SQL:

CREATE TABLE WRITERS

(ORCID VARCHAR2(20) PRIMARY KEY,

NAME VARCHAR2(15) NOT NULL,

EMAIL VARCHAR2(50) NOT NULL UNIQUE,

TYPE VARCHAR2(15) NOT NULL,

PHONE_NUMBER VARCHAR2(12));

DESCRIBE WRITERS

Object Type **TABLE** Object **WRITERS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
WRITERS	ORCID	VARCHAR2	20	-	-	1	-	-	-
	NAME	VARCHAR2	15	-	-	-	-	-	-
	EMAIL	VARCHAR2	50	-	-	-	-	-	-
	TYPE	VARCHAR2	15	-	-	-	-	-	-
	PHONE_NUMBER	VARCHAR2	12	-	-	-	✓	-	-
									1 - 5

INSERT INTO WRITERS VALUES('995720608338182','Stuart Russell','elindl0@xing.com','scientist','577-588-5941')

SELECT * FROM WRITERS

ORCID	NAME	EMAIL	TYPE	PHONE_NUMBER
995720608338182	Stuart Russell	elindl0@xing.com	scientist	577-588-5941
330383414591719	Yoshua Bengio	matthow1@issuu.com	scientist	633-539-3624
870614372065111	Roberto Battiti	hpurshouse2@goo.gl	researher	577-588-5941
580249133321665	Jeffrey Needham	bmalan3@weather.com	researher	449-711-9061
994207556371976	Richard Szelski	abaumler4@ustream.tv	researher	218-415-6668
111085482828409	Max Welling	nbabington8@nhs.uk	author	235-280-1608
895385219414810	Csaba Szepsvari	blinton9@globo.com	scientist	478-312-9538
456626877746488	Ron Zacharski	ssimesa@prweb.com	scientist	550-695-2464
395159977873330	David Barber	bfallowsb@businessinsider.com	scientist	889-148-9100
943266965776918	Wikibooks	kgladdisc@yolasite.com	researher	306-116-8116

CREATE TABLE LIBRARIANS

(LIBRARIAN_ID NUMBER(6) ,

NAME VARCHAR2(10) NOT NULL ,

SALARY NUMERIC(7,2) NOT NULL ,

SHIFT VARCHAR2(40) NOT NULL ,

PHONE_NUMBER VARCHAR2(12),

CONSTRAINT LIBRARIAN_ID_PK PRIMARY KEY (LIBRARIAN_ID));

DESCRIBE LIBRARIANS

Object Type **TABLE** Object **LIBRARIANS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
LIBRARIANS	LIBRARIAN_ID	NUMBER	-	6	0	1	-	-	-
	NAME	VARCHAR2	10	-	-	-	-	-	-
	SALARY	NUMBER	-	7	2	-	-	-	-
	SHIFT	VARCHAR2	40	-	-	-	-	-	-
	PHONE_NUMBER	VARCHAR2	12	-	-	-	✓	-	-
									1 - 5

INSERT INTO LIBRARIANS VALUES(508083 , 'Shaun' , 3500 , 'from 8:00:00 AM to 12:00 PM' , '109-170-3912');

SELECT * FROM LIBRARIANS

LIBRARIAN_ID	NAME	SALARY	SHIFT	PHONE_NUMBER
508083	Shaun	3500	from 8:00:00 AM to 12:00 PM	109-170-3912
138781	Demetria	3500	from 12:00:00 PM to 4:00 PM	641-951-5018
886004	Alaine	3500	from 8:00:00 AM to 12:00 PM	463-857-9569
595560	Cathee	3500	from 12:00:00 PM to 4:00 PM	812-729-7886
711235	Quint	3500	From 4:00 PM to 8:00 PM	405-393-2646
654908	Rivy	3500	From 4:00 PM to 8:00 PM	202-729-7922

CREATE TABLE BOOKS

(ISBN varchar2(20) PRIMARY KEY ,

CONTENT varchar2(500) NOT NULL ,

NAME varchar2(60) NOT NULL ,

SELF_NUMBER varchar2(4) NOT NULL ,

SECTION_NAME varchar(15) NOT NULL , LIBRARIAN_ID NUMBER(6),

CONSTRAINT LIBRARIAN_ID_FKBOOK FOREIGN KEY (LIBRARIAN_ID)

