Lab 2

Outline

1. **Download lab2.accdb**
2. **Using SQL in Access**
3. **Lab project**
4. **Assignment2**

1. Download lab2.accdb

Download the following data files from WeChat group files

-  lab2.accdb

-  Boats.txt
-  Reserves.txt
-  Sailors.txt

1. Download lab2.accdb

1) Table - Sailor

sid	sname	rating	age
22	dustin	7	45
28	yuppy	9	35
31	lubber	8	55
32	Adam	7	30
34	Allen	6	40
35	Bart	8	50
37	Bill	7	30
39	black	6	35
41	white	7	45

1. Download lab2.accdb

1) Table - Boats

bid	bname	color
101	tiger	red
103	lion	green
105	hero	blue
136	brave	gray
139	freedom	white
177	challenger	black
224	meteor	orange
269	rose	red
381	smart	blue

1. Download lab2.accdb

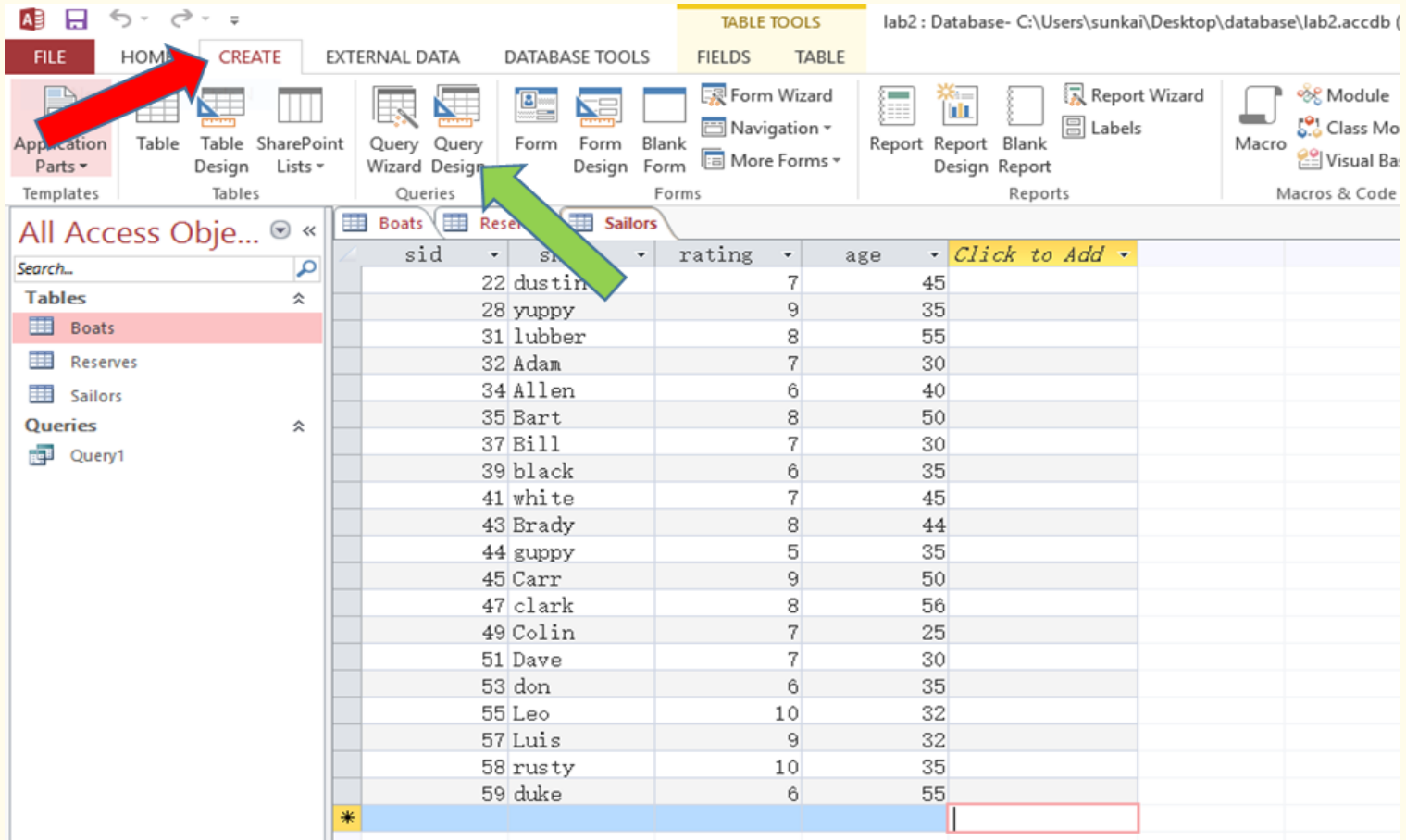
1) Table - Reserves

sid	bid	day
22	101	9/26/2018
32	101	12/2/2018
58	103	1/2/2019
49	105	4/13/2019
59	136	7/9/2019
55	139	8/12/2019
47	177	9/5/2019
51	224	10/6/2019
31	269	10/6/2019
44	269	10/14/2019

