Oefening 1:

**CREATE OR REPLACE FUNCTION** *dagen\_einde\_maand*

**RETURN NUMBER**

**IS**

**BEGIN**

**RETURN** *last\_day*(*sysdate*) - *sysdate*;

**END**;

Oefening 2:

**CREATE OR REPLACE FUNCTION** *aantal\_dienstjaren*

(p\_hire\_date employees.hire\_date%**TYPE**)

**RETURN NUMBER**

**AS**

v\_dienstjaren **NUMBER**(2);

**BEGIN**

v\_dienstjaren := *trunc*(*months\_between*(*sysdate*, p\_hire\_date) / 12);

**RETURN** v\_dienstjaren;

**END**;

Oefening 3:

a)

**CREATE OR REPLACE FUNCTION** *netto*

(p\_bruto\_salaris employees.SALARY%**TYPE**)

**RETURN VARCHAR2**

**AS**

v\_netto **NUMBER**;

**BEGIN**

v\_netto := p\_bruto\_salaris - (0.4 \* p\_bruto\_salaris);

**RETURN** *TO\_CHAR*(v\_netto, '999,999.99') || ' euro';

**END**;

b)

**CREATE OR REPLACE FUNCTION** *netto*

(p\_bruto\_salaris employees.SALARY%**TYPE**)

**RETURN VARCHAR2**

**AS**

v\_netto **NUMBER**;

**BEGIN**

**IF** p\_bruto\_salaris <= 10000 **THEN**

v\_netto := (p\_bruto\_salaris - (0.4 \* p\_bruto\_salaris));

**ELSIF** p\_bruto\_salaris <= 16000 **THEN**

v\_netto := (10000 - (0.4 \* 10000)) + (p\_bruto\_salaris - 10000 - (0.5 \* (p\_bruto\_salaris - 10000)));

**ELSE**

v\_netto := (10000 - (0.4 \* 10000)) + (6000 - (0.5 \* 6000)) + (p\_bruto\_salaris - 16000 - (0.6 \* (p\_bruto\_salaris - 16000)));

**END IF**;

**RETURN** *TO\_CHAR*(v\_netto, '999,999.99') || ' euro';

**END**;

Oefening 4:

a)

**CREATE OR REPLACE FUNCTION** *schrikkeljaar*

**RETURN VARCHAR2**

**AS**

v\_schrikkeljaar **VARCHAR2**(50);

v\_jaartal **NUMBER**;

**BEGIN**

v\_jaartal := *to\_number*(*to\_char*(*SYSDATE*, 'YYYY'));

**IF** *MOD*(v\_jaartal, 4) = 0 **THEN**

**IF** *MOD*(v\_jaartal, 100) = 0 **THEN**

**IF** *MOD*(v\_jaartal, 400) = 0 **THEN**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is een schrikkeljaar';

**ELSE**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is geen schrikkeljaar';

**END IF**;

**ELSE**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is een schrikkeljaar';

**END IF**;

**ELSE**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is geen schrikkeljaar';

**END IF**;

**RETURN** v\_schrikkeljaar;

**END**;

b)

**CREATE OR REPLACE FUNCTION** *schrikkeljaar*

(p\_schrikkeljaar **NUMBER**)

**RETURN VARCHAR2**

**AS**

v\_schrikkeljaar **VARCHAR2**(50);

v\_jaartal **NUMBER**;

**BEGIN**

v\_jaartal := p\_schrikkeljaar;

**IF** *MOD*(v\_jaartal, 4) = 0 **THEN**

**IF** *MOD*(v\_jaartal, 100) = 0 **THEN**

**IF** *MOD*(v\_jaartal, 400) = 0 **THEN**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is een schrikkeljaar';

**ELSE**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is geen schrikkeljaar';

**END IF**;

**ELSE**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is een schrikkeljaar';

**END IF**;

**ELSE**

v\_schrikkeljaar := 'het jaar ' || *to\_char*(v\_jaartal) || ' is geen schrikkeljaar';

**END IF**;

**RETURN** v\_schrikkeljaar;

**END**;

Oefening 5:

**CREATE OR REPLACE FUNCTION** *volgende\_vergadering*

**RETURN VARCHAR2**

**AS**

v\_datum **DATE**;

v\_datumAfprint **VARCHAR2**(20);