REFERENCES LIBRARIANS (LIBRARIAN_ID));

DESCRIBE BOOKS

Object Type **TABLE** Object **BOOKS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOKS	ISBN	VARCHAR2	20	-	-	1	-	-	-
	CONTENT	VARCHAR2	500	-	-	-	-	-	-
	NAME	VARCHAR2	60	-	-	-	-	-	-
	SELF_NUMBER	VARCHAR2	4	-	-	-	-	-	-
	SECTION_NAME	VARCHAR2	15	-	-	-	-	-	-
	LIBRARIAN_ID	NUMBER	-	6	0	-	✓	-	-
									1 - 6

INSERT INTO BOOKS VALUES('45672144889016' , 'introduction to the theory and practice of artificial intelligence.' , 'Artificial Intelligence A Modern Approach, 1st Edition' , '19b' ,'Data Science' , 508083);

SELECT * FROM BOOKS

ISBN	CONTENT	NAME	SELF_NUMBER	SECTION_NAME	LIBRARIAN_ID
45672144889016	introduction to the theory and practice of artificial intelligence.	Artificial Intelligence A Modern Approach, 1st Edition	19b	Data Science	508083
39299330723160	Foundations and Trends(r) in Machine Learning.	Learning Deep Architectures for AI	17b	Data Science	138781
88310165309943	Learn about increasing the automation level and connecting data directly to decisions and actions.	The LION Way: Machine Learning plus Intelligent Optimization	8a	Data Science	886004
22151469163433	provides an historically-informed overview through a wide range of topics, from the evolution of	Disruptive Possibilities: How Big Data Changes Everything	9b	Data Science	595560

CREATE TABLE WRITE

(ORCID VARCHAR(20) ,

ISBN varchar2(20),

PRIMARY KEY (ORCID , ISBN),

CONSTRAINT ORCID_FKWRITE FOREIGN KEY (ORCID)

REFERENCES WRITERS (ORCID) ,

CONSTRAINT ISBN_FKWRITE FOREIGN KEY (ISBN)

REFERENCES BOOKS (ISBN));

DESCRIBE WRITE

Object Type **TABLE** Object **WRITE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
WRITE	ORCID	VARCHAR2	20	-	-	1	-	-	-
	ISBN	VARCHAR2	20	-	-	2	-	-	-
									1 - 2

INSERT INTO WRITE VALUES('995720608338182','45672144889016');

SELECT * FROM WRITE

ORCID	ISBN
111085482828409	22151469163433
330383414591719	39299330723160
395159977873330	22151469163433
456626877746488	22151469163433
580249133321665	80282193505592
870614372065111	89266014555061
895385219414810	27033637188491
943266965776918	78625448991467
994207556371976	45672144889016
995720608338182	45672144889016

CREATE TABLE PUBLISHING_HOUSES

(PUBLISHER_ID NUMBER(7) ,

EMAIL VARCHAR2(70) NOT NULL,

NAME VARCHAR2(40) NOT NULL,

PHONE_NUMBER VARCHAR2(12),

CONSTRAINT PUBLISHER_ID_PK PRIMARY KEY (PUBLISHER_ID),

CONSTRAINT EMAIL_UQ UNIQUE (EMAIL));

DESCRIBE PUBLISHING_HOUSES

Object Type **TABLE** Object **PUBLISHING_HOUSES**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PUBLISHING_HOUSES	PUBLISHER_ID	NUMBER	-	7	0	1	-	-	-
	EMAIL	VARCHAR2	70	-	-	-	-	-	-
	NAME	VARCHAR2	40	-	-	-	-	-	-
	PHONE_NUMBER	VARCHAR2	12	-	-	-	✓	-	-
									1 - 4

INSERT INTO PUBLISHING_HOUSES VALUES(9000522 , 'ehumbell0@odnoklassniki.ru' , 'Smitham, Nienow and Schumm' , '692-343-9718');

