Lab 4

Outline

1. Download lab4.accdb

2. SQL:DELETE, INSERT, UPDATE

3. Integrity constraint

4. Assignment4

5. Assignment3 Review

1. Download lab4.accdb

Download the following data files from WeChat group files

The database of lab4 is same as lab2.accdb

- lab2.accdb

- Boats.txt
  Reserves.txt
  Sailors.txt

2.1 SQL: INSERT

INSERT INTO Boats values(222,'Summer','black');

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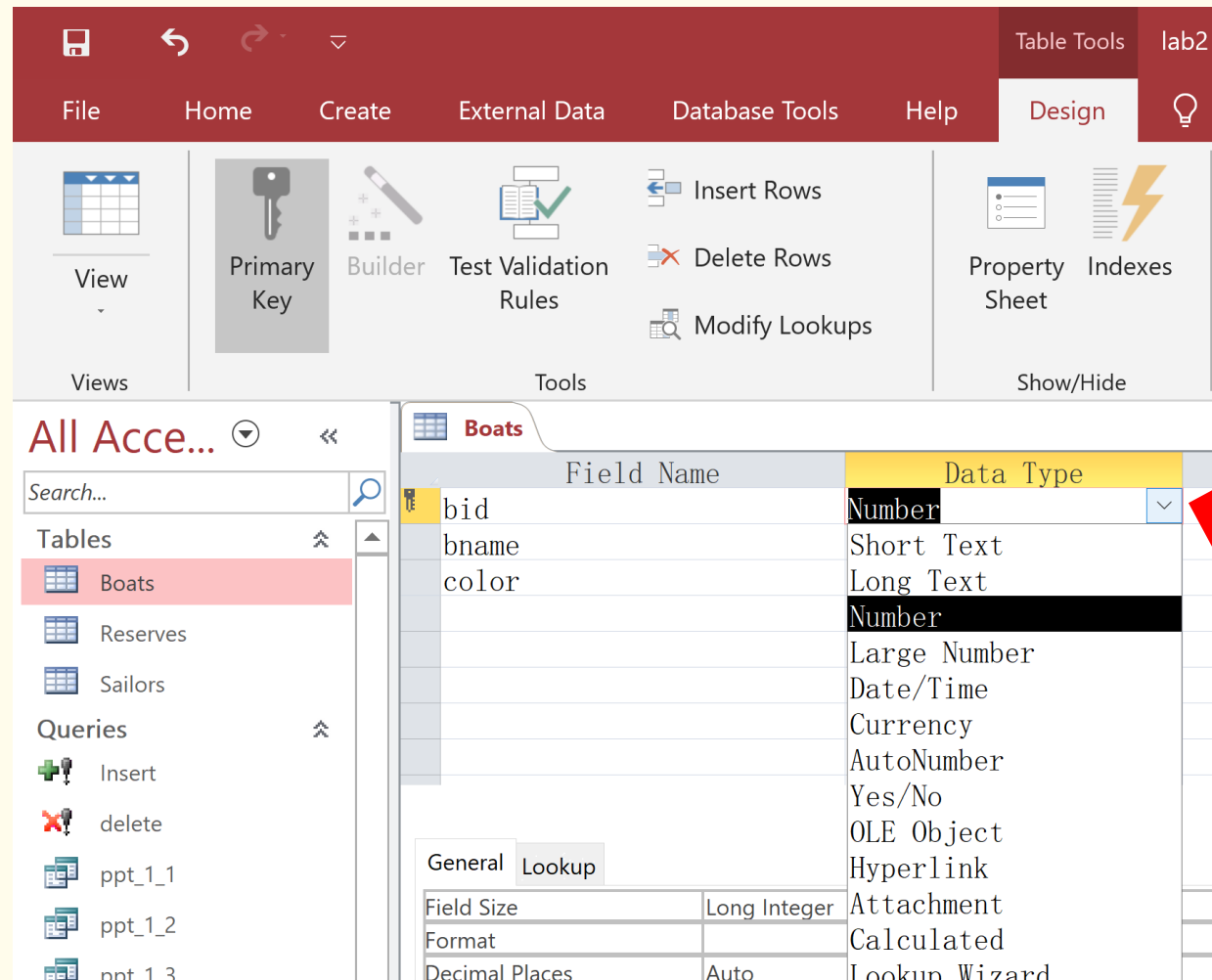
bid	bname	color
101	tiger	red
103	lion	green
105	hero	blue
136	brave	gray
139	freedom	white
177	challenger	black
222	Summer	black
224	meteor	orange
269	rose	red
381	smart	blue

4

2.2 SQL: DELETE

DELETE from Boats where bid = 222;

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

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

2.3 SQL: UPDATE

UPDATE Boats set color = 'green' where bid = 101;

3.1 Domain integrity constraint

1) Choose Boats and Click Home

3.1 Domain integrity constraint

2) Choose Design View

3.1 Domain integrity constraint

3) Choose Data Type

3.1 Domain integrity constraint

4) Write Validation Rule

General	Lookup	
Field Size	Long Integer
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	
Validation Rule	[bid]>0
Validation Text	
Required	Yes
Indexed	Yes (No Duplicates)
Text Align	General

3.1 Domain integrity constraint

INSERT INTO Boats VALUES('abc','spring','red');

3.1 Domain integrity constraint

UPDATE Boats SET bid = -10 WHERE bid = 103;


```
update_1

UPDATE Boats
SET bid = -10
WHERE bid = 103
```

Microsoft Access   ✕

⚠ **Microsoft Access can't update all the records in the update query.**

Microsoft Access didn't update 0 field(s) due to a type conversion failure, 0 record(s) due to key violations, 0 record(s) due to lock violations, and 1 record(s) due to validation rule violations.
Do you want to continue running this type of action query anyway?
To ignore the error(s) and run the query, click Yes.
For an explanation of the causes of the violations, click Help.