2. Using SQL in Access

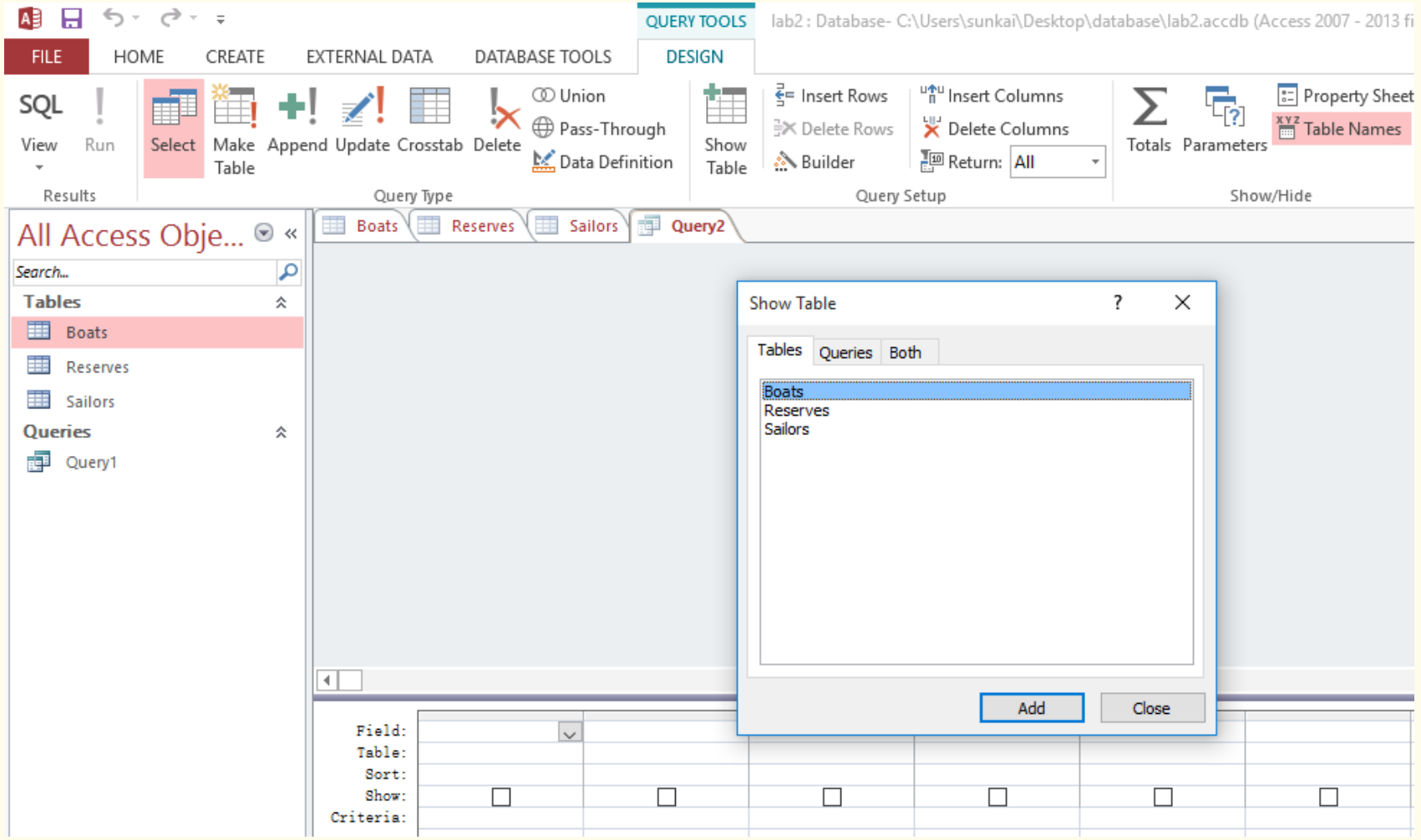
1) Click Create

2) Click Query Design



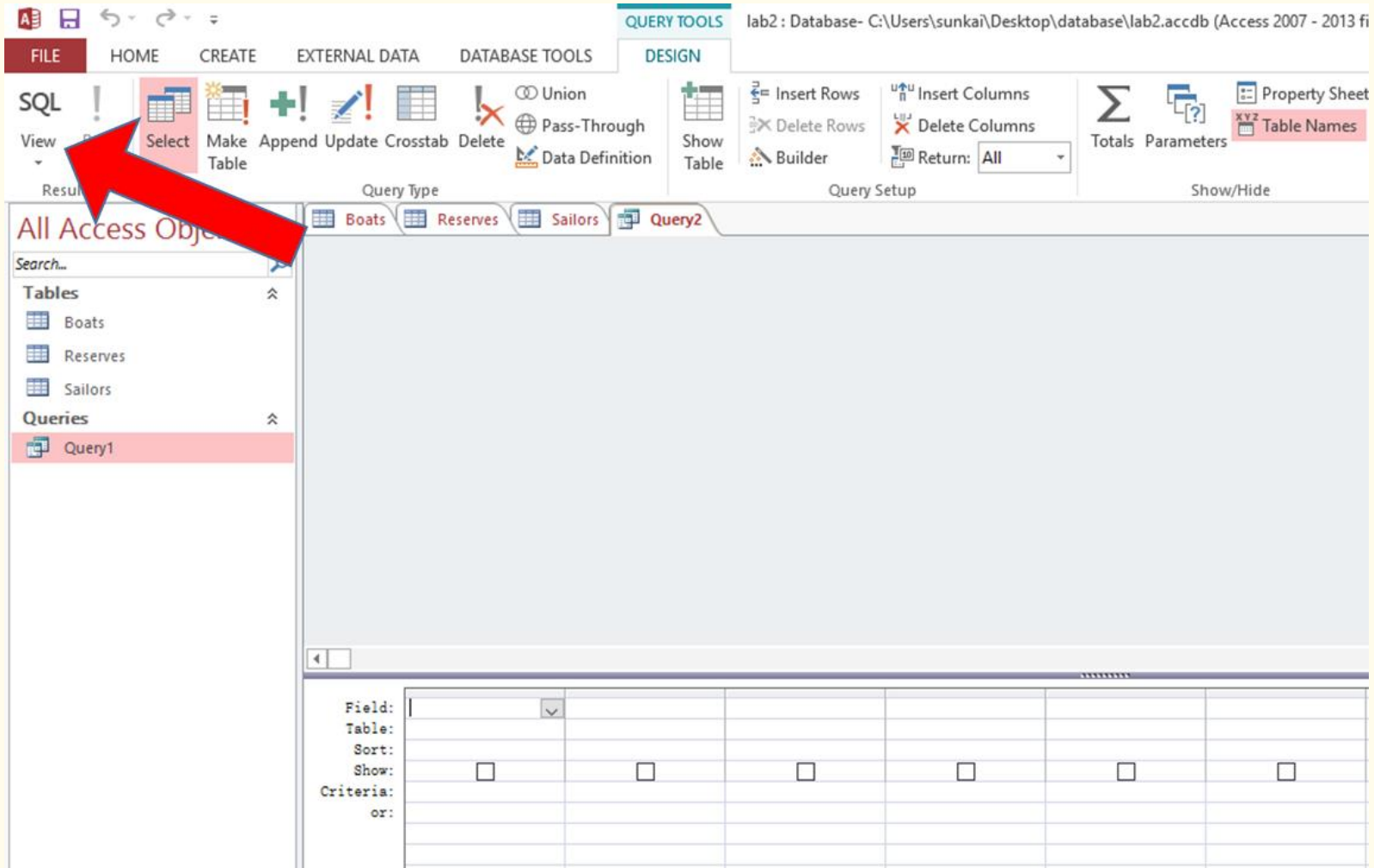
2. Using SQL in Access

3) Close the **Show Table**