SELECT * FROM PUBLISHING_HOUSES

PUBLISHER_ID	EMAIL	NAME	PHONE_NUMBER
9000522	ehumbell0@odnoklassniki.ru	Smitham, Nienow and Schumm	692-343-9718
5350713	bgremane1@java.com	Dickinson-Purdy	972-932-6145
6031615	emackowle2@sourceforge.net	Moen and Sons	258-419-8417
4874083	gparkman3@businessinsider.com	Bashirian Inc	872-657-7611
4384124	dcatton4@soup.io	Dickinson, Mills and Hagenes	432-300-4271
7709440	lponte5@kickstarter.com	Erdman, Hintz and Feeney	579-428-7315
4262497	jhourigan6@stanford.edu	Hilpert LLC	867-146-3911
5513572	varthurs7@github.io	Heathcote, Stark and MacGyver	150-952-9018
3213459	kcrucetti8@reddit.com	Harber-Torp	806-830-1434
8252374	kfeatherstonhaugh9@linkedin.com	Walker, Wiza and Nienow	271-531-5719

CREATE TABLE PUBLISH

(PUBLISHER_ID NUMBER(7),

ISBN VARCHAR2(20),

PRIMARY KEY(PUBLISHER_ID , ISBN),

CONSTRAINT PUBLISHER_ID_FKPUBLISH FOREIGN KEY(PUBLISHER_ID) REFERENCES PUBLISHING_HOUSES (PUBLISHER_ID),

CONSTRAINT ISBN_FKPUBLISH FOREIGN KEY(ISBN) REFERENCES BOOKS(ISBN));

DESCRIBE PUBLISH

Object Type **TABLE** Object **PUBLISH**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PUBLISH	PUBLISHER_ID	NUMBER	-	7	0	1	-	-	-
	ISBN	VARCHAR2	20	-	-	2	-	-	-
									1 - 2

INSERT INTO PUBLISH VALUES(8252374 ,'45672144889016')

SELECT * FROM PUBLISH

PUBLISHER_ID	ISBN
4262497	45672144889016
4262497	78625448991467
4874083	78625448991467
5350713	39299330723160
5350713	45672144889016
5513572	88310165309943
6031615	45672144889016
7709440	45672144889016
8252374	39299330723160
8252374	45672144889016

CREATE TABLE USERS

(USER_ID NUMBER(15) ,

EMAIL_ADDRESS VARCHAR2(50) NOT NULL ,

 NAME VARCHAR2(30) NOT NULL ,

PHONE_NUMBER VARCHAR2(12) ,

CONSTRAINT USER_ID_PK PRIMARY KEY (USER_ID));

DESCRIBE USERS

Object Type **TABLE** Object **USERS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
USERS	USER_ID	NUMBER	-	15	0	1	-	-	-
	EMAIL_ADDRESS	VARCHAR2	50	-	-	-	-	-	-
	NAME	VARCHAR2	30	-	-	-	-	-	-
	PHONE_NUMBER	VARCHAR2	12	-	-	-	✓	-	-
									1 - 4

INSERT INTO USERS VALUES(425238065,'jtull0@oracle.com','Jessey Tull','323-454-6229');

SELECT * FROM USERS

USER_ID	EMAIL_ADDRESS	NAME	PHONE_NUMBER
425238065	jtull0@oracle.com	Jessey Tull	323-454-6229
368741353	dbirtley1@cocolog-nifty.com	Donnajean Birtley	774-970-4350
138450549	evowles2@booking.com	Eolanda Vowles	184-970-3334
158568256	rkryzhov3@msn.com	Ruben Kryzhov	907-656-4272
154716359	fgrichukhanov4@gizmodo.com	Fara Grichukhanov	728-434-5835
458586254	ktewnion5@nyu.edu	Keslie Tewnion	880-238-9584
619124146	eoxford6@economist.com	Elana Oxford	144-852-2991
312283584	ctregenna7@altervista.org	Cody Tregenna	264-787-7472
327010764	btidridge8@state.tx.us	Bradan Tidridge	528-750-0634
818107648	hurlich9@nih.gov	Hoyt Urlich	787-656-8838

More than 10 rows available. Increase rows selector to view more rows.