                                                    [Yes]   [No]   [Help]

3.2 Entity integrity constraint

INSERT INTO Boats VALUES(103,'winter','white');

insert_2

```
INSERT INTO Boats
VALUES(103,'winter','white');
```

Microsoft Access   ×

Microsoft Access can't append all the records in the append query.

⚠ Microsoft Access set 0 field(s) to Null due to a type conversion failure, and it didn't add 1 record(s) to the table due to key violations, 0 record(s) due to lock violations, and 0 record(s) due to validation rule violations.
Do you want to run the action query anyway?
To ignore the error(s) and run the query, click Yes.
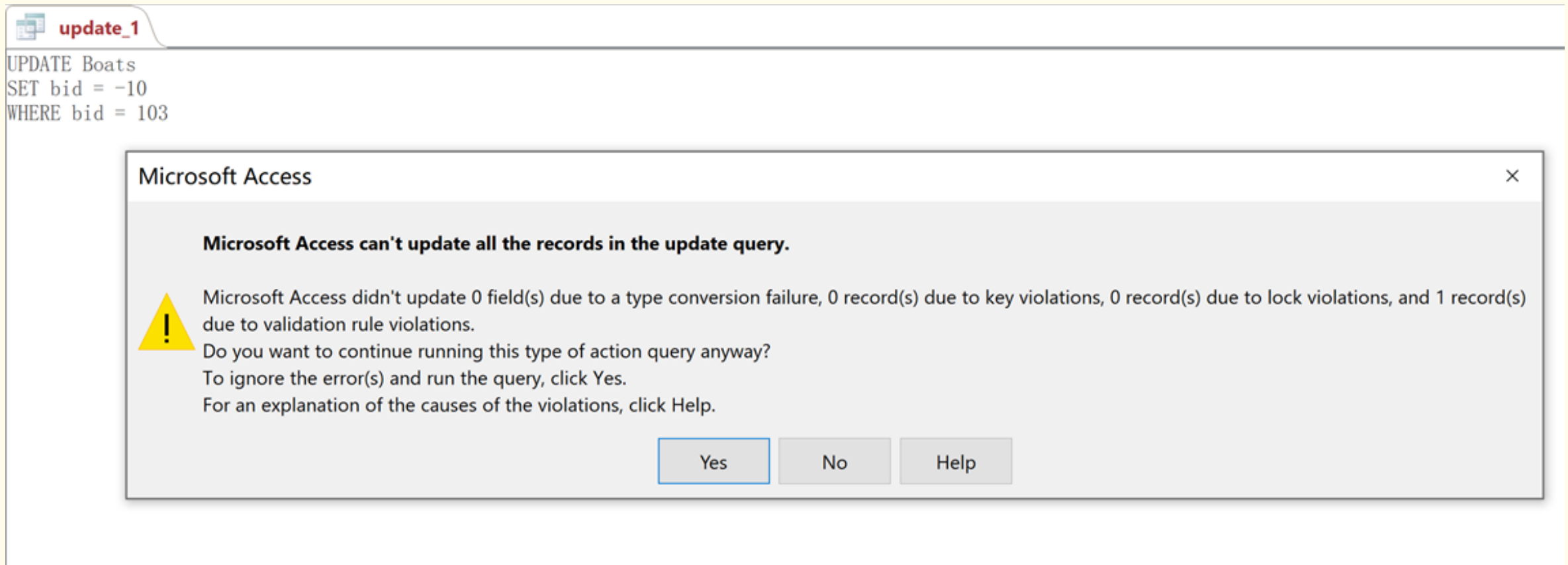For an explanation of the causes of the violations, click Help.
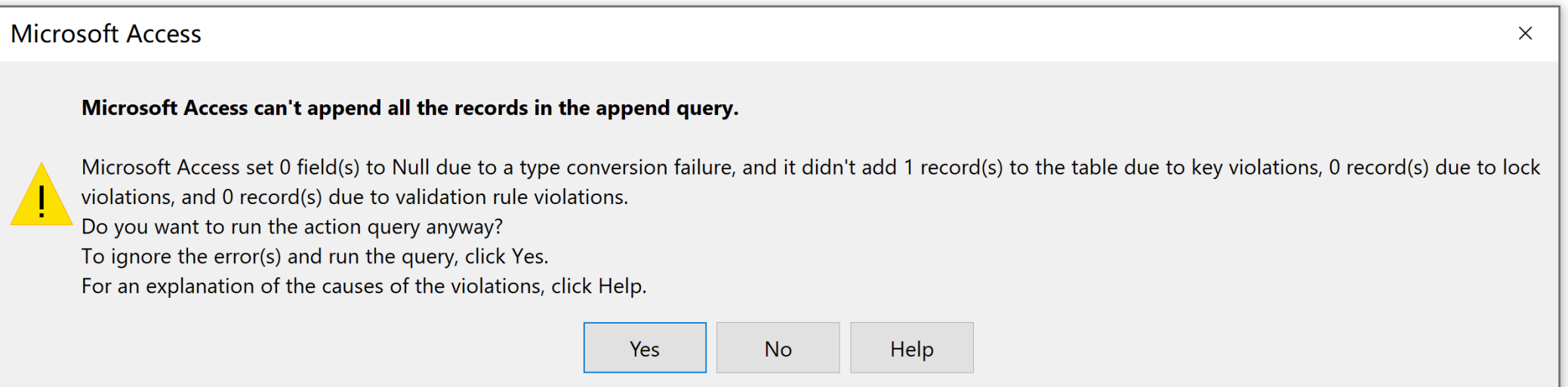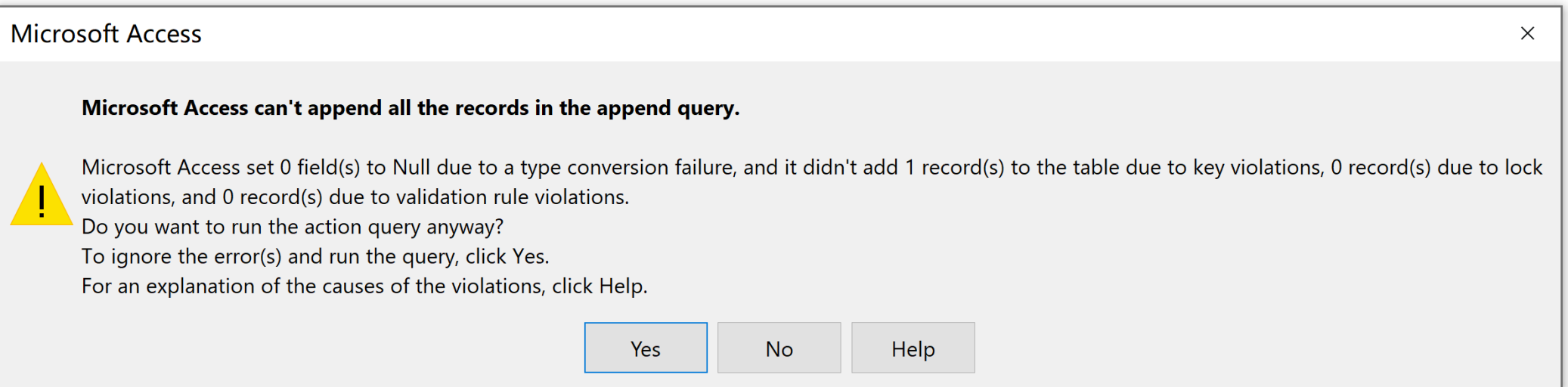
[Yes]   [No]   [Help]

