Practice Exercise – Week 2 – SQL Course

Note – Once MYSQL installation is complete, click on MYSQL workbench option available in the installed MYSQL to launch MY SQL Workbench.

Once Workbench is launched, connect using the administrator login and password.

Once connected, use the sample database “Sakila” and /or “World” as per the instruction of the exercises.

Disclaimer - Please note some part of this exercise is an extension of Practice Exercise Week 1 and hence participants are suggested to attempt Practice Exercise Week 1 quiz before solving this quiz.

Use “Sakila” database for the following questions

Q1 Which actor has appeared in the most films? (‘107', 'GINA', 'DEGENERES', '42')

Q2 What is the average length of films by category? (16 rows)

Q3 Which film categories are long? (5 rows)

Q4 How many copies of the film “Hunchback Impossible” exist in the inventory system? (6)

Q5 Using the tables “payment” and “customer” and the JOIN command, list the total paid by each customer. List the customers alphabetically by last name (599 rows)

Use “world” database for the following questions

Q1 Write a query in SQL to display the code, name, continent and GNP for all the countries whose country name last second word is 'd’, using “country” table. (22 rows)

Q2 Write a query in SQL to display the code, name, continent and GNP of the 2nd and 3rd highest GNP from “country” table. (Japan & Germany)

Execute the following commands to create 2 new tables and insert records

```
--
-- Table structure for table `departments`
--

CREATE TABLE IF NOT EXISTS `departments` (
  `DEPARTMENT_ID` decimal(4,0) NOT NULL DEFAULT '0',
  `DEPARTMENT_NAME` varchar(30) NOT NULL,
  `MANAGER_ID` decimal(6,0) DEFAULT NULL,
  `LOCATION_ID` decimal(4,0) DEFAULT NULL,
  PRIMARY KEY (`DEPARTMENT_ID`),
  KEY `DEPT_MGR_FK` (`MANAGER_ID`),
  KEY `DEPT_LOCATION_IX` (`LOCATION_ID`)
) ;

--
-- Dumping data for table `departments`
--

INSERT INTO `departments` (`DEPARTMENT_ID`, `DEPARTMENT_NAME`,
`MANAGER_ID`, `LOCATION_ID`) VALUES
('10', 'Administration', '200', '1700'),
('20', 'Marketing', '201', '1800'),
('30', 'Purchasing', '114', '1700'),
('40', 'Human Resources', '203', '2400'),
('50', 'Shipping', '121', '1500'),
('60', 'IT', '103', '1400'),
('70', 'Public Relations', '204', '2700'),
('80', 'Sales', '145', '2500'),
('90', 'Executive', '100', '1700'),
('100', 'Finance', '108', '1700'),
('110', 'Accounting', '205', '1700'),
('120', 'Treasury', '0', '1700'),
('130', 'Corporate Tax', '0', '1700'),
('140', 'Control And Credit', '0', '1700'),
('150', 'Shareholder Services', '0', '1700'),
('160', 'Benefits', '0', '1700'),
('170', 'Manufacturing', '0', '1700'),
('180', 'Construction', '0', '1700'),
('190', 'Contracting', '0', '1700'),
('200', 'Operations', '0', '1700'),
('210', 'IT Support', '0', '1700'),
('220', 'NOC', '0', '1700'),
('230', 'IT Helpdesk', '0', '1700'),
('240', 'Government Sales', '0', '1700'),
('250', 'Retail Sales', '0', '1700'),
('260', 'Recruiting', '0', '1700'),
('270', 'Payroll', '0', '1700');

-- --------------------------------------------------------

--
```

```
-- Table structure for table `employees`
--

CREATE TABLE IF NOT EXISTS `employees` (
  `EMPLOYEE_ID` decimal(6,0) NOT NULL DEFAULT '0',
  `FIRST_NAME` varchar(20) DEFAULT NULL,
