Student Name: Kavya Sharma
Student ID: W1619309

SQL DDLs for Entities and their supporting tables

```sql
CREATE TABLE User (
phlid VARCHAR(20) NOT NULL,
email VARCHAR(50),
pswd VARCHAR(255),
PRIMARY KEY (phlid)
);

CREATE TABLE Supporter (
phlid VARCHAR(20),
phone INT,
role VARCHAR(50),
PRIMARY KEY (phlid),
FOREIGN KEY (phlid) REFERENCES User(phlid) ON DELETE CASCADE
);

CREATE TABLE PHLogger (
phlid VARCHAR(20),
name VARCHAR(50),
street VARCHAR(150),
city VARCHAR(100),
state VARCHAR(50),
pcode VARCHAR(20),
PRIMARY KEY (phlid),
FOREIGN KEY (phlid) REFERENCES User(phlid) ON DELETE CASCADE
);

CREATE TABLE Contact (
phlid VARCHAR(20),
contact VARCHAR(15),
PRIMARY KEY (phlid, contact),
FOREIGN KEY (phlid) REFERENCES PHLogger(phlid) ON DELETE CASCADE
);

CREATE TABLE Observer (
observer_id VARCHAR(20),
kind VARCHAR(50),
manufacturer VARCHAR(100),
model VARCHAR(100),
software_version VARCHAR(50) NULL,
```

```sql
phlid VARCHAR(20),
PRIMARY KEY(observer_id),
FOREIGN KEY (phlid) REFERENCES PHLogger(phlid) ON DELETE CASCADE
);

CREATE TABLE Observation (
observation_id VARCHAR(20),
phlid VARCHAR(20),
start DATE,
end DATE NULL,
PRIMARY KEY (observation_id),
FOREIGN KEY (phlid) REFERENCES User(phlid) ON DELETE CASCADE
);

CREATE TABLE PHLG_obs (
observation_id VARCHAR(20),
text VARCHAR(255),
PRIMARY KEY (observation_id),
FOREIGN KEY (observation_id) REFERENCES Observation(observation_id) ON DELETE
CASCADE
);

CREATE TABLE Observable (
observation_id VARCHAR(20),
observer_id VARCHAR(20),
kind VARCHAR(50),
rate INT,
diastolic INT,
systolic INT,
picture BLOB,
label VARCHAR(255),
text VARCHAR(255),
PRIMARY KEY (observation_id),
FOREIGN KEY (observation_id) REFERENCES Observation(observation_id) ON DELETE
CASCADE,
FOREIGN KEY (observer_id) REFERENCES Observer(observer_id) ON DELETE CASCADE
);

CREATE TABLE Heart_rate (
observation_id VARCHAR(20),
rate INT,
PRIMARY KEY (observation_id),
FOREIGN KEY (observation_id) REFERENCES Observable(observation_id) ON DELETE
CASCADE
```

```sql
);

CREATE TABLE Blood_prsr (
observation_id VARCHAR(20),
diastolic INT,
systolic INT,
PRIMARY KEY (observation_id),
FOREIGN KEY (observation_id) REFERENCES Observable(observation_id) ON DELETE
CASCADE
);

CREATE TABLE Picture (
observation_id VARCHAR(20),
picture BLOB,
label VARCHAR(255),
text VARCHAR(255),
PRIMARY KEY (observation_id),
FOREIGN KEY (observation_id) REFERENCES Observable(observation_id)
);

CREATE TABLE Event (
eid VARCHAR(20),
ename VARCHAR(20),
start TIME,
end TIME NULL,
origin VARCHAR(50) NULL,
phlid VARCHAR(20),
PRIMARY KEY (eid),
FOREIGN KEY (phlid) REFERENCES PHLogger(phlid) ON DELETE CASCADE
);

CREATE TABLE Interest (
iname VARCHAR(20),
description VARCHAR(100),
topic VARCHAR(20),
date DATE,
PRIMARY KEY (iname)
);

CREATE TABLE Thought (
phlid VARCHAR(20),
tnum INT,
text VARCHAR(255),
date DATE,
```

```
PRIMARY KEY (phlid, tnum),
FOREIGN KEY (phlid) REFERENCES PHLogger(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 About (
phlid VARCHAR(20),
tnum INT,
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
);

CREATE TABLE Member (
phlid VARCHAR(20),
iname VARCHAR(20),
PRIMARY KEY (phlid, iname),
FOREIGN KEY (phlid) REFERENCES PHLogger(phlid) ON DELETE CASCADE,
FOREIGN KEY (iname) REFERENCES Interest(iname) ON DELETE CASCADE
);
```