3.2 Entity integrity constraint

INSERT INTO Boats VALUES(Null,'winter','white');

insert_2

```
INSERT INTO Boats
VALUES(103,'winter','white');
```

Microsoft Access   ×

Microsoft Access can't append all the records in the append query.

⚠ Microsoft Access set 0 field(s) to Null due to a type conversion failure, and it didn't add 1 record(s) to the table due to key violations, 0 record(s) due to lock violations, and 0 record(s) due to validation rule violations.
Do you want to run the action query anyway?
To ignore the error(s) and run the query, click Yes.
For an explanation of the causes of the violations, click Help.

[Yes]   [No]   [Help]

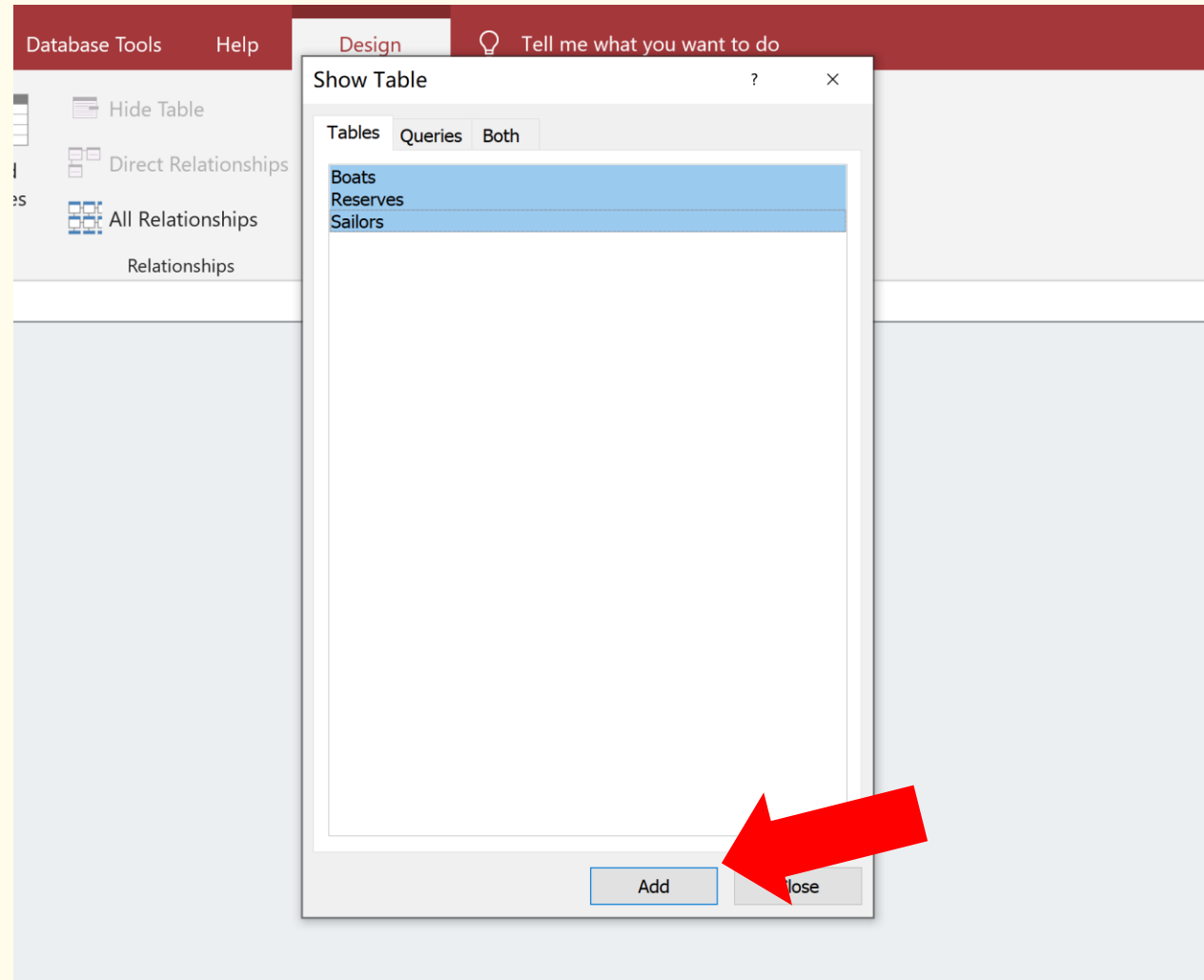# 3.3 Referential integrity constraint
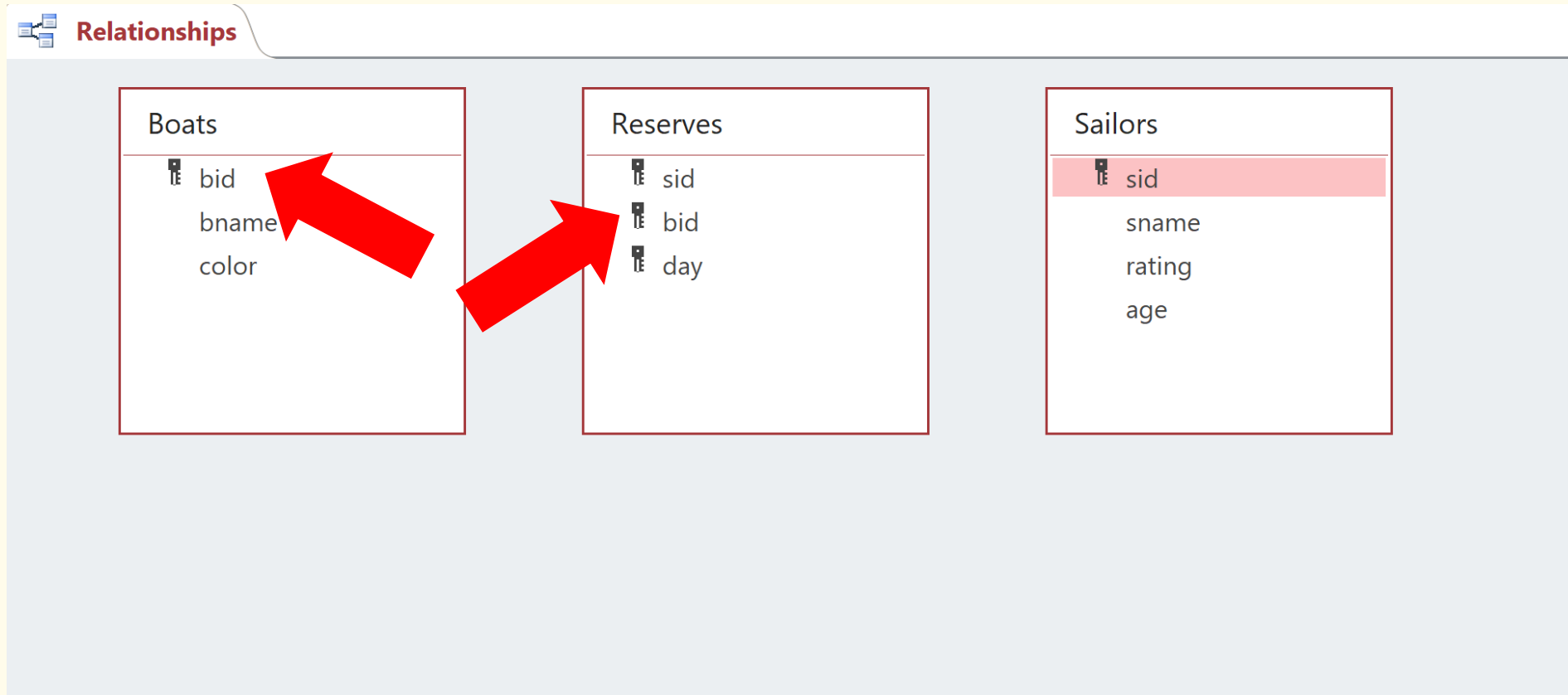
1) Click Database Tools-Relationships
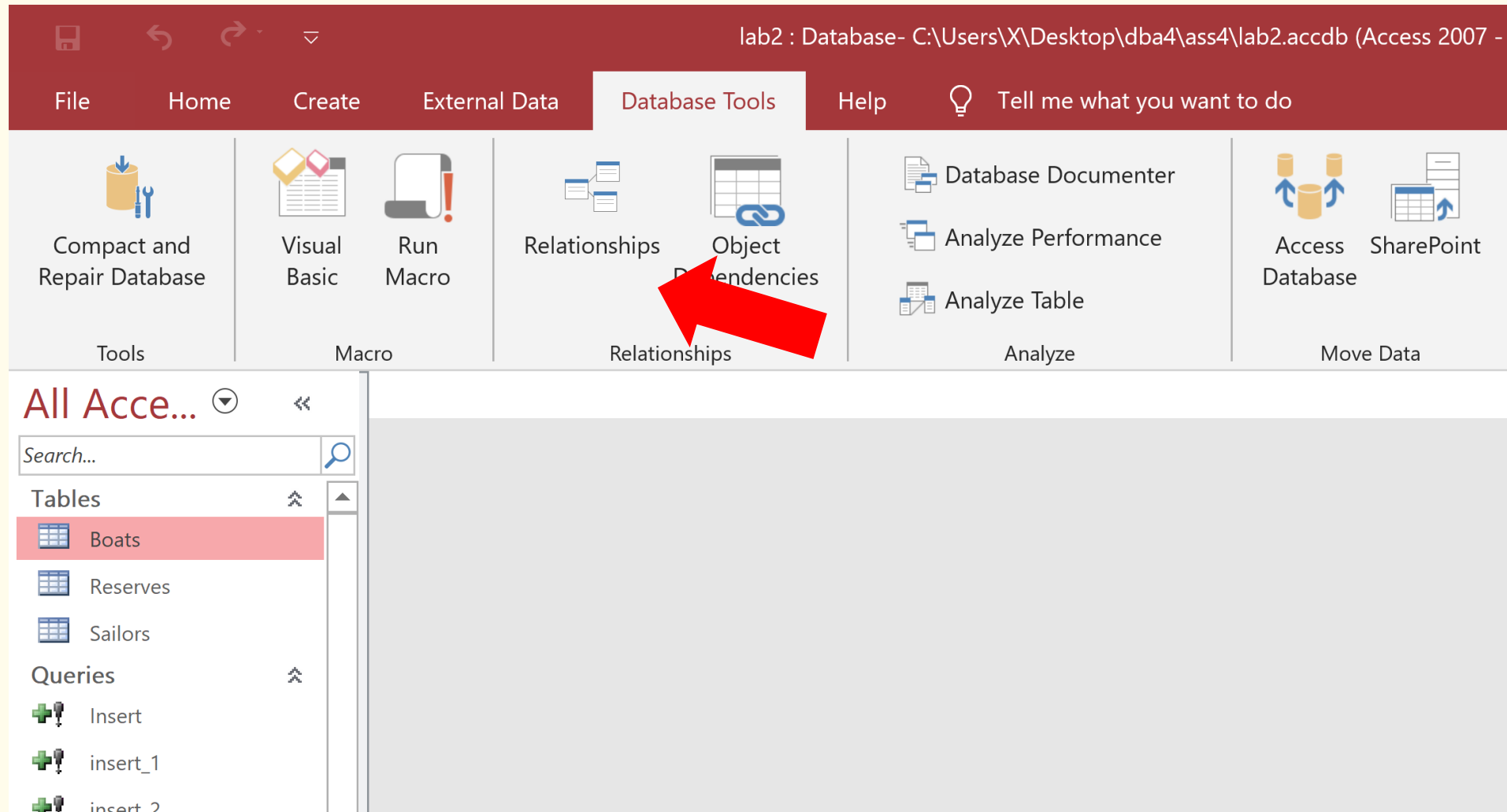
3.3 Referential integrity constraint