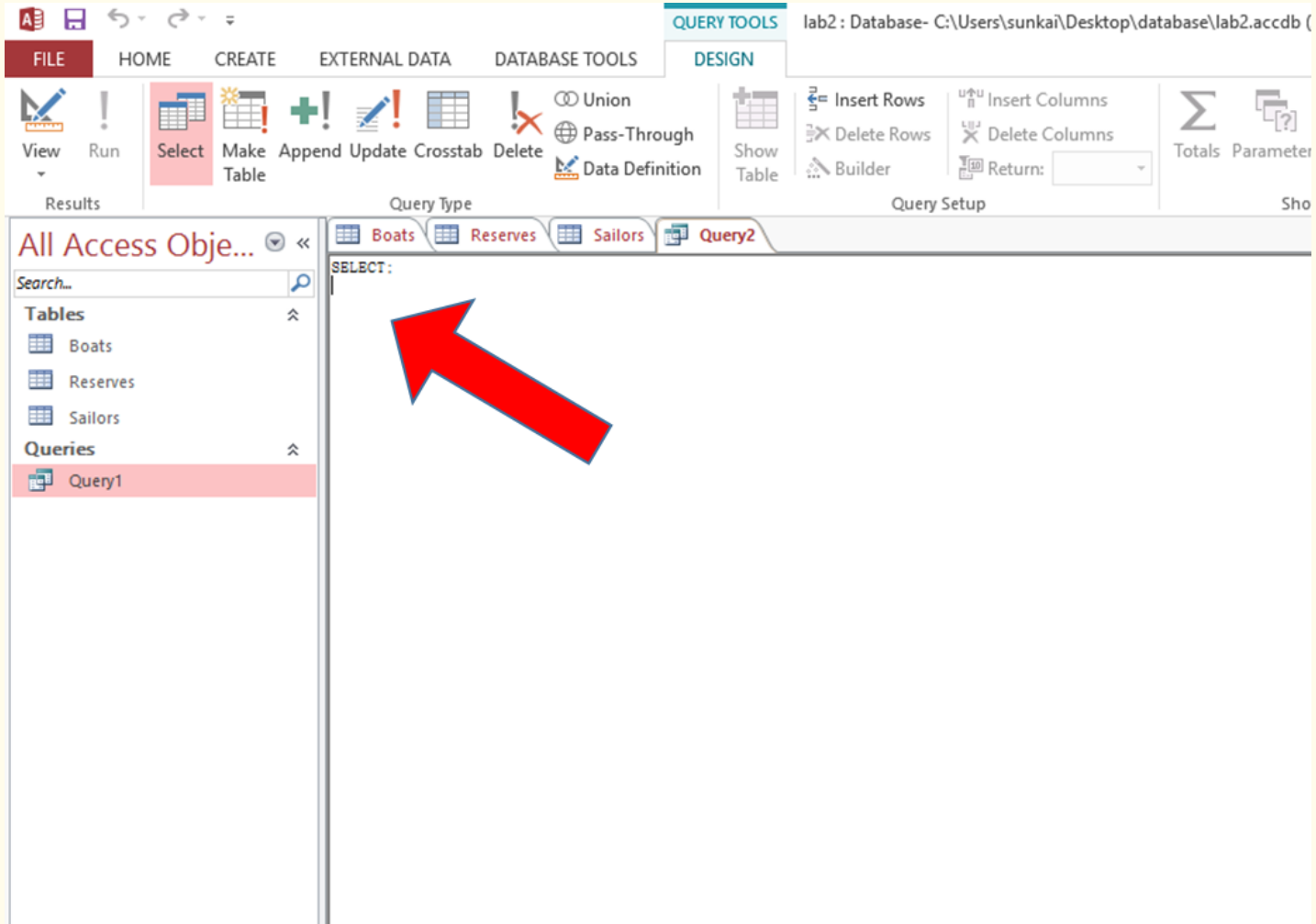
2. Using SQL in Access

4) Click SQL View



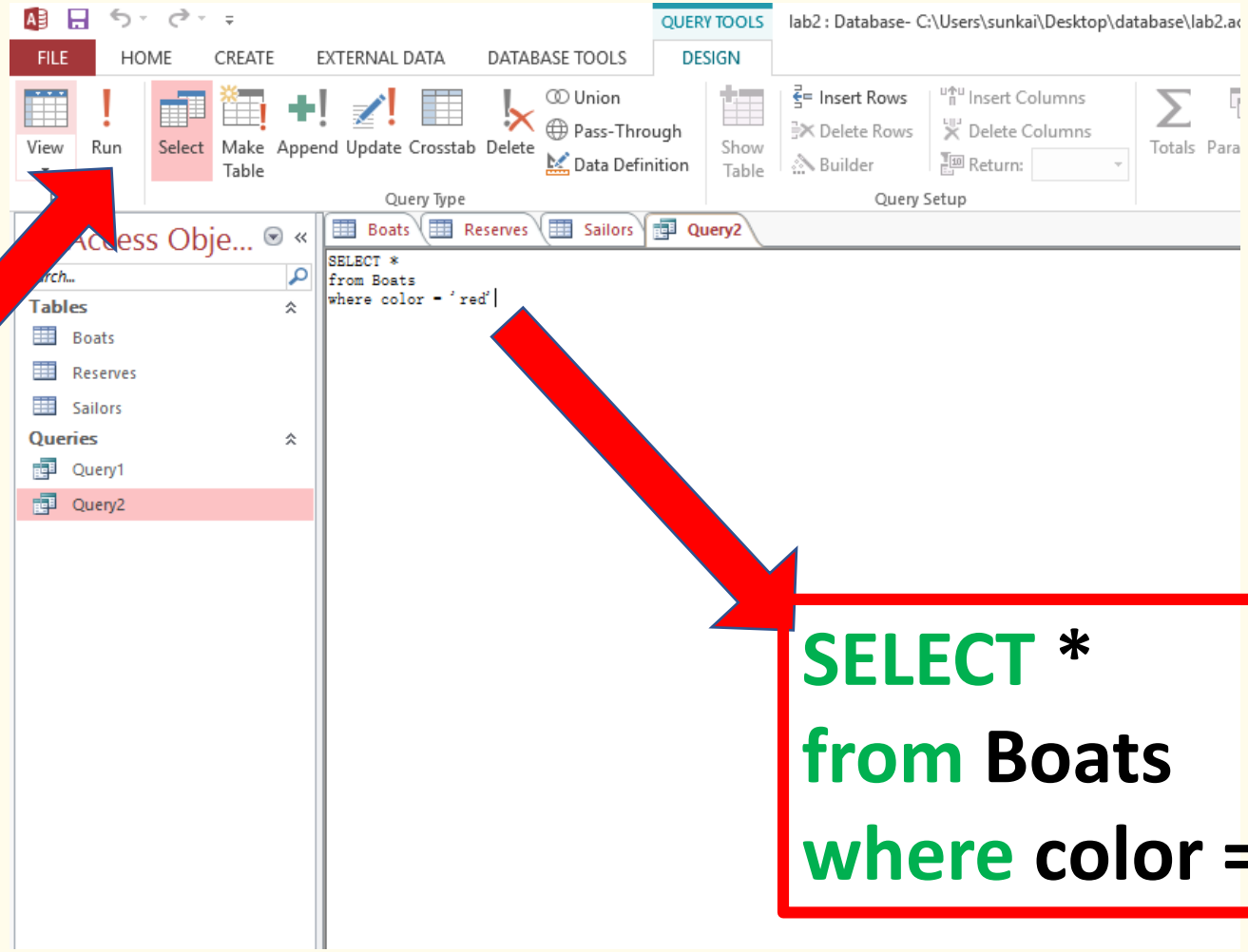
2. Using SQL in Access

5) Now we change to **SQL View**, then we can input **SQL** in access



