

Create Table

```
CREATE OR REPLACE TABLE it_staff_members
FOR SYSTEM NAME itstaff
( employee_id          FOR empid
  NUMERIC(9, 0)       NOT NULL
, employee_role       FOR role
  CHAR(15)            NOT NULL   DEFAULT 'developer'
, employee_first_name FOR fname
  CHAR(30)           NOT NULL
, employee_last_name  FOR lname
  CHAR(30)           NOT NULL
, employee_phone_number FOR phone
  CHAR(20)           NOT NULL   DEFAULT
) RCDFMT itstaffr
;
```

Create Table

```
CREATE OR REPLACE TABLE  it_oncall_roster
FOR SYSTEM NAME itoncall
( shift_date
    DATE                NOT NULL
, application          FOR appl
    CHAR(10)            NOT NULL
, on_call
    NUMERIC(9, 0)       NOT NULL
) RCDFMT itoncallr;
```

Create Table

```
CREATE OR REPLACE TABLE  it_job_application
FOR SYSTEM NAME itjobs
( job_name
    CHAR(10)                NOT NULL
, application              FOR appl
    CHAR(10)                NOT NULL
) RCDFMT itjobsr;
```

Insert

```
INSERT INTO it_staff_members
( employee_id
, employee_first_name
, employee_last_name
, employee_phone_number
)
```

VALUES

```
( 1111, 'Tim'      , 'Berners-Lee' , '(555) 555 - 1111' ),
( 2222, 'George'   , 'Boole'      , '(555) 555 - 2222' ),
( 3333, 'Kathleen' , 'Booth'     , '(555) 555 - 3333' ),
( 4444, 'Stephen'  , 'Bourne'    , '(555) 555 - 4444' ),
( 5555, 'Brian'    , 'Fox'       , '(555) 555 - 5555' ),
( 6666, 'Ryan'     , 'Dahl'      , '(555) 555 - 6666' );
```

Insert

```
INSERT INTO it_staff_members
```

```
( employee_id  
  , employee_role  
  , employee_first_name  
  , employee_last_name  
  , employee_phone_number  
)
```

```
VALUES
```

```
( 7777, 'manager', 'Alan', 'Turing', '(555) 555 - 7777');
```

Insert

```
INSERT INTO it_oncall_roster
( shift_date, application, on_call )
VALUES
( current date , 'web' , 1111 ),
( current date , 'fpga' , 2222 ),
( current date , 'asm' , 3333 ),
( current date , 'ssh' , 4444 ),
( current date , 'node' , 6666 );
```

Insert

```
INSERT INTO it_job_application
( job_name, application )
VALUES
( 'JOB001', 'web' ),
( 'JOB002', 'fpga' ),
( 'JOB003', 'asm' ),
( 'JOB004', 'ssh' ),
( 'JOB005', 'node' );
```

Constraints

- UNIQUE
 - UNIQUE constraint

```
ALTER TABLE  it_staff_members
ADD CONSTRAINT  it_staff_unique_name
UNIQUE ( employee_first_name
, employee_last_name );
```


Constraints

- UNIQUE
 - UNIQUE constraint
 - PRIMARY KEY constraint

```
ALTER TABLE  it_staff_members  
ADD CONSTRAINT it_staff_members_pk  
PRIMARY KEY ( employee_id );
```

Constraints

- CHECK

```
ALTER TABLE  it_staff_members
ADD CONSTRAINT it_staff_members_role
CHECK (
    employee_role IN('developer', 'manager')
);
```

Constraints

- REFERENTIAL

```
ALTER TABLE  it_oncall_roster
ADD CONSTRAINT oncall_empid_exists
FOREIGN KEY (on_call)
REFERENCES it_staff_members (empid)
ON DELETE RESTRICT;
```

View Example

```
CREATE OR REPLACE VIEW it_staff_oncall_roster
FOR SYSTEM NAME stafoncall AS
SELECT employee_id
       , COALESCE(application, '** not found **')
       AS application
FROM   it_staff_members
LEFT OUTER JOIN it_oncall_roster
ON employee_id = on_call;

SELECT * FROM it_staff_oncall_roster;
```

Functions

```
CREATE OR REPLACE FUNCTION contact_info
( in_employee_id numeric(9, 0) )
RETURNS varchar(128)
RETURN
( SELECT
    '(' CONCAT SUBSTRING(role, 1, 1) CONCAT ')'
    CONCAT TRIM(fname) CONCAT ' '
    CONCAT TRIM(lname) CONCAT ' '
    CONCAT TRIM(phone)
FROM   it_staff_members
WHERE  employee_id = in_employee_id
FETCH FIRST ROW ONLY
);
```

Functions

```
CREATE OR REPLACE FUNCTION get_it_manager()  
RETURNS varchar(128)  
RETURN  
(  
    SELECT contact_info(employee_id)  
    FROM it_staff_members  
    WHERE employee_role = 'manager'  
    FETCH FIRST ROW ONLY  
);
```

Functions

```
CREATE OR REPLACE FUNCTION parse_jobname_from_job
( qual_job    VARCHAR(28) )
RETURNS CHAR(10)
BEGIN
    DECLARE slash    SMALLINT;
    SET slash = LOCATE('/', qual_job);
    SET slash = LOCATE('/', qual_job, slash + 1);
    RETURN SUBSTRING(qual_job, slash + 1);
END;
```

Procedure

```
CREATE OR REPLACE PROCEDURE create_oncall_roster
( IN from_date DATE DEFAULT current date
, IN to_date DATE DEFAULT (current date + 1 day)
)
INSERT INTO it_oncall_roster
( SELECT to_date, application, on_call
FROM it_oncall_roster
WHERE shift_date = from_date )
;
```


View

```
CREATE OR REPLACE VIEW msgw_job_names AS
SELECT parse_jobname_from_job(job_name)
       AS job_name
FROM TABLE (qsys2.active_job_info())
WHERE job_status = 'MSGW';
```

View

```
CREATE VIEW msgw_contact_info AS
SELECT msgw.job_name
      , COALESCE( job.application, '* MISSING *' )
        AS application
      , COALESCE( contact_info(rst.on_call)
                , get_it_manager()
                , '* MISSING *'
                ) AS on_call_contact
FROM msgw_job_names AS msgw
LEFT OUTER JOIN it_job_application AS job
  ON msgw.job_name = job.job_name
LEFT OUTER JOIN it_oncall_roster AS rst
  ON rst.shift_date = CURRENT DATE
  AND rst.application = job.application
```