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| Ch3 The Term | Definition |
|  SQL data-definition language (DDL | allows the specification of information about relations. |
|  Domain Types in SQL | **char(n).** Fixed length character string, with user-specified length *n.***varchar(n).**  Variable length character strings, with user-specified maximum length *n.***int.** Integer (a finite subset of the integers that is machine-dependent).**smallint.** Small integer (a machine-dependent subset of the integer domain type).**numeric(p,d).** Fixed point number, with user-specified precision of *p* digits, with *n* digits to the right of decimal point. **real, double precision.** Floating point and double-precision floating point numbers, with machine-dependent precision.**float(n).** Floating point number, with user-specified precision of at least *n* digits. |
|  SQL data-manipulation language (DML | * provides the ability to query information ,and insert, delete and update tuples
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| The result of an SQL qu | The result of an SQL query is a relation |
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|  select clause | list the attributes desired in the result of a query |
| where clause | specifies conditions that the result must satisfy.  |
|  from clause | lists the relations involved in the query |
|  Danger in natural join  |  beware of unrelated attributes with same name which get equated incorrectly |
|  Nested Subqueries |  **A common use of subqueries is to perform tests for set membership, set comparisons, and set cardinality.** |
|  subquery | is a **select-from-where** expression that is nested within another query. |
|  exists construct | **Is** construct returns the value **true** if the argument subquery is nonempty. |
|  unique construct | whether a subquery has any duplicate tuples in its result. |
|  with clause | provides a way of defining a temporary view whose definition is available only to the query in which the **with** clause occurs.  |
|  Scalar subquery | is one which is used where a single value is expected |
|  Modification of the Database | * Deletion of tuples from a given relation
* Insertion of new tuples into a given relation
* Updating values in some tuples in a given relation
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|  Deletion | Delete all instructors whose salary is less than the average salary of instructors |