Selection Queries

◆ Retrieve the records that satisfy certain conditions

```sql
select field(s) from table(s)
[where condition(s)]
[order by field(s) asc|desc];
```

Selection Query Examples

◆ List the descriptions of all products
◆ List all products
◆ List all CPU products
◆ List all products that cost more than $80, and order the results by price in descending order
◆ List the orders placed in this month

Values

◆ Numbers: 10, 30.2
◆ Strings: ‘CPU’, ‘John’s Kitchen’
◆ Dates: ‘2007-06-01’
◆ NULL

Operators

◆ Arithmetic
  ◆ +, -, *, /, %
◆ Comparison
  ◆ <, >, <=, >=, =, <>
  ◆ between
◆ Logical
  ◆ and, or, not
◆ String
  ◆ like
◆ Other
  ◆ is null
  ◆ in

LIKE

◆ Pattern matching
  ◆ %: any zero or more characters
  ◆ ::: any single character
  ◆ [abc], [a-z], [0-9]: range
  ◆ * -- zero or more instances of the preceding character

select * from products where description like ‘%intel%’;
Expressions

(1-0.1) * price

category = 'CPU' and price > 100
description like '%intel%'

order_date between '2007-5-19' and '2007-6-17'
and shipping_date is null

More Selection Query Examples

Find the prices of the CPU products after 10% discount
Find the hard drives made by Maxtor
Find the orders made last month but have not been shipped yet

CASE: switch style

```
SELECT product_id,
      CASE category
          WHEN 'MB' THEN 'Motherboard'
          WHEN 'CPU' THEN 'Processor'
          ELSE 'ERROR!' END
FROM products;
```

CASE: if-else style

```
SELECT product_id,
      CASE
          WHEN Price > 200 THEN 'Expensive'
          ELSE 'Cheap'
      END
FROM products;
```

DISTINCT

Remove duplicate results

```
select distinct address from customers;
```

Column Aliases

Name the result columns

```
select description as 'Intel CPUs' from products
    where category = 'CPU' and description like '%Intel%';
```