Lab 2
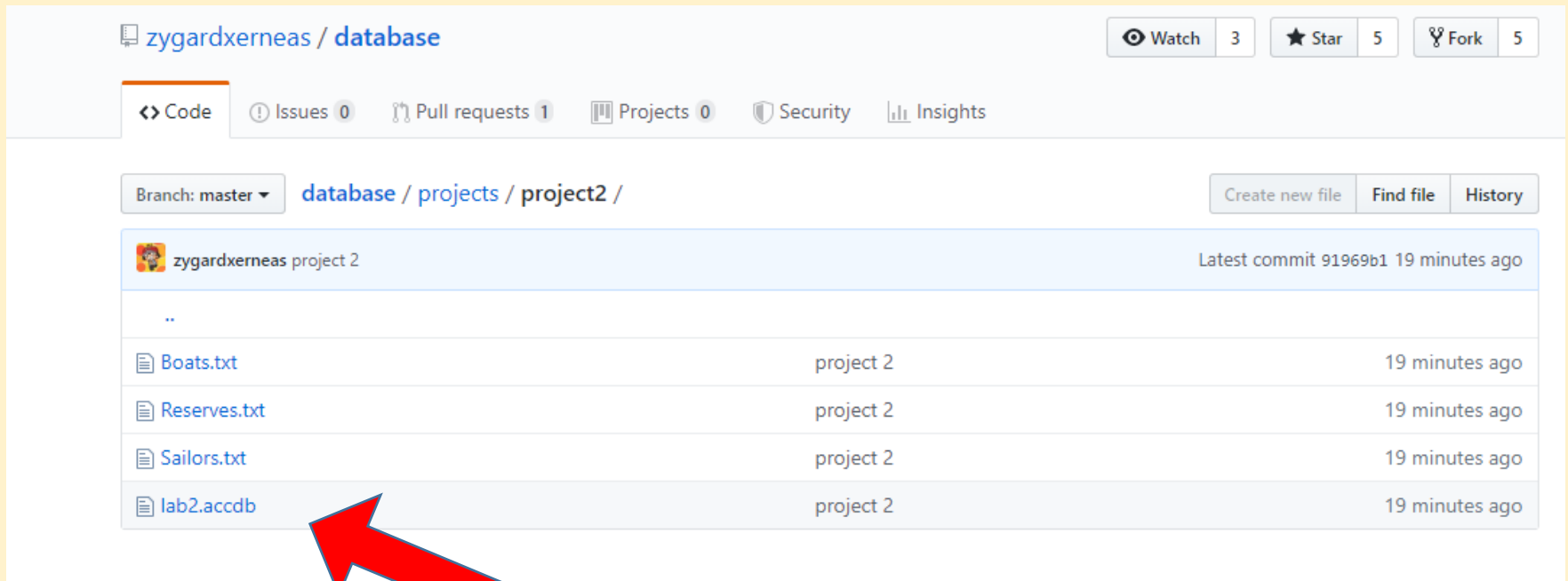
outline

1. Download lab2.accdb

2. Using SQL in Access

3. Lab project

4. Assignment2

1. Download lab2.accdb

- https://github.com/zygardxerneas/database

1. Download lab2.accdb

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