2. Using SQL in Access

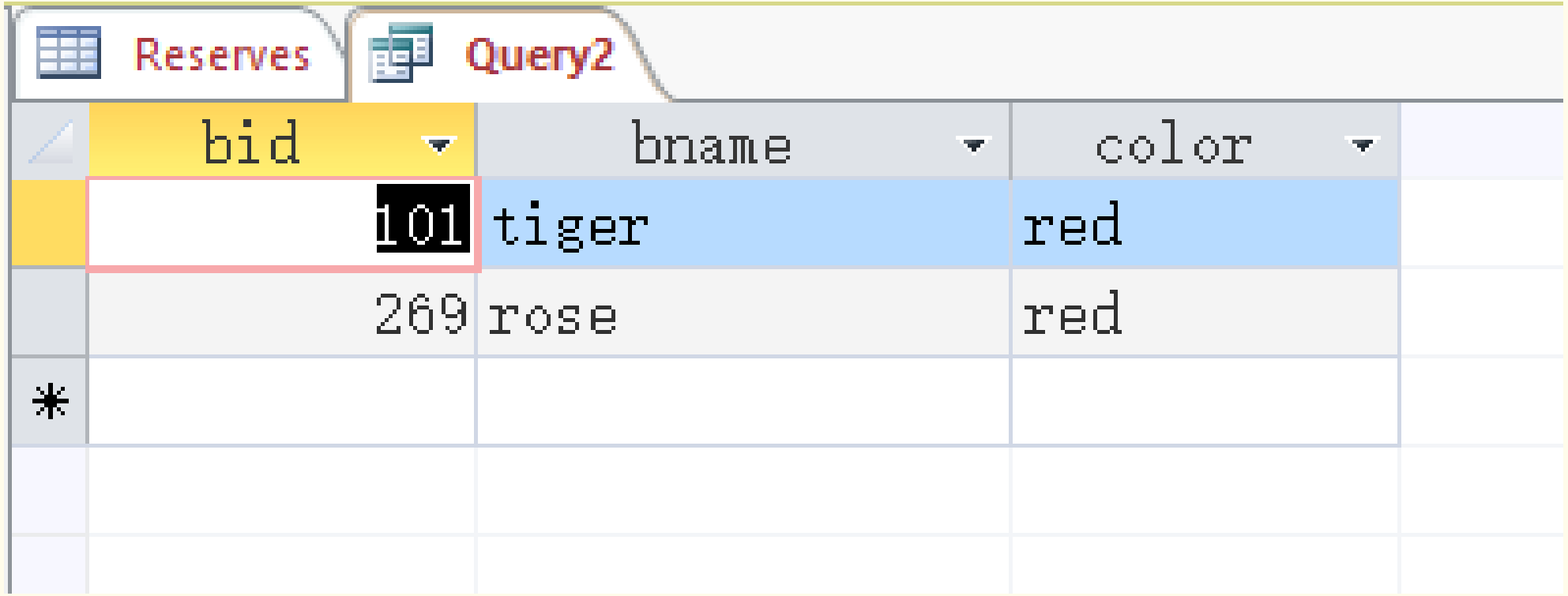
6) Print records in Boats Table that Boat's color is 'red'




```
SELECT *
from Boats
where color = 'red';
```