**BEGIN**

v\_datum := *NEXT\_DAY*(*LAST\_DAY*(*SYSDATE*), 'MAANDAG');

**IF** *TO\_CHAR*(v\_datum, 'DD/MM') = '01/01' **OR** *TO\_CHAR*(v\_datum, 'DD/MM') = '01/05' **THEN**

v\_datum := v\_datum + 1;

**END IF**;

v\_datumAfprint := *TO\_CHAR*(v\_datum, 'DD/MM/YYYY');

**RETURN** v\_datumAfprint;

**END**;

Oefening 6:

**CREATE OR REPLACE FUNCTION** *next\_employee\_id*

**RETURN NUMBER**

**AS**

v\_id employees.employee\_id%**TYPE**;

**BEGIN**

**SELECT** *MAX*(EMPLOYEE\_ID)

**INTO** v\_id

**FROM** employees;

v\_id := v\_id + 1;

**RETURN** v\_id;

**END**;

Oefening 7:

**CREATE OR REPLACE FUNCTION** *jaarloon*

(p\_employee\_id employees.employee\_id%**TYPE**)

**RETURN NUMBER**

**AS**

v\_maandloon employees.salary%**TYPE**;

v\_jaarloon employees.salary%**TYPE**;

v\_commissie employees.COMMISSION\_PCT%**TYPE**;

**BEGIN**

**SELECT** SALARY

**INTO** v\_maandloon

**FROM** EMPLOYEES

**WHERE** p\_employee\_id = EMPLOYEE\_ID;

**SELECT** COMMISSION\_PCT

**INTO** v\_commissie

**FROM** EMPLOYEES

**WHERE** p\_employee\_id = EMPLOYEE\_ID;

v\_maandloon := v\_maandloon \* (1 + *NVL*(v\_commissie, 0));

v\_jaarloon := v\_maandloon \* 12;

**RETURN** v\_jaarloon;

**END**;

Oefening 8:

**CREATE OR REPLACE FUNCTION** *hoofd\_meeste\_wn*

**RETURN VARCHAR2**

**AS**

v\_dep\_id employees.department\_id%**type**;

v\_aantal **NUMBER**;

v\_manager\_id employees.manager\_id%**type**;

v\_first employees.first\_name%**type**;

v\_last employees.last\_name%**type**;

**BEGIN**

**SELECT** department\_id, *count*(employee\_id)

**INTO** v\_dep\_id, v\_aantal

**FROM** employees

**GROUP BY** department\_id

**HAVING** *count*(employee\_id) = (**SELECT** *max*(*count*(employee\_id))

**FROM** employees

**GROUP BY** department\_id);

**SELECT** manager\_id

**INTO** v\_manager\_id

**FROM** departments

**WHERE** department\_id = v\_dep\_id;

**select** first\_name , last\_name

**INTO** v\_first, v\_last

**FROM** employees

**WHERE** employee\_id = v\_manager\_id;

**RETURN** v\_first || ' ' || v\_last;

**END**;

Oefening 9:

**CREATE OR REPLACE PROCEDURE** *minimumlonen*

p\_land\_naam

**CREATE OR REPLACE FUNCTION** *get\_jubileumdatum*

(p\_last\_name employees.last\_name%**TYPE**

,p\_first\_name employees.first\_name%**TYPE**)

**RETURN VARCHAR2**

**AS**

v\_datum **DATE**;

v\_output **VARCHAR2**(20);

**BEGIN**

**SELECT** HIRE\_DATE

**INTO** v\_datum

**FROM** EMPLOYEES

**WHERE** LAST\_NAME = p\_last\_name **AND** FIRST\_NAME = p\_first\_name;

v\_datum := *ADD\_MONTHS*(v\_datum, (12 \* 25));

**IF** v\_datum < *SYSDATE* **THEN**

v\_output := 'werd reeds gevierd';

**ELSIF** *LOWER*(*TO\_CHAR*(v\_datum, 'DAY')) = 'vrijdag' **THEN**

v\_output := *TO\_CHAR*(v\_datum, 'DD/MM/YYYY');

**ELSE**

v\_output := *TO\_CHAR*(*NEXT\_DAY*(v\_datum, 'VRIJDAG'), 'DD/MM/YYYY');

**END IF**;

**RETURN** v\_output;

**END**;