
HR Database

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HR Database

Description

This database reference documents the HR database.

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Tables: HR

Description

HR demo database that is included with Oracle.


Tables

Name	Description
COUNTRIES	Country table. Contains 25 rows. References with locations table.
DEPARTMENTS	Departments table that shows details of departments where employees work. Contains 27 rows; references with locations, employees, and job_history tables.
EMPLOYEES	employees table. Contains 107 rows. References with departments, jobs, job_history tables. Contains a self reference.
JOBS	jobs table with job titles and salary ranges. Contains 19 rows. References with employees and job_history table.
JOB_HISTORY	Table that stores job history of the employees. If an employee changes departments within the job or changes jobs within the department, new rows get inserted into this table with old job information of the employee. Contains a complex primary key: employee_id+start_date. Contains 25 rows. References with jobs, employees, and departments tables.
LOCATIONS	Locations table that contains specific address of a specific office, warehouse, and/or production site of a company. Does not store addresses / locations of customers. Contains 23 rows; references with the departments and countries tables.
REGIONS	Region table.

Table: COUNTRIES**Description**

Country table. Contains 25 rows. References with locations table.

Columns

Name	Type	Description
 COUNTRY_ID	CHAR(2)	Primary key of countries table.
COUNTRY_NAME	VARCHAR2(40)	Country name
REGION_ID	NUMBER(22)	Region ID for the country. Foreign key to region_id column in the departments table.

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
COUNTRIES	REGION_ID	REGIONS	REGION_ID
LOCATIONS	COUNTRY_ID	COUNTRIES	COUNTRY_ID

Indexes

Name	Type	Columns
COUNTRY_C_ID_PK	Unique	COUNTRY_ID

Check Constraints


None

Table: DEPARTMENTS

Description

Departments table that shows details of departments where employees work. Contains 27 rows; references with locations, employees, and job_history tables.

Columns

Name	Type	Description
 DEPARTMENT_ID	NUMBER(4)	Primary key column of departments table.
DEPARTMENT_NAME	VARCHAR2(30)	A not null column that shows name of a department. Administration, Marketing, Purchasing, Human Resources, Shipping, IT, Executive, Public Relations, Sales, Finance, and Accounting.
MANAGER_ID	NUMBER(6)	Manager_id of a department. Foreign key to employee_id column of employees table. The manager_id column of the employee table references this column.
LOCATION_ID	NUMBER(4)	Location id where a department is located. Foreign key to location_id column of locations table.

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
DEPARTMENTS	MANAGER_ID	EMPLOYEES	EMPLOYEE_ID
DEPARTMENTS	LOCATION_ID	LOCATIONS	LOCATION_ID
EMPLOYEES	DEPARTMENT_ID	DEPARTMENTS	DEPARTMENT_ID
JOB_HISTORY	DEPARTMENT_ID	DEPARTMENTS	DEPARTMENT_ID

Indexes

Name	Type	Columns
DEPT_ID_PK	Unique	DEPARTMENT_ID
DEPT_LOCATION_IX	Non-unique	LOCATION_ID

Check Constraints

None

Table: EMPLOYEES

Description

employees table. Contains 107 rows. References with departments, jobs, job_history tables. Contains a self reference.

Columns

Name	Type	Description
EMPLOYEE_ID	NUMBER(6)	Primary key of employees table.
FIRST_NAME	VARCHAR2(20)	First name of the employee. A not null column.
LAST_NAME	VARCHAR2(25)	Last name of the employee. A not null column.
EMAIL	VARCHAR2(25)	Email id of the employee
PHONE_NUMBER	VARCHAR2(20)	Phone number of the employee; includes country code and area code
HIRE_DATE	DATE	Date when the employee started on this job. A not null column.
JOB_ID	VARCHAR2(10)	Current job of the employee; foreign key to job_id column of the jobs table. A not null column.
SALARY	NUMBER(8,2)	Monthly salary of the employee. Must be greater than zero (enforced by constraint emp_salary_min)
COMMISSION_PCT	NUMBER(2,2)	Commission percentage of the employee; Only employees in sales department eligible for commission percentage
MANAGER_ID	NUMBER(6)	Manager id of the employee; has same domain as manager_id in departments table. Foreign key to employee_id column of employees table. (useful for reflexive joins and CONNECT BY query)
DEPARTMENT_ID	NUMBER(4)	Department id where employee works; foreign key to department_id column of the departments table

