(5, 'Geography', 100),
(6, 'Drawing', 150),
(7, 'Architecture', 120)

INSERT INTO Student Values
(1, 'Alice', 21, 'Male', 2),
(2, 'Alfred', 20, 'Male', 3),
(3, 'Henry', 19, 'Male', 3),
(4, 'Jacobs', 22, 'Male', 5),
(5, 'Bob', 20, 'Male', 4),
(6, 'Shane', 22, 'Male', 4),
(7, 'Linda', 24, 'Female', 4),
(8, 'Stacy', 20, 'Female', 1),
(9, 'Wolfred', 21, 'Male', 2),
(10, 'Sandy', 25, 'Female', 1),
(11, 'Colin', 18, 'Male', 1),
```



```
(12, 'Maria', 19, 'Female', 3),  
(13, 'Ziva', 20, 'Female', 5),  
(14, 'Mark', 23, 'Male', 5),  
(15, 'Fred', 25, 'Male', 2),  
(16, 'Vic', 25, 'Male', null),  
(17, 'Nick', 25, 'Male', null)
```

Table 33

DepID	DepName	DepCapacity
1	English	100
2	Math	80
3	History	70
4	French	90
5	Geography	100
6	Drawing	150
7	Architecture	120

Table 34

Student Table

StudID	StudName	StudentAge	StudentGender	DeptID
1	Alice	21	Male	2
2	Alfred	20	Male	3
3	Henry	19	Male	3
4	Jacobs	22	Male	5
5	Bob	20	Male	4
6	Shane	22	Male	4
7	Linda	24	Female	4
8	Stacy	20	Female	1
9	Wolfred	21	Male	2
10	Sandy	25	Female	1
11	Colin	18	Male	1
12	Maria	19	Female	3
13	Ziva	20	Female	5
14	Mark	23	Male	5
15	Fred	25	Male	2
16	Vic	25	Male	NULL
17	Nick	25	Male	NULL

Table 35

StudName	DepName
Alice	Math
Alfred	History
Henry	History
Jacobs	Geography
Bob	French
Shane	French
Linda	French
Stacy	English
Wolfred	Math
Sandy	English
Colin	English
Maria	History
Ziva	Geography
Mark	Geography
Fred	Math

Table 36

StudName	DepName
Alice	Math
Alfred	History
Henry	History
Jacobs	Geography
Bob	French
Shane	French
Linda	French
Stacy	English
Wolfred	Math
Sandy	English
Colin	English
Maria	History
Ziva	Geography
Mark	Geography
Fred	Math
Vic	NULL
Nick	NULL

Table 37

StudName	DepName
Stacy	English
Sandy	English
Colin	English
Alice	Math
Wolfred	Math
Fred	Math
Alfred	History
Henry	History
Maria	History
Bob	French
Shane	French
Linda	French
Jacobs	Geography
Ziva	Geography
Mark	Geography
NULL	Drawing
NULL	Architecture

Table 38

StudName	DepName
Alice	Math
Alfred	History
Henry	History
Jacobs	Geography
Bob	French
Shane	French
Linda	French
Stacy	English
Wolfred	Math
Sandy	English
Colin	English
Maria	History
Ziva	Geography
Mark	Geography
Fred	Math
Vic	NULL
Nick	NULL

NULL	Drawing
NULL	Architecture

Table 39

DepName	AverageStudentAge
Architecture	NULL
Drawing	NULL
English	21
French	22
Geography	21
History	19
Math	22

Table 40

DepName	AverageStudentAge
English	21
French	22
Geography	21
Math	22

Chapter 9: SQL Sub-queries

Table 41

StudID	StudName	StudentAge	StudentGender	DepID
1	Alice	21	Male	2
4	Jacobs	22	Male	5
6	Shane	22	Male	4
7	Linda	24	Female	4
9	Wolfred	21	Male	2
10	Sandy	25	Female	1
14	Mark	23	Male	5
15	Fred	25	Male	2
16	Vic	25	Male	NULL
17	Nick	25	Male	NULL

Other Books by the Author

JavaScript Programming: A Beginners Guide to the Javascript Programming Language

<http://www.linuxtrainingacademy.com/js-programming>

If you've attempted to learn how to program in the past, but hadn't had much success then give *JavaScript Programming* a try. It will teach you exactly what you need to know about programming in the world's most widely used scripting language in existence today. It will start you at the beginning and allow you to build upon what you've learned along the way.