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

Table - Reserves

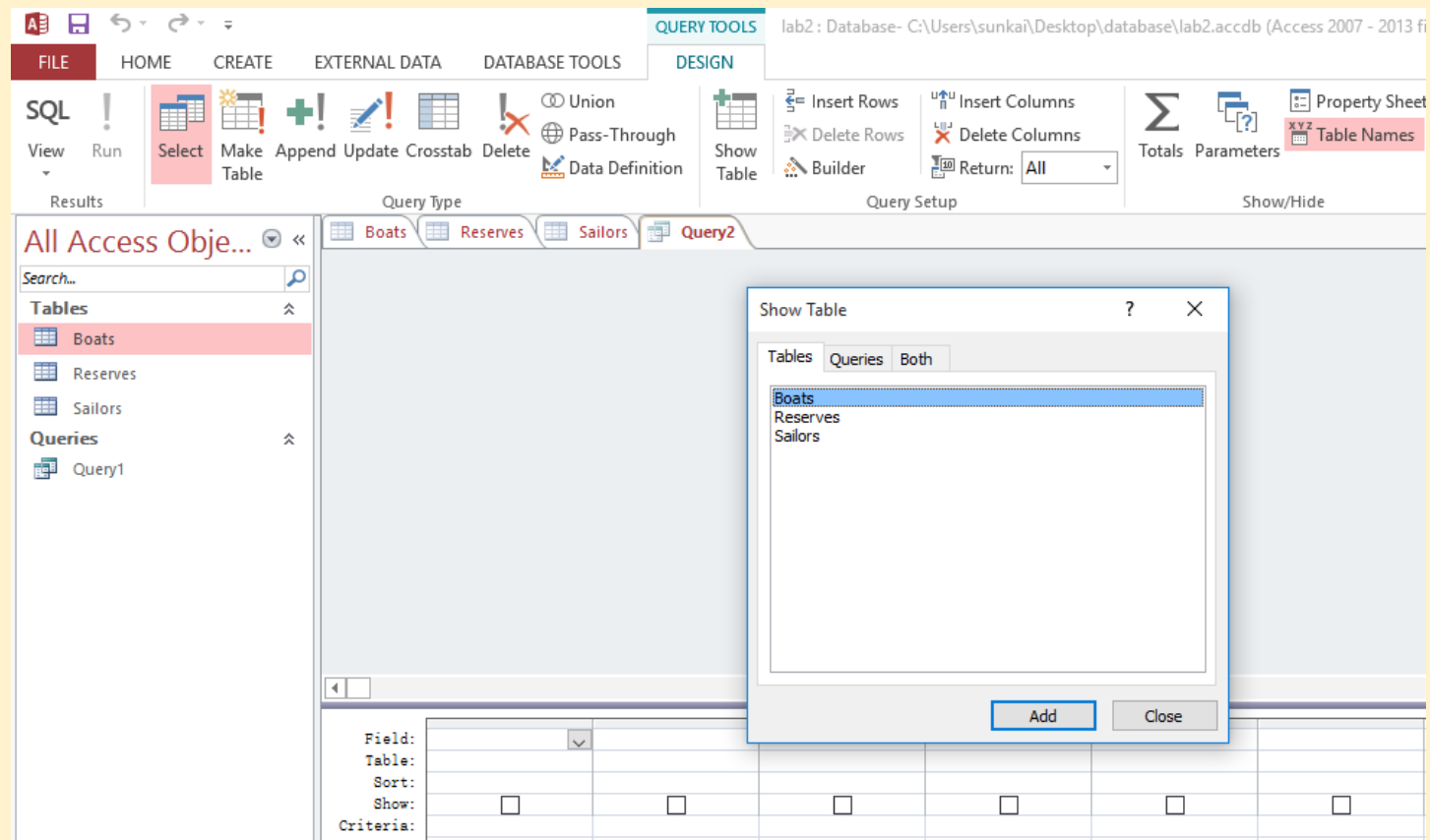| sid	bid	day
22	101	9/26/2018
32	101	12/2/2018
58	103	1/2/2019
49	105	4/13/2019
59	136	7/9/2019
55	139	8/12/2019
47	177	9/5/2019
51	224	10/6/2019
31	269	10/6/2019
44	269	10/14/2019

