CIS 353

Week 7 Notes

Book(bid, title, DoPulish)

Student(sid, sname, age, city)

Buy(bid, sid, DoPurchase)

Pub(pid, phone, bid, price)

**Group by + Having –**

1. **All attributes used in group by must also be used in the select clause**
2. **Any other attribute not part of the group by clause but needs to be output must be used with an aggregated function**
3. **Having is used on aggregated data as Where is used on tuples.**

Find the max, min, avg price of the books published by every individual publisher

* Select pid, max(price, min(price), avg(price) from pub group by pid
* With rule 2, you can not add pname to be outputted because it is not part of the group by clause or apart of the aggregated function(Max, min, avg)

List the titles and the number of copies for every title

* Select title, count(\*) from book group by title

List the student IDs and the number of books bough by a student

* Select sid, count(bid) from buy group by sid

List the number of books bought by a particular student or the same date

* Select sid, count(\*), Dopurchase from buy group by sid, DoPurchase

List the titles of the books who have more than 50 copies

* Select title, count(\*) from book group by title having count(\*)>50

List the titles of the books published on october 2 and have more than 50 copies

* Select title, count(\*) **from** book **where** DoPurchase = October 2 **group by** title **having** count(\*)>50

Find the name of the student who bought more than 5 books

* Select sname count(bid), from student, buy where student.sid = buy.sid group by buy sname having count(bid)5

Find the name of the student who bought more than 5 copies of a particular book

* Select sname, count(\*) from student, buy where student.sid = buy.sid group by sname, bid having count(\*)>5

**Brain Teaser**

Select pid, max(price), from pub group by pid;

* Finds the highest priced book for each publisher id

Select pid, (second highest max(price)) from pub group by pid;

* Select p1.price form pub p1 where (select count(\*) from pub p2 where p1.pid = p2.pid and p2.price > p1.price) = 1
* Inner queries find the values form pub2 vs. values I pub1 and finds the value from pub2 table that is greater than one value from pub1 table.