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
DEPARTMENTS	MANAGER_ID	EMPLOYEES	EMPLOYEE_ID
EMPLOYEES	DEPARTMENT_ID	DEPARTMENTS	DEPARTMENT_ID
EMPLOYEES	MANAGER_ID	EMPLOYEES	EMPLOYEE_ID
EMPLOYEES	JOB_ID	JOBS	JOB_ID
JOB_HISTORY	EMPLOYEE_ID	EMPLOYEES	EMPLOYEE_ID

Indexes

Name	Type	Columns
EMP_DEPARTMENT_IX	Non-unique	DEPARTMENT_ID
EMP_EMAIL_UK	Unique	EMAIL
EMP_EMP_ID_PK	Unique	EMPLOYEE_ID

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EMP_JOB_IX	Non-unique	JOB_ID
EMP_MANAGER_IX	Non-unique	MANAGER_ID
EMP_NAME_IX	Non-unique	LAST_NAME, FIRST_NAME


Check Constraints

Name	Check
EMP_SALARY_MIN	salary > 0

Table: JOBS**Description**

jobs table with job titles and salary ranges. Contains 19 rows.
References with employees and job_history table.

Columns

Name	Type	Description
 JOB_ID	VARCHAR2(10)	Primary key of jobs table.
JOB_TITLE	VARCHAR2(35)	A not null column that shows job title, e.g. AD_VP, FI_ACCOUNTANT
MIN_SALARY	NUMBER(6)	Minimum salary for a job title.
MAX_SALARY	NUMBER(6)	Maximum salary for a job title

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
EMPLOYEES	JOB_ID	JOBS	JOB_ID
JOB_HISTORY	JOB_ID	JOBS	JOB_ID

Indexes

Name	Type	Columns
JOB_ID_PK	Unique	JOB_ID

Check Constraints

None

Table: JOB_HISTORY

Description

Table that stores job history of the employees. If an employee changes departments within the job or changes jobs within the department, new rows get inserted into this table with old job information of the employee. Contains a complex primary key: employee_id+start_date. Contains 25 rows. References with jobs, employees, and departments tables.

Columns

Name	Type	Description
EMPLOYEE_ID	NUMBER(6)	A not null column in the complex primary key employee_id+start_date. Foreign key to employee_id column of the employee table
START_DATE	DATE	A not null column in the complex primary key employee_id+start_date. Must be less than the end_date of the job_history table. (enforced by constraint jhist_date_interval)
END_DATE	DATE	Last day of the employee in this job role. A not null column. Must be greater than the start_date of the job_history table. (enforced by constraint jhist_date_interval)
JOB_ID	VARCHAR2(10)	Job role in which the employee worked in the past; foreign key to job_id column in the jobs table. A not null column.
DEPARTMENT_ID	NUMBER(4)	Department id in which the employee worked in the past; foreign key to department_id column in the departments table

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
JOB_HISTORY	DEPARTMENT_ID	DEPARTMENTS	DEPARTMENT_ID
JOB_HISTORY	EMPLOYEE_ID	EMPLOYEES	EMPLOYEE_ID
JOB_HISTORY	JOB_ID	JOBS	JOB_ID

Indexes

Name	Type	Columns
JHIST_DEPARTMENT_IX	Non-unique	DEPARTMENT_ID
JHIST_EMPLOYEE_IX	Non-unique	EMPLOYEE_ID
JHIST_EMP_ID_ST_DAT E_PK	Unique	EMPLOYEE_ID, START_DATE
JHIST_JOB_IX	Non-unique	JOB_ID