2. Using SQL in Access
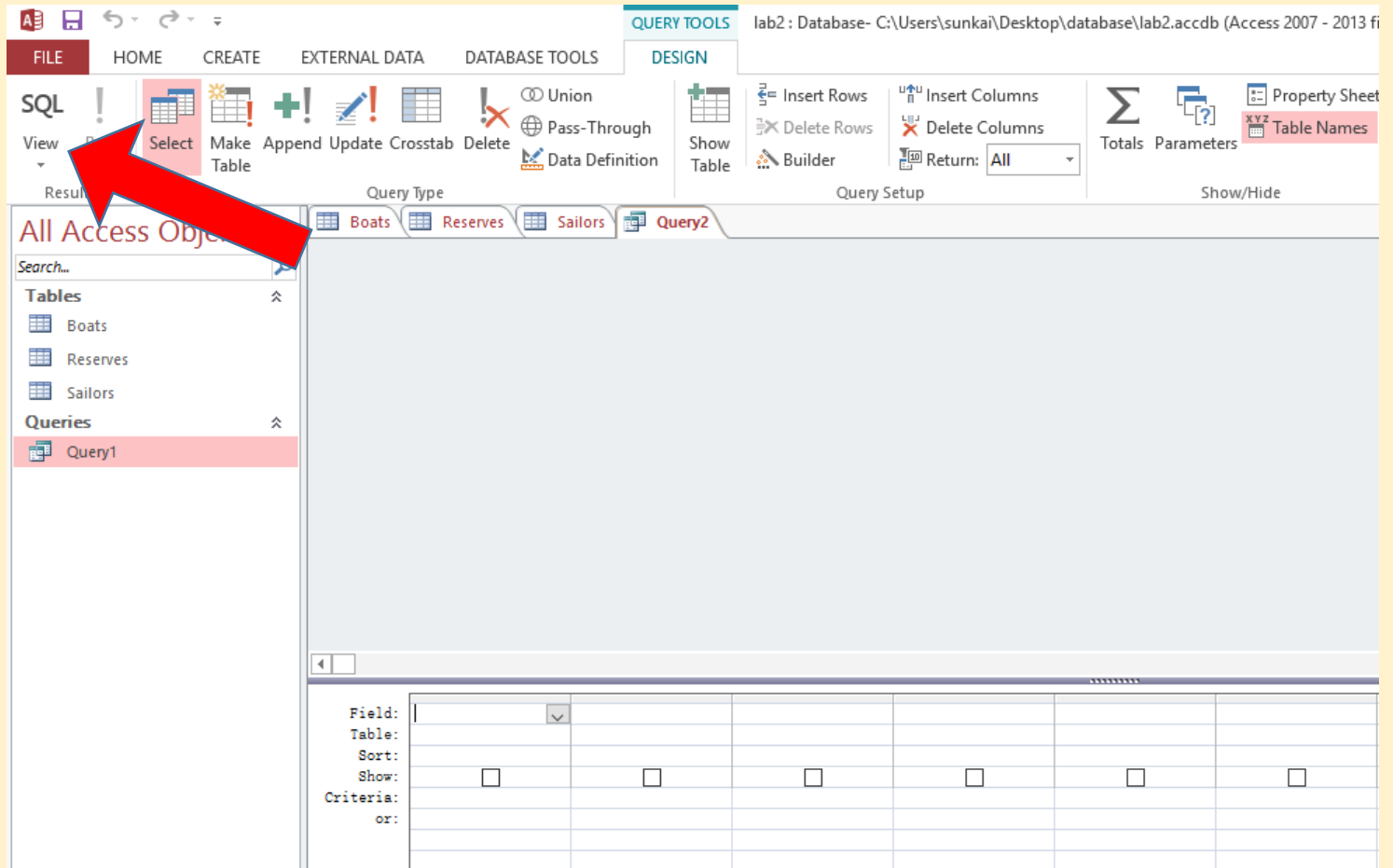