2) Choose Tables and Click Add
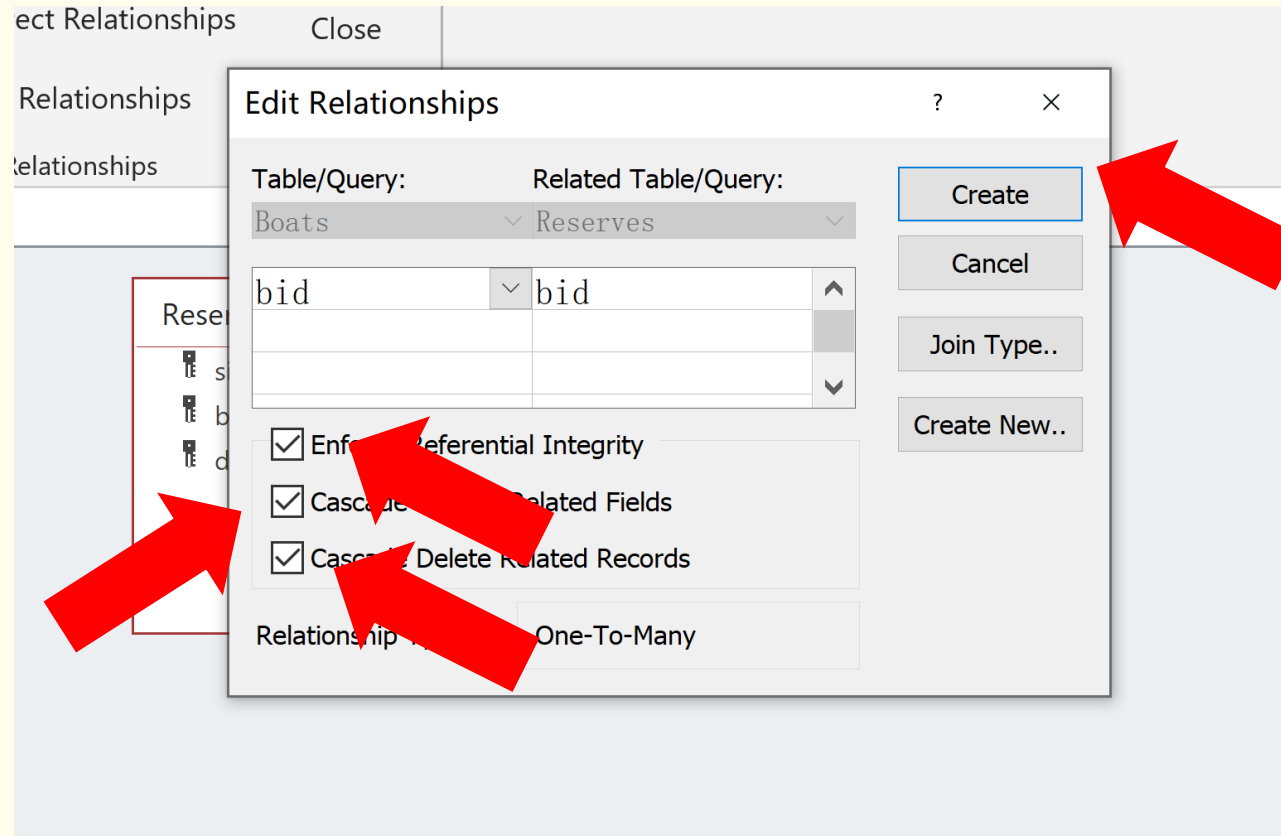
4.3 Referential integrity constraint

