**Chapter 3 lecture related notes**

(Please bring along for reference during lecture)

We will use as an example a company that operates worldwide to fill orders for several different products. The company has three divisions:

Human Resources: Tracks information about the employees and facilities Order Entry: Tracks product inventories and sales through various channels Sales History: Tracks business statistics to facilitate business decisions

For our SQL lecture reference, we will build a database based on the Human Resources (HR) division.

Sample database: Human Resources Division - Tracks information about the employees and facilities.

Human Resources (HR)

* In the Human Resource (HR) records, each employee has an identification number, email address, job identification code, salary, and manager. Some employees earn commissions in addition to their salary.
* The company also tracks information about jobs within the organization. Each job has an identification code, job title, and a minimum and maximum salary range for the job. Some employees have been with the company for a long time and have held different positions within the company. When an employee resigns, the duration the employee was working for, the job identification number, and the department are recorded.
* The sample company is regionally diverse, so it tracks the locations of its warehouses and departments. Each employee is assigned to a department, and each department is identified either by a unique department number or a short name. Each department is associated with one location, and each location has a full address that includes the street name, postal code, city, state or province, and the country code.
* In places where the departments and warehouses are located, the company records details such as the country name, currency symbol, currency name, and the region where the country is located geographically.

**Some sample data for the HR tables**

|  |  |
| --- | --- |
| REGIONS | COUNTRIES |
| |  |  | | --- | --- | | REGION\_  ID | REGION\_NAME | | 1 | Europe | | 2 | Americas | | 3 | Asia | | 4 | Middle East and Africa | | |  |  |  | | --- | --- | --- | | COUNTRY\_ID | COUNTRY\_NAME | REGION\_ID | | IT | Italy | 1 | | JP | Japan | 3 | | US | United States of America | 2 | | CA | Canada | 2 | | CN | China | 3 | | IN | India | 3 | | AU | Australia | 3 | | ZW | Zimbabwe | 4 | | SG | Singapore | 3 | | UK | United Kingdom | 1 | | FR | France | 1 | | DE | Germany | 1 | | ZM | Zambia | 4 | | EG | Egypt | 4 | | BR | Brazil | 2 | | CH | Switzerland | 1 | | NL | Netherlands | 1 | | MX | Mexico | 2 | | KW | Kuwait | 4 | | IL | Israel | 4 | | DK | Denmark | 1 | | HK | HongKong | 3 | | NG | Nigeria | 4 | | AR | Argentina | 2 | | BE | Belgium | 1 | |

|  |  |
| --- | --- |
| DEPARTMENTS | LOCATIONS |
| |  |  |  |  | | --- | --- | --- | --- | | DEPARTMENT  \_ID | DEPARTMENT  \_NAME | MANAGER  \_ID | LOCATION  \_ID | | 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 |  | 1700 | | 130 | Corporate Tax |  | 1700 | | 140 | Control And Credit |  | 1700 | | 150 | Shareholder Services |  | 1700 | | 160 | Benefits |  | 1700 | | 170 | Manufacturing |  | 1700 | | 180 | Construction |  | 1700 | | 190 | Contracting |  | 1700 | | 200 | Operations |  | 1700 | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | LOCATION  \_ID | STREET\_ADDRESS | POSTAL\_CODE | CITY | STATE\_  PROVINCE | COUNTRY  \_ID | | 1000 | 1297 Via Cola di Rie | 989 | Roma | null | IT | | 1100 | 93091 Calle della Testa | 10934 | Venice | null | IT | | 1200 | 2017 Shinjuku-ku | 1689 | Tokyo | Tokyo Prefecture | JP | | 1300 | 9450 Kamiya-cho | 6823 | Hiroshima | null | JP | | 1400 | 2014 Jabberwocky Rd | 26192 | Southlake | Texas | US | | 1500 | 2011 Interiors Blvd | 99236 | South San Francisco | California | US | | 1600 | 2007 Zagora St | 50090 | South Brunswick | New Jersey | US | | 1700 | 2004 Charade Rd | 98199 | Seattle | Washington | US | | 1800 | 147 Spadina Ave | M5V 2L7 | Toronto | Ontario | CA | | 1900 | 6092 Boxwood St | YSW 9T2 | Whitehorse | Yukon | CA | | 2000 | 40-5-12 Laogianggen | 190518 | Beijing | null | CN | | 2100 | 1298 Vileparle (E) | 490231 | Bombay | Maharashtra | IN | | 2200 | 12-98 Victoria Street | 2901 | Sydney | New South Wales | AU | | 2300 | 198 Clementi North | 540198 | Singapore | null | SG | | 2400 | 8204 Arthur St | null | London | null | UK | |

