Phase 3

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CSCI 4125/5125

Spring 2018

Submit Date: 4/25

Development Task 2 (Phase 2)

Relation-schema

zip\_code (

zip varchar(5) NOT NULL PRIMARY KEY,

city varchar (255) NOT NULL,

state varchar (255) NOT NULL

)

person (  
    pers\_id NUMBER GENERATED by default on null as IDENTITY PRIMARY KEY,  
    last\_name varchar(255) NOT NULL,  
    first\_name varchar(255) NOT NULL,  
    mi varchar(1),  
    address1 varchar(255) NOT NULL,  
    address2 varchar(255),  
    zip varchar(9) NOT NULL,  
    email varchar(255),  
    gender varchar(2)

)

person\_phone\_numbers (

pers\_id number NOT NULL,

phone varchar(10) NOT NULL,

phone\_number\_type varchar(6) NOT NULL,

CONSTRAINT person\_ph\_pk PRIMARY KEY (pers\_id, phone),

CONSTRAINT person\_ph\_fk FOREIGN KEY (pers\_id) REFERENCES person(pers\_id)

)

course(  
    c\_code NUMBER GENERATED by default on null as IDENTITY PRIMARY KEY,  
    title varchar(255) NOT NULL,  
    training\_level varchar(12), -- Beginner, Intermediate, Advanced  
    description varchar(255),  
    status varchar(1) NOT NULL, -- A: Active, E: Expired  
    retail\_price number(10,2),  
    train\_type varchar(255) NOT NULL -- University, Training Company, Non-Profit  
)

prerequisite (  
    c\_code number NOT NULL,  
    prereq\_code number NOT NULL,  
    CONSTRAINT prereq\_pk PRIMARY KEY (c\_code, prereq\_code),  
    CONSTRAINT c\_code\_fk FOREIGN KEY (c\_code) REFERENCES course (c\_code),  
    CONSTRAINT prereq\_code FOREIGN KEY (prereq\_code) REFERENCES course (c\_code)  
)

GICS (  
    primary\_sector\_code varchar(8) NOT NULL PRIMARY KEY,  
    code\_name varchar(255),  
    code\_description varchar(255),  
    parent\_sector\_code varchar(8),  
    CONSTRAINT parent\_gics\_sector\_fk FOREIGN KEY (parent\_sector\_code) REFERENCES GICS (primary\_sector\_code)  
)

company (  
 comp\_id NUMBER GENERATED ALWAYS AS IDENTITY START WITH 1111 NOT NULL PRIMARY KEY,

comp\_name varchar(255) NOT NULL,

address1 varchar(255) NOT NULL,

address2 varchar(255),

zip varchar(9) NOT NULL,

primary\_sector\_code varchar(8) NOT NULL, --References GICS

phone varchar(10),

website varchar(255),

CONSTRAINT sector\_fk FOREIGN KEY (primary\_sector\_code)   
)

company\_specialty (

comp\_id number NOT NULL,

specialty varchar(8) NOT NULL,

CONSTRAINT comp\_spec\_pk PRIMARY KEY (comp\_id, specialty),

CONSTRAINT comp\_spec\_fk FOREIGN KEY (comp\_id) REFERENCES company(comp\_id),

CONSTRAINT specialty\_fk FOREIGN KEY (specialty) REFERENCES GICS(primary\_sector\_code)

)

training\_provider(  
    comp\_id number NOT NULL PRIMARY KEY,  
    train\_type varchar(255), -- University, Training Company, Non-Profit  
    CONSTRAINT provider\_comp\_fk FOREIGN KEY (comp\_id) REFERENCES company (comp\_id)  
)

NWCET(  
    nwcet\_code varchar (255) NOT NULL PRIMARY KEY,  
    parent\_nwcet\_code varchar(255),  
    nwcet\_title varchar(255) NOT NULL,  
    description varchar (255),  
    CONSTRAINT parent\_nwcet\_fk FOREIGN KEY (parent\_nwcet\_code) REFERENCES NWCET (nwcet\_code)  
)

know\_skill(  
    ks\_code varchar (255) NOT NULL PRIMARY KEY,  
    nwcet\_code varchar (255) NOT NULL,  
    ks\_title varchar(255) NOT NULL,  
    description varchar(255),  
    training\_level varchar(255) NOT NULL, -- Beginner, Intermediate, Advanced  
    CONSTRAINT ks\_nwcet\_fk FOREIGN KEY (nwcet\_code) REFERENCES NWCET (nwcet\_code)  
)

provides\_skill (

ks\_code varchar (255) NOT NULL,

c\_code NUMBER NOT NULL,

CONSTRAINT provide\_skill\_pk PRIMARY KEY (ks\_code, c\_code),

CONSTRAINT skill\_provide\_fk FOREIGN KEY (ks\_code) REFERENCES know\_skill(ks\_code),

CONSTRAINT course\_provide\_fk FOREIGN KEY (c\_code) REFERENCES course(c\_code)

)