CREATE TABLE STUDENTS

(STUDENT_ID NUMBER(10) ,

DEGREE VARCHAR2(15) NOT NULL ,

CONSTRAINT USER_ID_FKSTU FOREIGN KEY (STUDENT_ID) REFERENCES USERS (USER_ID),

CONSTRAINT STUDENT_PK PRIMARY KEY(STUDENT_ID));

DESCRIBE STUDENTS

Object Type **TABLE** Object **STUDENTS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STUDENTS	STUDENT_ID	NUMBER	-	10	0	1	-	-	-
	DEGREE	VARCHAR2	15	-	-	-	-	-	-
									1 - 2

INSERT INTO STUDENTS VALUES(425238065 , 'postgraduate');

SELECT * FROM STUDENTS

STUDENT_ID	DEGREE
425238065	postgraduate
368741353	senior
138450549	senior
158568256	junior
154716359	freshman
458586254	freshman
619124146	postgraduate
312283584	sophomore
327010764	sophomore
818107648	freshman

CREATE TABLE LECTURERS (

LECTURER_ID NUMBER (15),

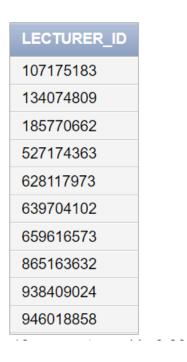CONSTRAINT USER_ID_FK FOREIGN KEY (LECTURER_ID) REFERENCES USERS (USER_ID),

CONSTRAINT LECTURER_ID_PK PRIMARY KEY (LECTURER_ID));

DESCRIBE LECTURERS

Object Type **TABLE** Object **LECTURERS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
LECTURERS	LECTURER_ID	NUMBER	-	15	0	1	-	-	-
									1 - 1

INSERT INTO LECTURERS VALUES(628117973);

SELECT * FROM LECTURERS

LECTURER_ID
107175183
134074809
185770662
527174363
628117973
639704102
659616573
865163632
938409024
946018858

CREATE TABLE LEC_COURSE (

LECTURER_ID NUMBER (15) ,

COURSES VARCHAR2(30) ,

CONSTRAINT LEC_ID_FK FOREIGN KEY (LECTURER_ID)

REFERENCES LECTURERS (LECTURER_ID) ,

PRIMARY KEY(LECTURER_ID ,COURSES));

DESCRIBE LEC_COURSE

Object Type **TABLE** Object **LEC_COURSE**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
LEC_COURSE	LECTURER_ID	NUMBER	-	15	0	1	-	-	-
	COURSES	VARCHAR2	30	-	-	2	-	-	-
									1 - 2

INSERT INTO LEC_COURSE VALUES(628117973,'Machine Learning');

SELECT * FROM LEC_COURSE

LECTURER_ID	COURSES
107175183	Buisness
107175183	Economics
107175183	Probability
134074809	Numerical
134074809	discrete
185770662	Advanced Calculus
185770662	Calculus
527174363	Buisness
527174363	Economics
628117973	Cloud Computing
More than 10 rows available. Increase rows selector to view more rows.	

CREATE TABLE READ (

USER_ID NUMBER(15) ,

ISBN VARCHAR2(20),

PRIMARY KEY (USER_ID , ISBN) ,

CONSTRAINT USER_ID_FKREAD FOREIGN KEY (USER_ID) REFERENCES USERS(USER_ID) ,

CONSTRAINT ISBN_FKREAD FOREIGN KEY (ISBN) REFERENCES BOOKS(ISBN));

DESCRIBE READ

Object Type **TABLE** Object **READ**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
READ	USER_ID	NUMBER	-	15	0	1	-	-	-
	ISBN	VARCHAR2	20	-	-	2	-	-	-
									1 - 2

INSERT INTO READ VALUES (865163632, '45672144889016')

SELECT * FROM READ

USER_ID	ISBN
107175183	45672144889016
158568256	22151469163433
327010764	78625448991467
458586254	27033637188491
527174363	39299330723160
527174363	78625448991467
865163632	45672144889016
946018858	39299330723160