1. Click Create

2. Click Query Design
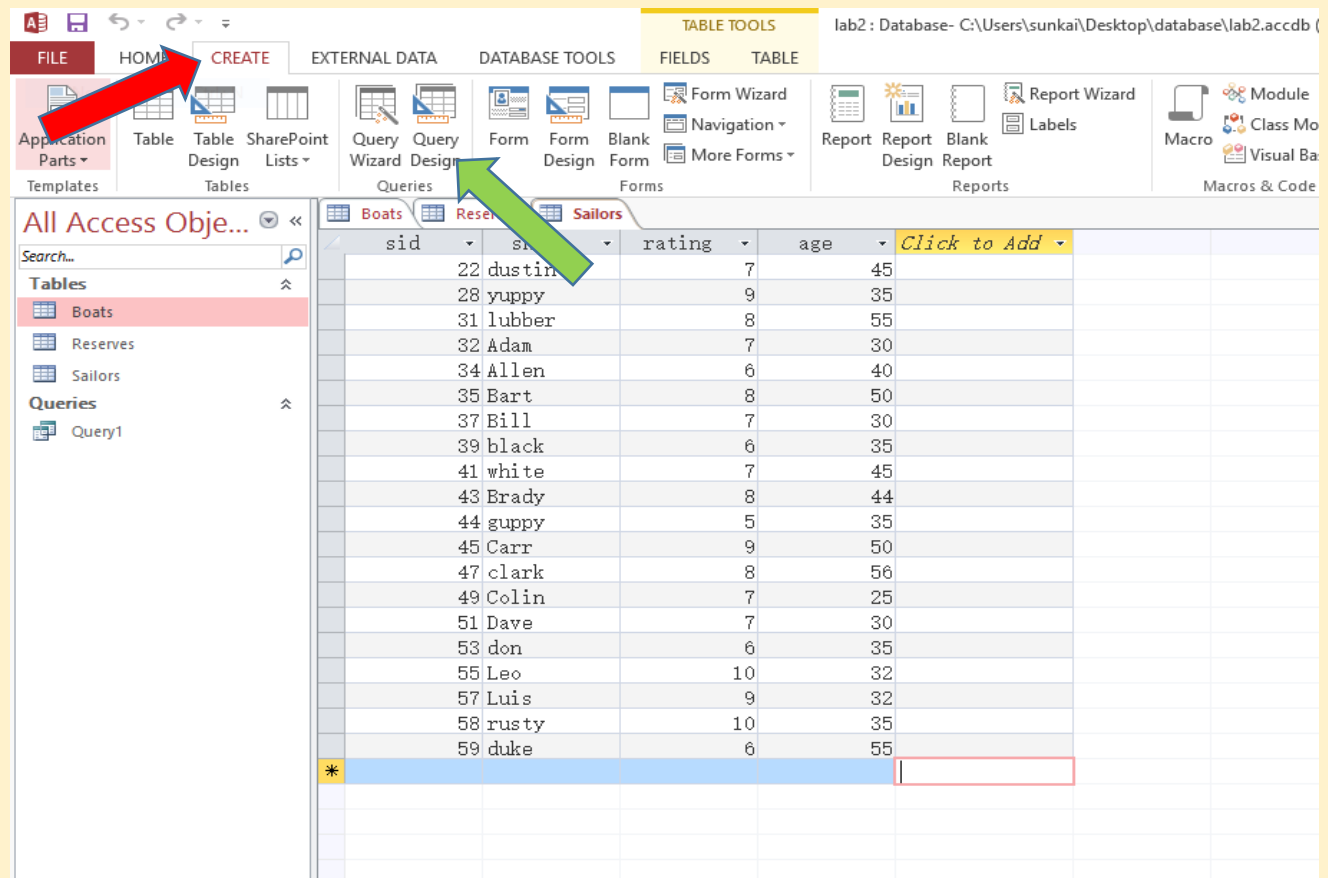