Check Constraints

Name	Check
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```
JHIST_DATE_INTERVAL end_date > start_date
```

Table: LOCATIONS

Description

Locations table that contains specific address of a specific office, warehouse, and/or production site of a company. Does not store addresses / locations of customers. Contains 23 rows; references with the departments and countries tables.

Columns

Name	Type	Description
🔑 LOCATION_ID	NUMBER(4)	Primary key of locations table
STREET_ADDRESS	VARCHAR2(40)	Street address of an office, warehouse, or production site of a company. Contains building number and street name
POSTAL_CODE	VARCHAR2(12)	Postal code of the location of an office, warehouse, or production site of a company.
CITY	VARCHAR2(30)	A not null column that shows city where an office, warehouse, or production site of a company is located.
STATE_PROVINCE	VARCHAR2(25)	State or Province where an office, warehouse, or production site of a company is located.
COUNTRY_ID	CHAR(2)	Country where an office, warehouse, or production site of a company is located. Foreign key to country_id column of the countries table.

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
DEPARTMENTS	LOCATION_ID	LOCATIONS	LOCATION_ID
LOCATIONS	COUNTRY_ID	COUNTRIES	COUNTRY_ID

Indexes

Name	Type	Columns
LOC_CITY_IX	Non-unique	CITY
LOC_COUNTRY_IX	Non-unique	COUNTRY_ID
LOC_ID_PK	Unique	LOCATION_ID
LOC_STATE_PROVINCE_IX	Non-unique	STATE_PROVINCE

Check Constraints

None

Table: REGIONS

Description

Region table.

Columns

Name	Type	Description
🔑 REGION_ID	NUMBER(22)	Primary key of regions table.
REGION_NAME	VARCHAR2(25)	Name of region.

Relationships

Primary Table	Primary Key	Foreign Table	Foreign Key
COUNTRIES	REGION_ID	REGIONS	REGION_ID

Indexes

Name	Type	Columns
REG_ID_PK	Unique	REGION_ID

Check Constraints

None

Views: HR

Views

Name	Description
EMP_DETAILS_VIEW	

View: EMP_DETAILS_VIEW**Columns**

Name	Type	Description
EMPLOYEE_ID	NUMBER	
JOB_ID	VARCHAR2(0)	
MANAGER_ID	NUMBER	
DEPARTMENT_ID	NUMBER	
LOCATION_ID	NUMBER	
COUNTRY_ID	CHAR(0)	
FIRST_NAME	VARCHAR2(0)	
LAST_NAME	VARCHAR2(0)	
SALARY	NUMBER	
COMMISSION_PCT	NUMBER	
DEPARTMENT_NAME	VARCHAR2(0)	
JOB_TITLE	VARCHAR2(0)	
CITY	VARCHAR2(0)	
STATE_PROVINCE	VARCHAR2(0)	
COUNTRY_NAME	VARCHAR2(0)	
REGION_NAME	VARCHAR2(0)	

Definition

```

SELECT
  e.employee_id,
  e.job_id,
  e.manager_id,
  e.department_id,
  d.location_id,
  l.country_id,
  e.first_name,
  e.last_name,
  e.salary,
  e.commission_pct,
  d.department_name,
  j.job_title,
  l.city,
  l.state_province,
  c.country_name,
  r.region_name
FROM
  employees e,
  departments d,
  jobs j,
  locations l,
  countries c,
  regions r
WHERE e.department_id = d.department_id
      AND d.location_id = l.location_id
      AND l.country_id = c.country_id
      AND c.region_id = r.region_id
      AND j.job_id = e.job_id

```

HR Database

WITH READ ONLY

Procedures: HR

Procedures

Name	Description
SECURE_DML	
ADD_JOB_HISTORY	

Procedure: SECURE_DML

Parameters

None.

Procedure: ADD_JOB_HISTORY

Parameters

Name	Type	Direction
P_EMP_ID	NUMBER	Input
P_START_DATE	DATE	Input
P_END_DATE	DATE	Input
P_JOB_ID	VARCHAR2	Input
P_DEPARTMENT_ID	NUMBER	Input

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