8 rows returned in 0.00 seconds

CREATE TABLE BORROW

(LECTURER_ID NUMBER (15),

ISBN varchar2(20),

PRIMARY KEY (LECTURER_ID , ISBN),

CONSTRAINT LECTURER_ID_FKBORROW FOREIGN KEY (LECTURER_ID) REFERENCES LECTURERS (LECTURER_ID),

CONSTRAINT ISBN_FKBORROW FOREIGN KEY (ISBN) REFERENCES BOOKS (ISBN));

DESCRIBE BORROW

Object Type **TABLE** Object **BORROW**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BORROW	LECTURER_ID	NUMBER	-	15	0	1	-	-	-
	ISBN	VARCHAR2	20	-	-	2	-	-	-
									1 - 2

INSERT INTO BORROW VALUES(628117973,'45672144889016');

SELECT * FROM BORROW

LECTURER_ID	ISBN
185770662	22151469163433
185770662	69237972651435
527174363	78625448991467
628117973	39299330723160
628117973	45672144889016
659616573	80282193505592
865163632	27033637188491
938409024	89266014555061
946018858	85883651825070
946018858	88310165309943

CREATE TABLE PCS (

IP_ADDRESS VARCHAR2(15) PRIMARY KEY ,

PASSWORD VARCHAR2(15) NOT NULL ,

LIBRARIAN_ID NUMBER(6),

USER_ID NUMBER(15),

CONSTRAINT LIBRARIAN_ID_FKPCS FOREIGN KEY (LIBRARIAN_ID)

REFERENCES LIBRARIANS (LIBRARIAN_ID) ,

CONSTRAINT USER_ID_FKPCS FOREIGN KEY (USER_ID)

REFERENCES USERS (USER_ID));

DESCRIBE PCS

Object Type **TABLE** Object **PCS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PCS	IP_ADDRESS	VARCHAR2	15	-	-	1	-	-	-
	PASSWORD	VARCHAR2	15	-	-	-	-	-	-
	LIBRARIAN_ID	NUMBER	-	6	0	-	✓	-	-
	USER_ID	NUMBER	-	15	0	-	✓	-	-
									1 - 4

INSERT INTO PCS VALUES ('240.80.54.165' , 'efreELSxHZGQ' , 508083 , 425238065)

SELECT * FROM PCS

IP_ADDRESS	PASSWORD	LIBRARIAN_ID	USER_ID
240.80.54.165	efreELSxHZGQ	508083	425238065
57.68.50.28	o1LstPxlpF	138781	368741353
60.196.74.39	JwCJobCUyfty	886004	138450549
99.227.226.54	V64JyUJrMrst	595560	628117973
135.134.99.131	FKKNUt9XCc	711235	185770662
123.64.7.132	bNpbjpZGA	654908	154716359
19.35.217.196	8gJost	595560	865163632
42.215.207.12	px8rj7ewxKU	138781	458586254

CREATE TABLE ACCESS_PCS

(USER_ID NUMBER(15) PRIMARY KEY ,

IP_ADDRESS VARCHAR2(15) ,

CONSTRAINT USER_ID_FKACCES FOREIGN KEY (USER_ID)

REFERENCES USERS (USER_ID) ,

CONSTRAINT IP_ADDRESS_FKACCES FOREIGN KEY (IP_ADDRESS)

REFERENCES PCS (IP_ADDRESS));

DESCRIBE ACCESS_PCS

Object Type **TABLE** Object **ACCESS_PCS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
ACCESS_PCS	USER_ID	NUMBER	-	15	0	1	-	-	-
	IP_ADDRESS	VARCHAR2	15	-	-	-	✓	-	-
									1 - 2

INSERT INTO ACCESS_PCS VALUES(425238065 , '240.80.54.165');

SELECT * FROM ACCESS_PCS

USER_ID	IP_ADDRESS
425238065	240.80.54.165
368741353	57.68.50.28
938409024	60.196.74.39
946018858	99.227.226.54
639704102	135.134.99.131
158568256	123.64.7.132
458586254	19.35.217.196
628117973	42.215.207.12