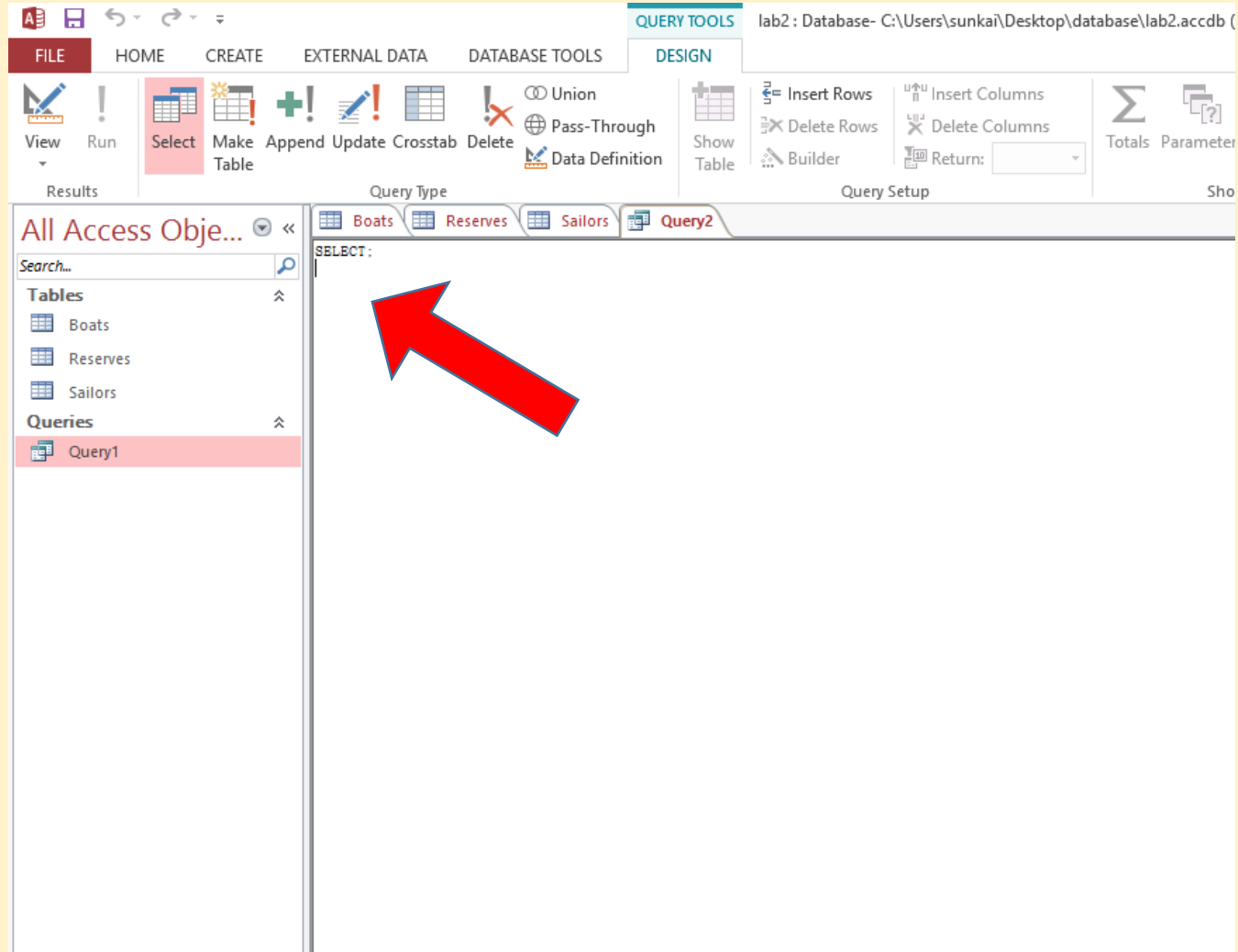
2. Using SQL in Access