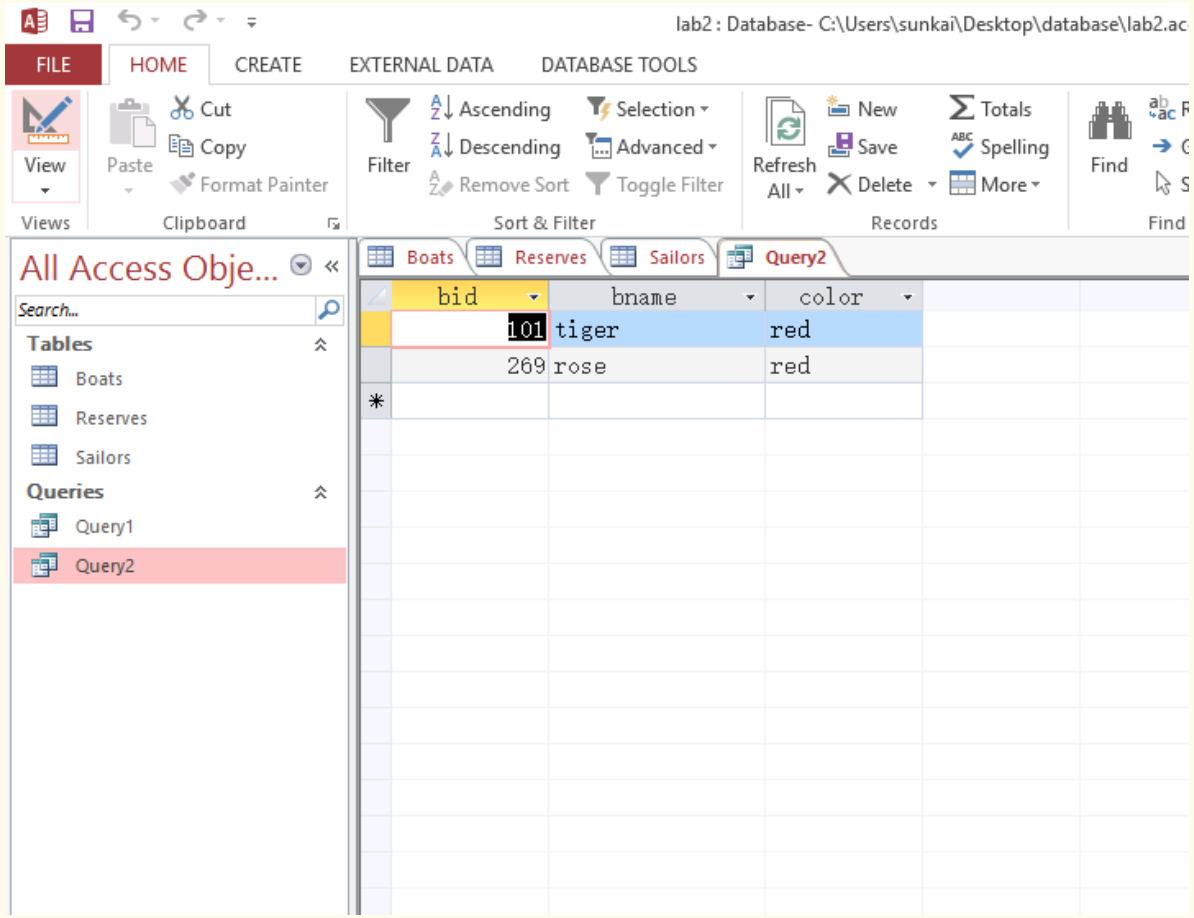
2. Using SQL in Access

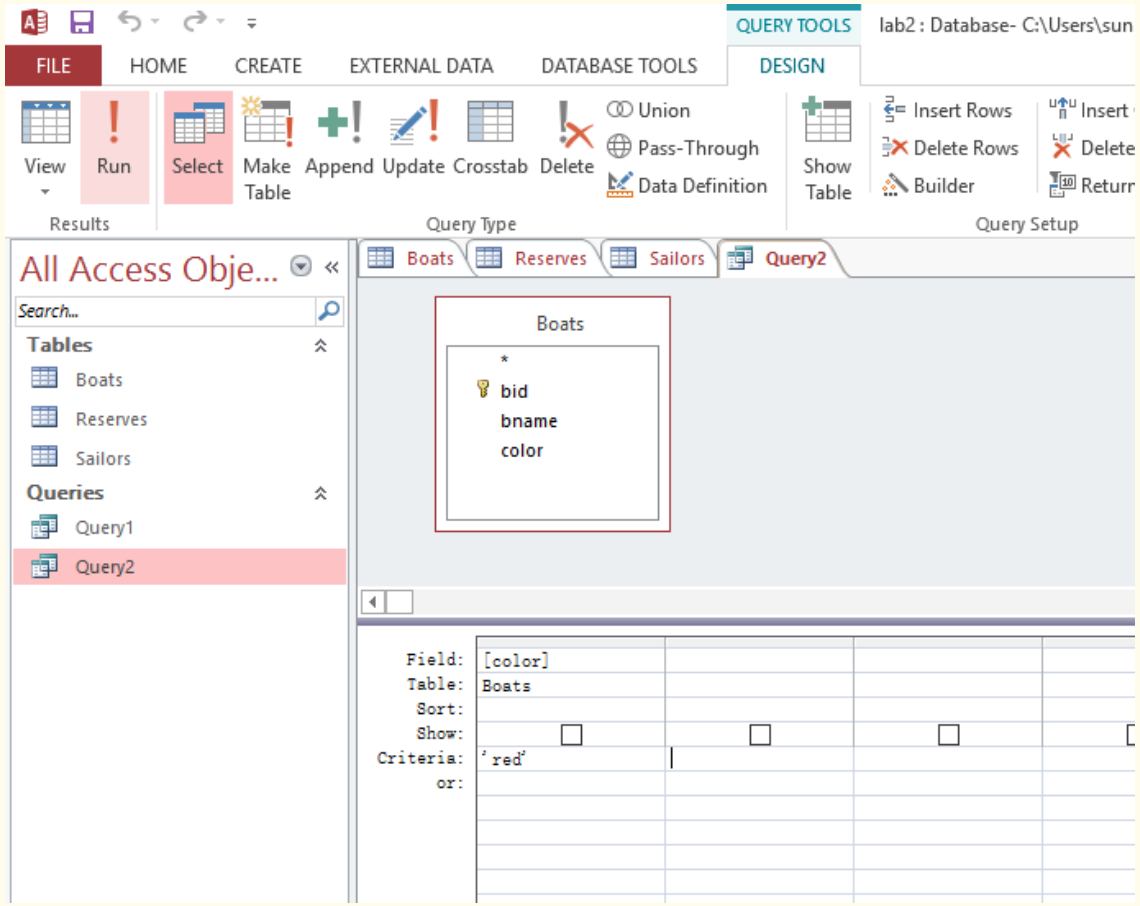
7) Results of Query