EMPLOYEES

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EMPLOYEE\_ID | FIRST\_NAME | LAST\_NAME | EMAIL | PHONE\_NUMBER | HIRE\_DATE | JOB\_ID | SALARY | COMMISSION\_  PCT | MANAGER\_  ID | DEPARTMENT\_  ID |
| 201 | Michael | Hartstein | MHARTSTE | 515.123.5555 | 17-Feb-96 | MK\_MAN | 13000 |  | 100 | 20 |
| 202 | Pat | Fay | PFAY | 603.123.6666 | 17-Aug-97 | MK\_REP | 6000 |  | 201 | 20 |
| 203 | Susan | Mavris | SMAVRIS | 515.123.7777 | 7-Jun-94 | HR\_REP | 6500 |  | 101 | 40 |
| 204 | Hermann | Baer | HBAER | 515.123.8888 | 7-Jun-94 | PR\_REP | 10000 |  | 101 | 70 |
| 205 | Shelley | Higgins | SHIGGINS | 515.123.8080 | 7-Jun-94 | AC\_MGR | 12000 |  | 101 | 110 |
| 206 | William | Gietz | WGIETZ | 515.123.8181 | 7-Jun-94 | AC\_ACCOUNT | 8300 |  | 205 | 110 |
| 100 | Steven | King | SKING | 515.123.4567 | 17-Jun-87 | AD\_PRES | 24000 |  |  | 90 |
| 101 | Neena | Kochhar | NKOCHHAR | 515.123.4568 | 21-Sep-89 | AD\_VP | 17000 |  | 100 | 90 |
| 102 | Lex | De Haan | Haan | 515.123.4569 | 13-Jan-93 | AD\_VP | 17000 |  | 100 | 90 |
| 103 | Alexander | Hunold | AHUNOLD | 590.423.4567 | 3-Jan-90 | IT\_PROG | 9000 |  | 102 | 60 |
| 104 | Bruce | Ernst | BERNST | 590.423.4568 | 21-May-91 | IT\_PROG | 6000 |  | 103 | 60 |
| 113 | Luis | Popp | LPOPP | 515.124.4567 | 7-Dec-99 | FI\_ACCOUNT | 6900 |  | 108 | 100 |
| 114 | Den | Raphaely | DRAPHEAL | 515.127.4561 | 7-Dec-94 | PU\_MAN | 11000 |  | 100 | 30 |
| 115 | Alexander | Khoo | AKHOO | 515.127.4562 | 18-May-95 | PU\_CLERK | 3100 |  | 114 | 30 |
| 116 | Shelli | Baida | SBAIDA | 515.127.4563 | 24-Dec-97 | PU\_CLERK | 2900 |  | 114 | 30 |
| 145 | John | Russell | JRUSSEL | 011.44.1344.429268 | 1-Oct-96 | SA\_MAN | 14000 | 0.4 | 100 | 80 |
| 146 | Karen | Partners | KPARTNER | 011.44.1344.467268 | 5-Jan-97 | SA\_MAN | 13500 | 0.3 | 100 | 80 |
| 147 | Alberto | Errazuriz | AERRAZUR | 011.44.1344.429278 | 10-Mar-97 | SA\_MAN | 12000 | 0.3 | 100 | 80 |
| 152 | Peter | Hall | PHALL | 011.44.1344.478968 | 20-Aug-97 | SA\_REP | 9000 | 0.25 | 145 | 80 |
| 196 | Alana | Walsh | AWALSH | 650.507.9811 | 24-Apr-98 | SH\_CLERK | 3100 |  | 124 | 50 |
| 197 | Kevin | Feeney | KFEENEY | 650.507.9822 | 23-May-98 | SH\_CLERK | 3000 |  | 124 | 50 |
| 198 | Donald | OConnell | DOCONNEL | 650.507.9833 | 21-Jun-99 | SH\_CLERK | 2600 |  | 124 | 50 |
| 199 | Douglas | Grant | DGRANT | 650.507.9844 | 13-Jan-00 | SH\_CLERK | 2600 |  | 124 | 50 |
| 200 | Jennifer | Whalen | JWHALEN | 515.123.4444 | 17-Sep-87 | AD\_ASST | 4400 |  | 101 | 10 |

|  |  |
| --- | --- |
| JOBS | JOB\_HISTORY |
| |  |  |  |  | | --- | --- | --- | --- | | JOB\_ID | JOB\_TITLE | MIN\_SALARY | MAX\_SALARY | | AD\_PRES | President | 20000 | 40000 | | AD\_VP | Administration Vice President | 15000 | 30000 | | AD\_ASST | Administration Assistant | 3000 | 6000 | | FI\_MGR | Finance Manager | 8200 | 16000 | | FI\_ACCOUNT | Accountant | 4200 | 9000 | | AC\_MGR | Accounting Manager | 8200 | 16000 | | AC\_ACCOUNT | Public Accountant | 4200 | 9000 | | SA\_MAN | Sales Manager | 10000 | 20000 | | SA\_REP | Sales Representative | 6000 | 12000 | | PU\_MAN | Purchasing Manager | 8000 | 15000 | | PU\_CLERK | Purchasing Clerk | 2500 | 5500 | | ST\_MAN | Stock Manager | 5500 | 8500 | | ST\_CLERK | Stock Clerk | 2000 | 5000 | | SH\_CLERK | Shipping Clerk | 2500 | 5500 | | IT\_PROG | Programmer | 4000 | 10000 | | MK\_MAN | Marketing Manager | 9000 | 15000 | | MK\_REP | Marketing Representative | 4000 | 9000 | | HR\_REP | Human Resources Representative | 4000 | 9000 | | PR\_REP | Public Relations Representative | 4500 | 10500 | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | EMPLOYEE  \_ID | START\_DAT | END\_DATE | JOB\_ID | DEPARTMENT  \_ID | | 102 | 13-Jan-93 | 24-Jul-98 | IT\_PROG | 60 | | 101 | 21-Sep-89 | 27-Oct-93 | AC\_ACCOUNT | 110 | | 101 | 28-Oct-93 | 15-Mar-97 | AC\_MGR | 110 | | 201 | 17-Feb-96 | 19-Dec-99 | MK\_REP | 20 | | 114 | 24-Mar-98 | 31-Dec-99 | ST\_CLERK | 50 | | 122 | 1-Jan-99 | 31-Dec-99 | ST\_CLERK | 50 | | 200 | 17-Sep-87 | 17-Jun-93 | AD\_ASST | 90 | | 176 | 24-Mar-98 | 31-Dec-98 | SA\_REP | 80 | | 176 | 1-Jan-99 | 31-Dec-99 | SA\_MAN | 80 | | 200 | 1-Jul-94 | 31-Dec-98 | AC\_ACCOUNT | 90 | |