3) Drag Boats-bid to Reserves-bid

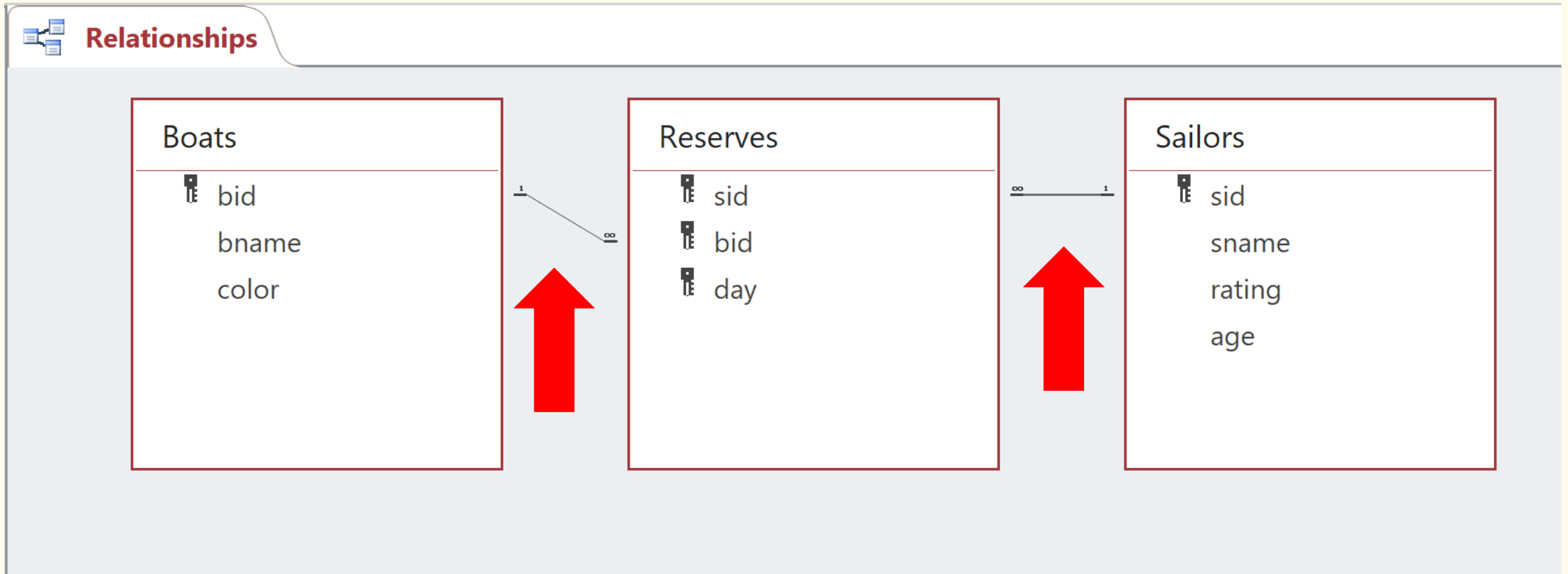# 4.3 Referential integrity constraint

4) Check and Create

4.3 Referential integrity constraint

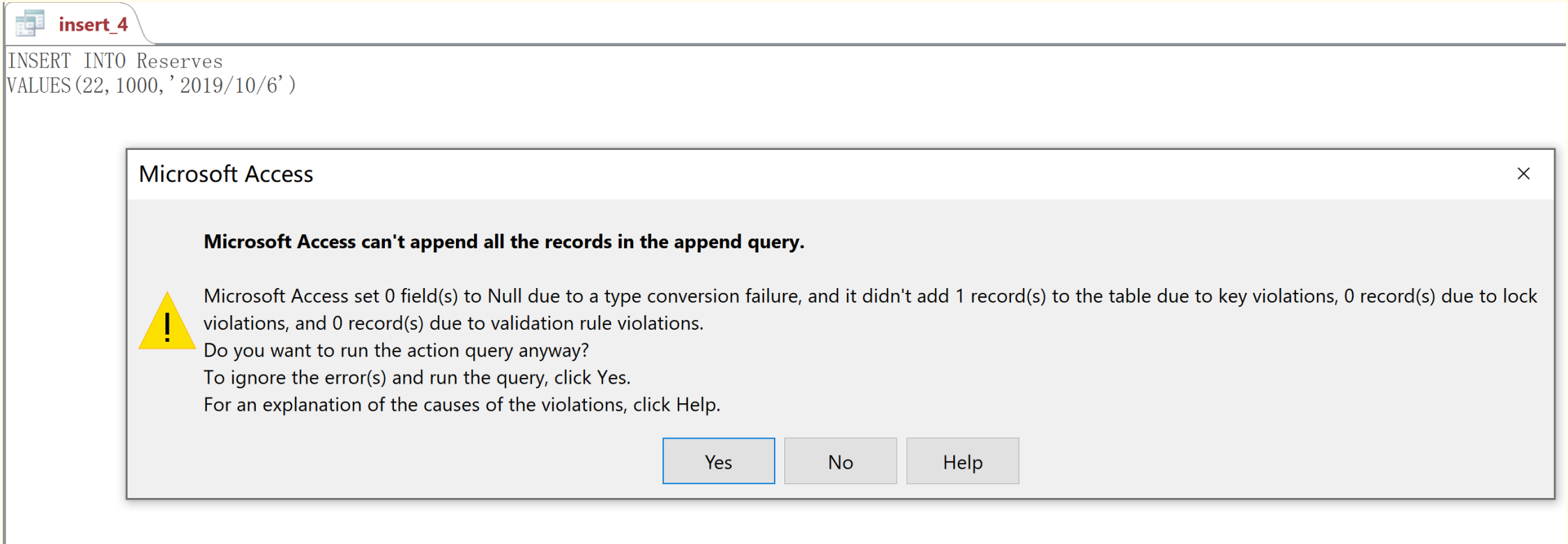# 4.3 Referential integrity constraint

4.3 Referential integrity constraint

INSERT INTO Reserves VALUES(22,1000,'2019/10/6');

insert_4

```
INSERT INTO Reserves
VALUES(22, 1000, '2019/10/6')
```

Microsoft Access   ✕

Microsoft Access can't append all the records in the append query.

⚠ Microsoft Access set 0 field(s) to Null due to a type conversion failure, and it didn't add 1 record(s) to the table due to key violations, 0 record(s) due to lock violations, and 0 record(s) due to validation rule violations.
Do you want to run the action query anyway?
To ignore the error(s) and run the query, click Yes.
For an explanation of the causes of the violations, click Help.

[Yes] [No] [Help]

Assignment4

Content

✓ **For Domain integrity constraint, Entity integrity constraint and Referential integrity constraint, you should give each integrity constraint "INSERT","DELETE" and "UPDATE" SQL statements to prove it.(At least 9 statements totally)**

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**)

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

Demand

- This is an individual assignment –no group submissions are allowed. Hand in an ACCESS database that contains at least nine statements. The database should contain nine queries, named as follows:

  Insert1

  Insert2

  …

  Delete1

  …

  Update3

- Hand in a **report** which indicates your answers.(Figure is important. You should give your analysis about your sql statements.)