2. Using SQL in Access

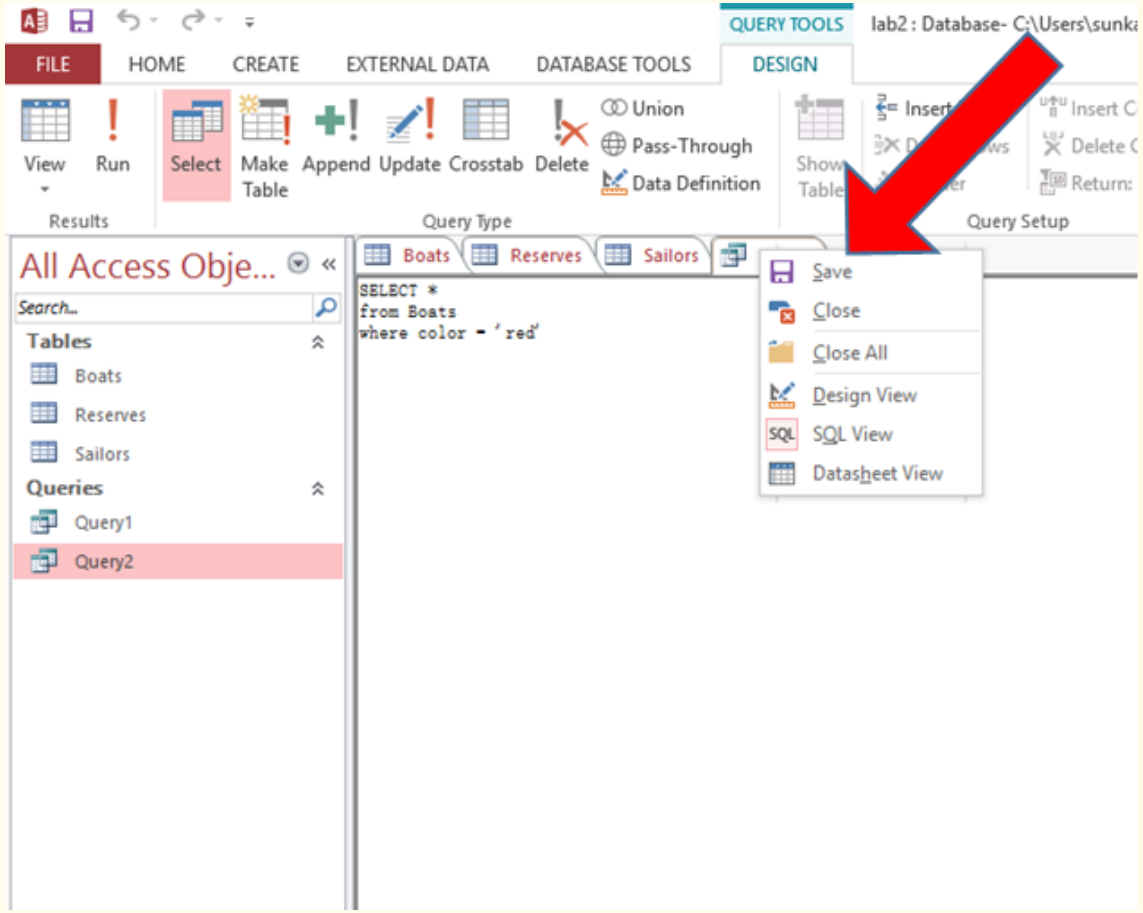
7) **Datasheet View** and **Design View**