(note: job\_category uses SOC)

job\_category(   
    cat\_code varchar (255) NOT NULL PRIMARY KEY,  
    parent\_cat\_code varchar(255),  
    core\_skill varchar(255) NOT NULL,  
    job\_category\_title varchar (255) NOT NULL,  
    description varchar(255),  
    pay\_range\_high float(15),  
    pay\_range\_low float(15),  
    CONSTRAINT cat\_nwcet\_fk FOREIGN KEY (core\_skill) REFERENCES NWCET (nwcet\_code),  
    CONSTRAINT parent\_cat\_fk FOREIGN KEY (parent\_cat\_code) REFERENCES job\_category (cat\_code)  
)

position(

pos\_code NUMBER GENERATED by default on null as IDENTITY PRIMARY KEY,

comp\_id number NOT NULL,

pos\_title varchar(255) NOT NULL,

emp\_mode varchar(2) NOT NULL,

cat\_code varchar (255) NOT NULL,

pay\_rate number(10,2) NOT NULL,

pay\_type varchar(1), --W: wage, S: salary

CONSTRAINT pos\_company\_fk FOREIGN KEY (comp\_id) REFERENCES company(comp\_id),

CONSTRAINT pos\_category\_fk FOREIGN KEY (cat\_code) REFERENCES job\_category(cat\_code)

)

position\_skills (  
    ks\_code varchar (255) NOT NULL,  
    pos\_code number NOT NULL,  
    prefer char(1) NOT NULL, -- R: Required, P: Preferred  
    CONSTRAINT position\_pk PRIMARY KEY (ks\_code, pos\_code),  
    CONSTRAINT ps\_ks\_fk FOREIGN KEY (ks\_code) REFERENCES know\_skill(ks\_code),  
    CONSTRAINT ps\_pos\_fk FOREIGN KEY (pos\_code) REFERENCES position(pos\_code)  
)

section (  
 c\_code number NOT NULL,

sec\_code number(10) NOT NULL,

complete\_date date NOT NULL,

offered\_by number NOT NULL,

taught\_by number NOT NULL,

format varchar(255),

price number(10,2),

CONSTRAINT section\_pk PRIMARY KEY (c\_code, sec\_code, complete\_date),

CONSTRAINT sect\_offered\_by\_fk FOREIGN KEY (offered\_by) REFERENCES training\_provider (comp\_id),

CONSTRAINT sect\_taught\_by\_fk FOREIGN KEY (taught\_by) REFERENCES person (pers\_id),

CONSTRAINT sec\_course\_fk FOREIGN KEY (c\_code) REFERENCES course (c\_code)  
)

cert(  
    cert\_code NUMBER GENERATED by default on null as IDENTITY PRIMARY KEY,  
    cert\_name varchar(255) NOT NULL,  
    issued\_by number(8) NOT NULL,  
    tool varchar(255), -- Description of what you're getting the cert in...  
    CONSTRAINT cert\_issued\_by FOREIGN KEY (issued\_by) REFERENCES training\_provider (comp\_id)  
)

position\_cert (  
    cert\_code number NOT NULL,  
    pos\_code number NOT NULL,  
    prefer varchar(2), -- R: Required, P: Preferred  
    CONSTRAINT position\_cert\_pk PRIMARY KEY (cert\_code, pos\_code),  
    CONSTRAINT pc\_cert\_fk FOREIGN KEY (cert\_code) REFERENCES cert (cert\_code),  
    CONSTRAINT pc\_pos\_fk FOREIGN KEY (pos\_code) REFERENCES position (pos\_code)  
)

has\_skill (  
    pers\_id number NOT NULL,  
    ks\_code varchar (255) NOT NULL,  
    CONSTRAINT has\_skill\_pk PRIMARY KEY (pers\_id, ks\_code),  
    CONSTRAINT pers\_skill\_fk FOREIGN KEY (pers\_id) REFERENCES person (pers\_id),  
    CONSTRAINT ks\_skill\_fk FOREIGN KEY (ks\_code) REFERENCES know\_skill (ks\_code)  
)

has\_cert (  
    pers\_id number NOT NULL,  
    cert\_code number NOT NULL,  
    CONSTRAINT has\_cert\_pk PRIMARY KEY (pers\_id, cert\_code),  
    CONSTRAINT pers\_cert\_fk FOREIGN KEY (pers\_id) REFERENCES person (pers\_id),  
    CONSTRAINT has\_cert\_fk FOREIGN KEY (cert\_code) REFERENCES cert (cert\_code)  
)

course\_cert (  
    cert\_code number NOT NULL,  
    c\_code number NOT NULL,  
    CONSTRAINT course\_cert\_pk PRIMARY KEY (cert\_code, c\_code),  
    CONSTRAINT cert\_requires\_pk FOREIGN KEY (cert\_code) REFERENCES cert (cert\_code),  
    CONSTRAINT course\_required\_pk FOREIGN KEY (c\_code) REFERENCES course (c\_code)  
)

takes(  
    c\_code number NOT NULL,  
    sec\_code number(10) NOT NULL,  
    complete\_date date NOT NULL,  
    pers\_id number NOT NULL,  
    CONSTRAINT takes\_pk PRIMARY KEY (c\_code, sec\_code, complete\_date, pers\_id),  
    CONSTRAINT sec\_takes\_fk FOREIGN KEY (c\_code, sec\_code, complete\_date) REFERENCES section (c\_code, sec\_code, complete\_date),  
    CONSTRAINT pers\_takes\_fk FOREIGN KEY (pers\_id) REFERENCES person (pers\_id)  
)

works(  
    pos\_code number NOT NULL,  
    pers\_id number NOT NULL,  
    start\_date varchar(255) NOT NULL,  
    end\_date varchar(255),  
    CONSTRAINT works\_pk PRIMARY KEY (pos\_code, pers\_id),  
    CONSTRAINT pos\_start\_date\_uniq UNIQUE (pos\_code, start\_date),  
    CONSTRAINT pers\_works\_fk FOREIGN KEY (pers\_id) REFERENCES person (pers\_id),  
    CONSTRAINT pos\_works\_fk FOREIGN KEY (pos\_code) REFERENCES position (pos\_code)  
)