Close the **Show Table**
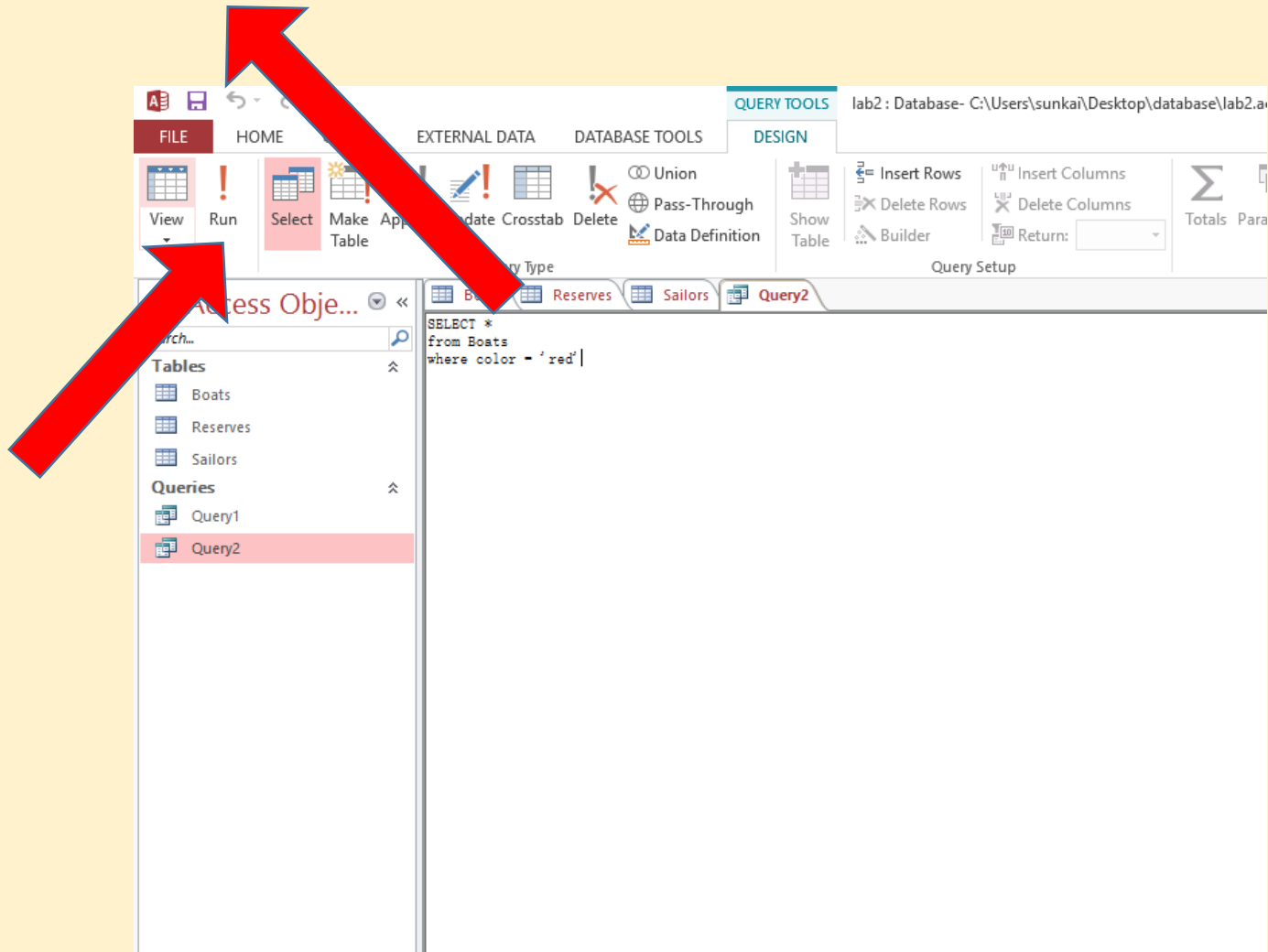
2) Click SQL View