  `LAST_NAME` varchar(25) NOT NULL,
  `EMAIL` varchar(25) NOT NULL,
  `PHONE_NUMBER` varchar(20) DEFAULT NULL,
  `HIRE_DATE` date NOT NULL,
  `JOB_ID` varchar(10) NOT NULL,
  `SALARY` decimal(8,2) DEFAULT NULL,
  `COMMISSION_PCT` decimal(2,2) DEFAULT NULL,
  `MANAGER_ID` decimal(6,0) DEFAULT NULL,
  `DEPARTMENT_ID` decimal(4,0) DEFAULT NULL,
  PRIMARY KEY (`EMPLOYEE_ID`),
  UNIQUE KEY `EMP_EMAIL_UK` (`EMAIL`),
  KEY `EMP_DEPARTMENT_IX` (`DEPARTMENT_ID`),
  KEY `EMP_JOB_IX` (`JOB_ID`),
  KEY `EMP_MANAGER_IX` (`MANAGER_ID`),
  KEY `EMP_NAME_IX` (`LAST_NAME`,`FIRST_NAME`)
) ;

--
-- Dumping data for table `employees`
--

INSERT INTO `employees` (`EMPLOYEE_ID`, `FIRST_NAME`, `LAST_NAME`, `EMAIL`,
`PHONE_NUMBER`, `HIRE_DATE`, `JOB_ID`, `SALARY`, `COMMISSION_PCT`,
`MANAGER_ID`, `DEPARTMENT_ID`) VALUES
('100', 'Steven', 'King', 'SKING', '515.123.4567', '1987-06-17', 'AD_PRES',
'24000.00', '0.00', '0', '90'),
('101', 'Neena', 'Kochhar', 'NKOCHHAR', '515.123.4568', '1987-06-18',
'AD_VP', '17000.00', '0.00', '100', '90'),
('102', 'Lex', 'De Haan', 'LDEHAAN', '515.123.4569', '1987-06-19', 'AD_VP',
'17000.00', '0.00', '100', '90'),
('103', 'Alexander', 'Hunold', 'AHUNOLD', '590.423.4567', '1987-06-20',
'IT_PROG', '9000.00', '0.00', '102', '60'),
('104', 'Bruce', 'Ernst', 'BERNST', '590.423.4568', '1987-06-21',
'IT_PROG', '6000.00', '0.00', '103', '60'),
('105', 'David', 'Austin', 'DAUSTIN', '590.423.4569', '1987-06-22',
'IT_PROG', '4800.00', '0.00', '103', '60'),
('106', 'Valli', 'Pataballa', 'VPATABAL', '590.423.4560', '1987-06-23',
'IT_PROG', '4800.00', '0.00', '103', '60'),
('107', 'Diana', 'Lorentz', 'DLORENTZ', '590.423.5567', '1987-06-24',
'IT_PROG', '4200.00', '0.00', '103', '60'),
('108', 'Nancy', 'Greenberg', 'NGREENBE', '515.124.4569', '1987-06-25',
'FI_MGR', '12000.00', '0.00', '101', '100'),
('109', 'Daniel', 'Faviet', 'DFAVIET', '515.124.4169', '1987-06-26',
'FI_ACCOUNT', '9000.00', '0.00', '108', '100'),
('110', 'John', 'Chen', 'JCHEN', '515.124.4269', '1987-06-27',
'FI_ACCOUNT', '8200.00', '0.00', '108', '100'),
('111', 'Ismael', 'Sciarra', 'ISCIARRA', '515.124.4369', '1987-06-28',
'FI_ACCOUNT', '7700.00', '0.00', '108', '100'),
('112', 'Jose Manuel', 'Urman', 'JMURMAN', '515.124.4469', '1987-06-29',
'FI_ACCOUNT', '7800.00', '0.00', '108', '100'),
('113', 'Luis', 'Popp', 'LPOPP', '515.124.4567', '1987-06-30',
'FI_ACCOUNT', '6900.00', '0.00', '108', '100'),
```

```
('114', 'Den', 'Raphaely', 'DRAPHEAL', '515.127.4561', '1987-07-01',
'PU_MAN', '11000.00', '0.00', '100', '30'),
('115', 'Alexander', 'Khoo', 'AKHOO', '515.127.4562', '1987-07-02',
'PU_CLERK', '3100.00', '0.00', '114', '30'),
('116', 'Shelli', 'Baida', 'SBAIDA', '515.127.4563', '1987-07-03',
'PU_CLERK', '2900.00', '0.00', '114', '30'),
('117', 'Sigal', 'Tobias', 'STOBIAS', '515.127.4564', '1987-07-04',
'PU_CLERK', '2800.00', '0.00', '114', '30');
```

Q1 Write a query to display Employee id and First Name of an employee whose dept_id = 100. (Use:Sub-query)(6 rows)

Q2. Write a query to display the dept_id, maximum salary, of all the departments whose maximum salary is greater than the average salary. (USE: SUB-QUERY) (11 rows)

Q3 Write a query to display department name and, department id of the employees whose salary is less than 35000. .(USE:SUB-QUERY)(11 rows)