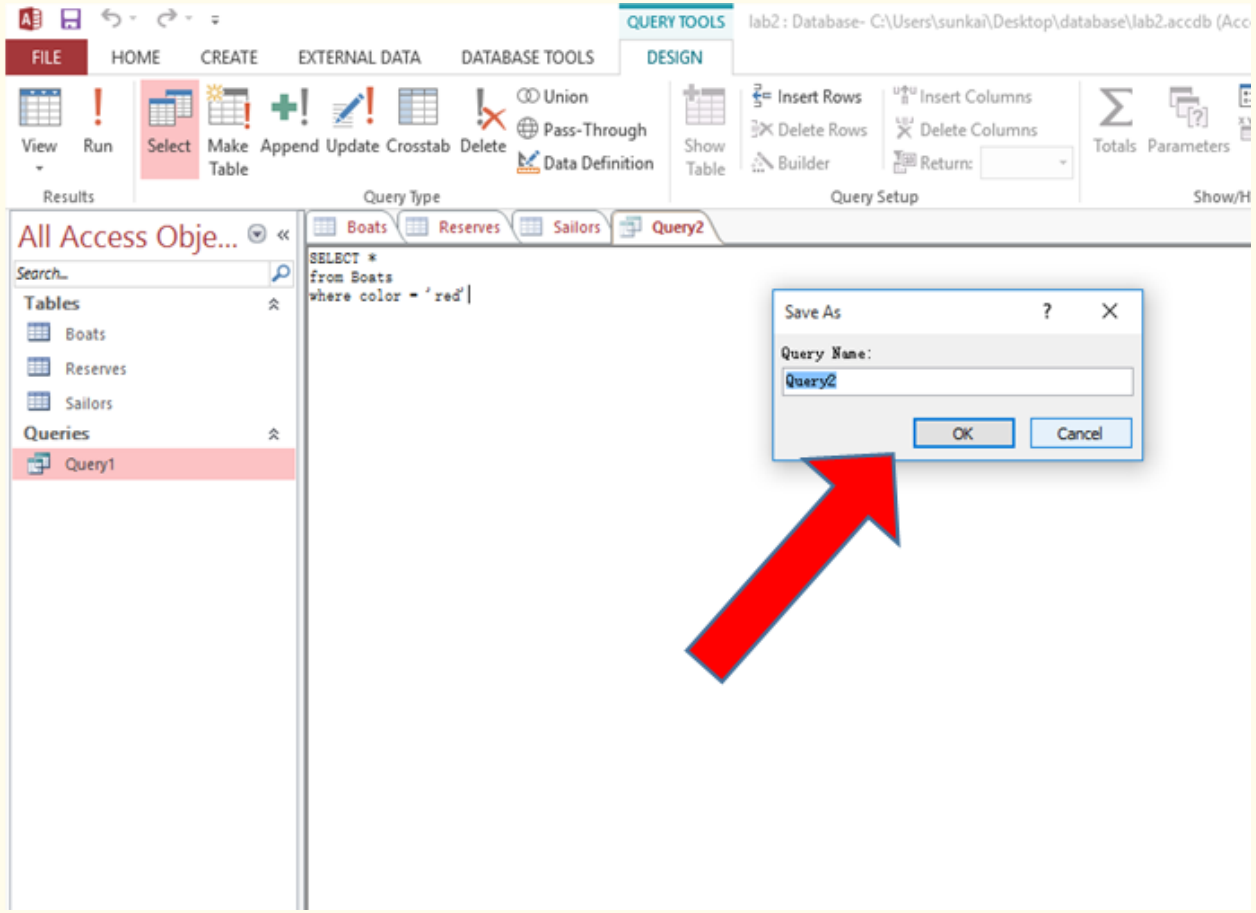




2. Using SQL in Access

8) Save Query





3. Lab project

3.1 print name and sid of sailors whose age >40 And rating>7

3.2 print the names of sailors who reserved boats in 2018

3.3 print names of sailors who reserved “rose” boat

3.4 print sid, name, age of sailors(order by age) who reserved boats in 2019

Assignment2

Content

- ✓ **SQL queries on university database**
- ✓ **Write SQL queries that answer the questions below (one query per question) and run them on the Microsoft ACCESS Database System using its SQL interpreter. The query answers must not contain duplicates, but you should use the SQL keyword distinctonly when necessary.**

Content

- ✓ **The SQL interpreter in ACCESS is not quite the same as the one described in the textbook. If the query you write is not accepted by ACCESS (usually it gives you some strange errors), try different ways until you get one that works with ACCESS. For this assignment, creation of temporary tables is not allowed, i.e., for each question you have to write exactly one SQL statement.**

Database Schema

- The schema of the database is provided below (keys are in bold, field types are omitted):
  student(**sid**, sname, sex, age, year, gpa)
  dept(**dname**, numphds)
  prof(**pname**, dname)
  course(**cno**, cname, **dname**)
  major(**dname**, **sid**)
  section(**dname**, **cno**, **sectno**, pname)
  enroll(**sid**, grade, **dname**, **cno**, **sectno**)

- Before you start writing SQL, it is a good idea to take a look at the database and familiarize yourself with its contents.

Data Files

- Download the following data files from WeChat group files

  - course.txt
  - dept.txt
  - enroll.txt
  - major.txt
  - prof.txt
  - section.txt
  - student.txt

Question

1. Print the names of professors who work in departments that have fewer than 50 PhD students.
2. Print the name(s) of student(s) with the lowest gpa
3. For each Computer Sciences class, print the cno, sectno, and the average gpa of the students enrolled in the class.
4. Print the course names, course numbers and section numbers of all classes with less than six students enrolled in them.
5. Print the name(s) and sid(s) of the student(s) enrolled in the most classes