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

SELECT *
from Boats
where color = 'red';
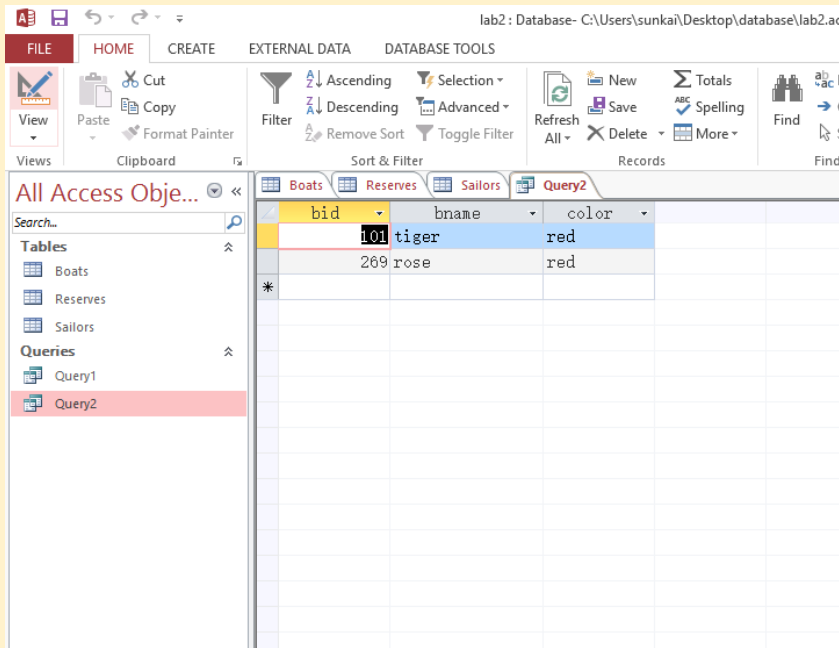
Print records in Boats Table that Boat's color is 'red'
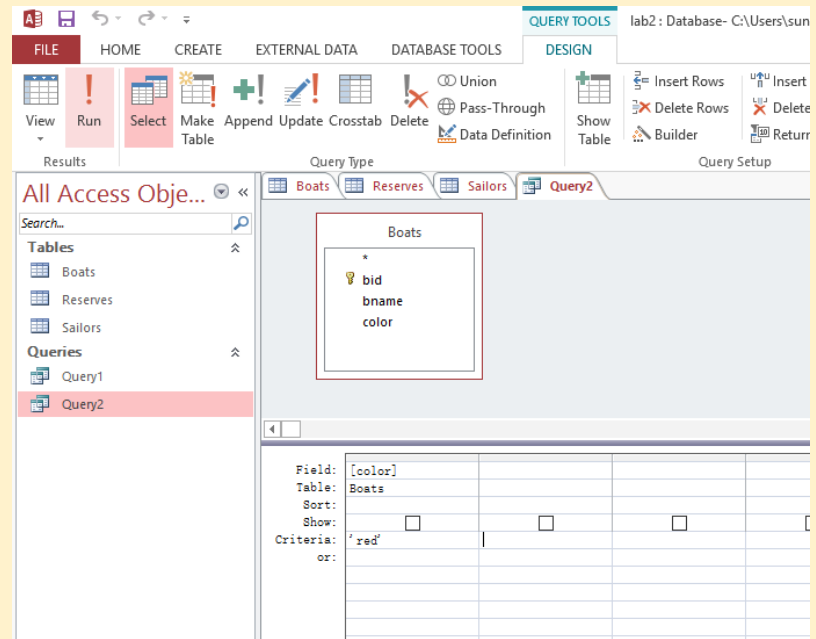
Results of Query

	bid	bname	color
	101	tiger	red
	269	rose	red

Reserves   Query2

Datasheet View   AND   Design View

4) 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
  https://github.com/zygardxerneas/database
  - ➢ 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.
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 under 1.0, 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:**
  Sno_A2.zip
- **including:**
  report_A2.doc
  university_A2.accdb

Deadline:
Beijing time, October, 29th ,23:59:59