```
CREATE TABLE LOCATION (
    ID    INTEGER      PRIMARY KEY,
    CITY  VARCHAR (128),
    STATE VARCHAR (128)
);


CREATE TABLE EMPLOYEE (
    ID       INTEGER      CONSTRAINT EMP_PK PRIMARY KEY ON CONFLICT ABORT
AUTOINCREMENT,
    FIRSTNAME  VARCHAR (255),
    LASTNAME   VARCHAR (255),
    DOB        DATE,
    ROLE      STRING (32)   CONSTRAINT ROLE_NOT_NULL NOT NULL ON CONFLICT ABORT,
    LOC_ID    INTEGER      REFERENCES LOCATION (ID) ON DELETE CASCADE
                                  ON UPDATE CASCADE
                                  MATCH [FULL],
    WORK_EMAIL VARCHAR (128),
    MANAGER_ID INTEGER      REFERENCES EMPLOYEE (ID)
);

CREATE TABLE CONFIGURATION (
    ID        INT        PRIMARY KEY,
    NAME       VARCHAR (255) NOT NULL,
    CREATION_TIME DATETIME     DEFAULT SYSDATE,
    DESCRIPTION   VARCHAR (512),
    OWNER      INTEGER      CONSTRAINT CONFIG_EMP_FK REFERENCES EMPLOYEE (ID)
ON DELETE CASCADE
                                        ON UPDATE CASCADE
                                        MATCH [FULL]
);


CREATE TABLE LOT (
    ID        INTEGER      PRIMARY KEY,
    NAME       VARCHAR (255) NOT NULL,
    MATERIAL_TYPE VARCHAR (32)  CONSTRAINT CHECK_MATERIAL_TYPE CHECK
(MATERIAL_TYPE IN ("PLASTIC", "METAL", "GLASS") ),
    HEIGHT       DECIMAL (4),
    DIAMETER     DECIMAL (4),
    CONFIGURATION INTEGER      CONSTRAINT LOT_CONFIG_FK REFERENCES
CONFIGURATION (ID) ON DELETE CASCADE
                                        ON UPDATE CASCADE
                                        MATCH [FULL],
    LOC_ID      INTEGER      REFERENCES LOCATION (ID) ON DELETE CASCADE
                                  ON UPDATE CASCADE
                                  MATCH [FULL]
);
```

```sql
CREATE TABLE PART (
    ID          INTEGER  PRIMARY KEY,
    TEST_START_TIME DATETIME,
    TEST_END_TIME   DATETIME,
    BUCKET          INTEGER,
    LOT             INTEGER  CONSTRAINT PART_LOT_FK REFERENCES LOT (ID) ON DELETE
CASCADE
                                        ON UPDATE CASCADE
                                        MATCH [FULL]
);


CREATE TABLE DEFECT (
    ID   INTEGER    PRIMARY KEY,
    TYPE VARCHAR (128) CONSTRAINT DEFECT_TYPE_CHECK CHECK (TYPE IN ("SCRATCH",
"HOLE", "DIM_ERR") )
                NOT NULL
);


CREATE TABLE DEFECT_SCRATCH (
    DEFECT_ID   INTEGER    CONSTRAINT DEFECT_SCRATCH_FK REFERENCES DEFECT (ID)
ON DELETE CASCADE
                                        ON UPDATE CASCADE
                                        MATCH [FULL],
    DEPTH       DECIMAL (4),
    ASPECT_RATIO VARCHAR (128)
);


CREATE TABLE DEFECT_HOLE (
    DEFECT_ID    INTEGER    CONSTRAINT HOLE_DEFECT_FK REFERENCES DEFECT (ID) ON
DELETE CASCADE
                                        ON UPDATE CASCADE
                                        MATCH [FULL],
    DIAMETER      DECIMAL (4),
    CIRCULAR_RATIO DECIMAL (1)
);


CREATE TABLE DEFECT_DIMENSION_ERROR (
    DEFECT_ID    INTEGER    CONSTRAINT DIM_DEFECT_FK REFERENCES DEFECT (ID) ON
DELETE CASCADE
                                        ON UPDATE SET DEFAULT
                                        MATCH [FULL],
    ACTUAL_DIAMETER DECIMAL (4),
    ACTUAL_HEIGHT   DECIMAL (4)
);
```

```sql
CREATE TABLE PART_DEFECT (
    PART_ID              CONSTRAINT PART_DEFECT_FK REFERENCES PART (ID) ON DELETE CASCADE
                                                ON UPDATE CASCADE
                                                MATCH [FULL],
    DEFECT_ID    INTEGER      CONSTRAINT DEFECT_PART_FK REFERENCES DEFECT (ID) ON DELETE CASCADE
                                                ON UPDATE CASCADE
                                                MATCH [FULL],
    DEFECT_COUNT INTEGER,
    SEVERITY     VARCHAR (128) CONSTRAINT SEVERITY_CHECK CHECK (SEVERITY IN ("CRITICAL", "HIGH", "MEDIUM", "LOW") )
);
```