6. Print the names of departments that have one or more majors who are under 18 years old.

Question

7. Print the names and majors of students who are taking one of the College Geometry courses. (Hint: You'll need to use the "like" predicate and the string matching character in your query.)
8. For those departments that have no majors taking a College Geometry course, print the department name and the number of PhD students in the department.
9. Print the names of students who are taking both a Computer Sciences course and a Mathematics course.

Question

10. Print the age difference between the oldest and youngest Computer Sciences major(s).
11. For each department that has one or more majors with a GPA under1.0, print the name of the department and the average GPA of its majors.
12. Print the ids, names, and GPAs of the students who are currently taking all of the Civil Engineering courses.

Demand

- This is an individual assignment –no group submissions are allowed. Hand in an ACCESS database that contains the answers to the twelve questions. The database should contain twelve queries, named as follows:

  Query1

  Query2

  …

  Query12
- Test the function of index with query related with student table
- Hand in a **report** which indicates your answers

Submission

- File name format:

  StudentNumber_A1.zip

  including:

  report_A2.doc/ report_A2.docx

  university_A2.mdb/university_A2.accdb

Deadline: Beijing time, November 5th, 00:00:00

Assignment1

- 未达到题目要求

sid	sname	sex	age	year	gpa
5038	Mike4930	m	20	3	3.10
5039	Mike4931	m	20	3	3.10
5040	Mike4932	m	20	3	3.10
5041	Mike4933	m	20	3	3.10
5042	Mike4934	m	20	3	3.10
5043	Mike4935	m	20	3	3.10
5044	Mike4936	m	20	3	3.10
5045	Mike4937	m	20	3	3.10
5046	Mike4938	m	20	3	3.10
5047	Mike4939	m	20	3	3.10
5048	Mike4940	m	20	3	3.10
5049	Mike4941	m	20	3	3.10
5050	Mike4942	m	20	3	3.10
5051	Mike4943	m	20	3	3.10
5052	Mike4944	m	20	3	3.10
5053	Mike4945	m	20	3	3.10
5054	Mike4946	m	20	3	3.10
5055	Mike4947	m	20	3	3.10
5056	Mike4948	m	20	3	3.10
5057	Mike4949	m	20	3	3.10
5058	Mike4950	m	20	3	3.10
5059	Mike4951	m	20	3	3.10
5060	Mike4952	m	20	3	3.10
5061	Mike4953	m	20	3	3.10

Assignment1

- 报告内容欠缺
  - 缺少代码
  - 格式不规范（实验目的、实验内容、实验总结）
  - 缺少以图片形式展示的实验结果