**Database Design – Exercises – Expected SQL**

**-- 2.1 Simple Query**

**-- 2.1.1 SELECT all columns**

**-- a)**

SELECT \*

FROM department;

**-- b)**

SELECT \*

FROM salesperson;

**-- c)**

SELECT \*

FROM sale;

**-- d)**

SELECT \*

FROM contact;

**-- 2.1.2 SELECT with comments**

-- “comment”

SELECT \* -- In-line comment

FROM department;

/\*

Block comment

\*/

**-- 2.1.3 SELECT specifying columns**

**-- a)**

SELECT

departmentnumber,

departmentname

FROM department;

**-- b)**

SELECT

employeenumber,

lastname,

tel

FROM salesperson;

**-- c)**

SELECT

companynumber,

ordernumber,

ordervalue

FROM sale;

**-- d)**

SELECT

jobtitle,

contactname

FROM contact;

**-- 2.1.4 SELECT calculated / virtual column and alias**

**-- a)**

SELECT

departmentnumber,

departmentname,

salestarget AS 'Old Sales Target',

salestarget \* 1.50 AS 'New Sales Target'

FROM department;

**-- b)**

SELECT

ordernumber,

ordervalue AS 'Old Order Value',

ordervalue \* 0.50 AS 'New Order Value'

FROM sale;

**-- 2.1.5 SELECT with arithmetic operators**

**-- a)**

SELECT

firstname,

lastname,

salary \* 1.50 AS 'New Salary',

salestarget \* 1.50 AS 'New Target',

salary \* 1.50 \* 0.10 + sales\_target \* 1.50 \* 0.20 AS 'Potential Bonus'

FROM salesperson;

**-- 2.1.6 SELECT with arithmetic operators using brackets**

**-- a)**

SELECT

firstname,

lastname,

salary \* 1.50 AS 'New Salary',

salestarget \* 1.50 AS 'New Target',

(((salary \* 1.50) \* 0.10) + ((sales\_target \* 1.50) \* 0.20)) AS

'Potential Bonus'

FROM salesperson;

**-- 2.1.7 SELECT with arithmetic operator on text**

**-- a)**

SELECT companynumber,

CONCAT(contact\_code,'/',contact\_name,'/',job\_title) AS 'Contact Details'

FROM contact;

**-- 2.1.8 SELECT with function**

**-- a)**

SELECT

employeenumber,

SUBSTRING(firstname,1,1) AS 'First Initial',

SUBSTRING(lastname,1,1) AS 'Last Initial',

SUBSTRING(postcode,1,4) AS 'Post Code Region'

FROM salesperson;

**-- 2.1.9 SELECT with function**

**-- a)**

SELECT

firstname,

lastname,

COALESCE(postcode,'No Post Code')

FROM salesperson;

**-- 2.1.10 SELECT with DISTINCT**

**-- a)**

SELECT DISTINCT

companynumber

FROM contact;

**-- b)**

SELECT DISTINCT

companynumber,

contactcode

FROM sale;