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**SQL DDLs for Entities and their supporting tables**

DROP DATABASE IF EXISTS cs122a;

CREATE DATABASE cs122a;

USE cs122a;

CREATE TABLE USER(

phlid VARCHAR(20),

email VARCHAR(30) NOT NULL,

pswd VARCHAR(20) NOT NULL,

PRIMARY KEY (phlid)

);

CREATE TABLE PHLOGGER(

phlid VARCHAR(20),

Log\_name VARCHAR(30) NOT NULL,

addr\_street VARCHAR(30) NOT NULL,

addr\_city VARCHAR(30) NOT NULL,

addr\_state VARCHAR(30) NOT NULL,

aadr\_pcode VARCHAR(10) NOT NULL,

PRIMARY KEY(phlid),

FOREIGN KEY(phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

CREATE TABLE CONTACT(

phlid VARCHAR (20),

phone\_number VARCHAR (20) NOT NULL,

PRIMARY KEY (phlid),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

CREATE TABLE SUPPORTER(

phlid VARCHAR(20),

phone VARCHAR(20) NOT NULL,

spt\_role VARCHAR(30) NOT NULL,

PRIMARY KEY (phlid),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

CREATE TABLE OBSERVER(

phlid VARCHAR(20),

observer\_id VARCHAR(20) NOT NULL,

kind VARCHAR(20) NOT NULL,

manufacturer VARCHAR(20) NOT NULL,

model VARCHAR(20) NOT NULL,

software\_version VARCHAR(30) NULL,

PRIMARY KEY (observer\_id),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

CREATE TABLE OBSERVATION(

phlid VARCHAR(20),

observation\_id VARCHAR(20),

start\_time DATETIME NOT NULL,

end\_time DATETIME NOT NULL,

PRIMARY KEY (observation\_id),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid)

);

CREATE TABLE PHLG\_OBS(

observation\_id VARCHAR(20),

content\_text VARCHAR(100) NOT NULL,

PRIMARY KEY(observation\_id),

FOREIGN KEY(observation\_id) REFERENCES OBSERVATION (observation\_id) ON DELETE CASCADE

);

CREATE TABLE OBSERVABLE(

observer\_id VARCHAR(20),

kind ENUM("Heart\_rate", "Blood\_prsr","Picture"),

observation\_id VARCHAR(20),

diastolic DECIMAL(3,2),

systolic DECIMAL(3,2),

heart\_rate INTEGER,

picture VARCHAR(200),

label VARCHAR(20),

text\_str VARCHAR(100),

PRIMARY KEY (observation\_id),

FOREIGN KEY (observation\_id) REFERENCES OBSERVATION (observation\_id) ON DELETE CASCADE,

FOREIGN KEY (observer\_id) REFERENCES OBSERVER (observer\_id)

);

CREATE TABLE EVENT(

phlid VARCHAR(20),

eid VARCHAR(20) NOT NULL,

start\_t DATETIME NOT NULL,

end\_t DATETIME NOT NULL,

orgin VARCHAR(100) NOT NULL,

PRIMARY KEY (eid),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

CREATE TABLE INTEREST(

phlid VARCHAR (20),

iname VARCHAR(20),

description\_ VARCHAR(100) NOT NULL,

topic VARCHAR(50) NOT NULL,

date\_ DATE NOT NULL,

PRIMARY KEY (iname),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

CREATE TABLE THOUGHT(

phlid VARCHAR(20) NOT NULL,

tnum INTEGER,

comment\_text VARCHAR (100) NOT NULL,

date\_\_ DATE NOT NULL,

PRIMARY KEY (phlid,tnum),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE

);

**SQL DDLs for Relationships**

CREATE TABLE INDICATE(

eid VARCHAR(20),

observation\_id VARCHAR(20),

PRIMARY KEY (eid, observation\_id),

FOREIGN KEY (eid) REFERENCES EVENT\_ (eid) ON DELETE CASCADE,

FOREIGN KEY (observation\_id) REFERENCES OBSERVATION (observation\_id) ON DELETE CASCADE

);

CREATE TABLE MEMBER(

phlid VARCHAR(20),

iname VARCHAR(20),

PRIMARY KEY (phlid, iname),

FOREIGN KEY (phlid) REFERENCES USER\_ (phlid) ON DELETE CASCADE,

FOREIGN KEY (iname) REFERENCES INTEREST (iname) ON DELETE CASCADE

);

CREATE TABLE ABOUT(

phlid VARCHAR(20),

tnum INTEGER,

iname VARCHAR(20),

PRIMARY KEY (phlid, tnum, iname),

FOREIGN KEY (phlid, tnum) REFERENCES THOUGHT (phlid, tnum) ON DELETE CASCADE,

FOREIGN KEY (iname) REFERENCES INTEREST (iname) ON DELETE CASCADE

);