Submission

- File name format:
    StudentNumber_A4.zip
including:
    report_A4.doc/ report_A4.docx
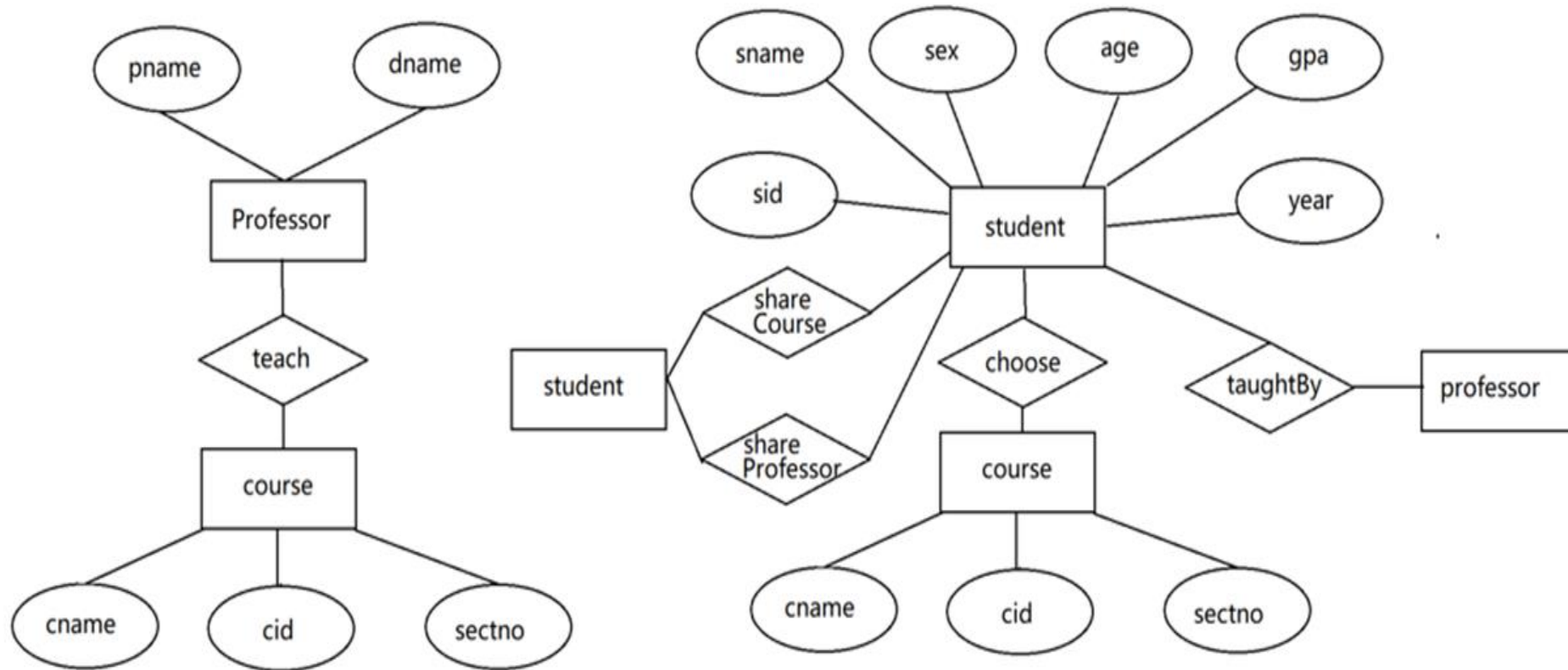   university_A4.mdb/university_A4.accdb
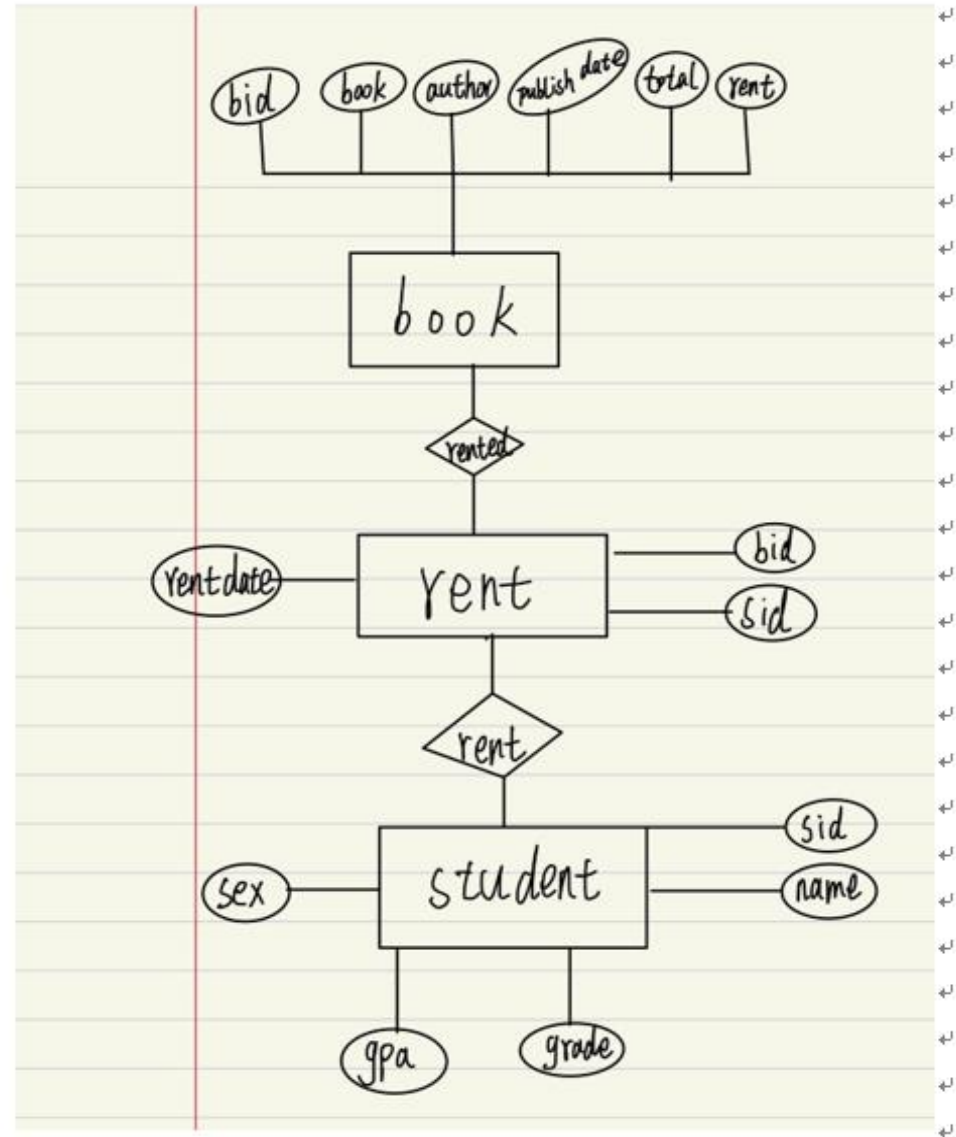

Deadline: Beijing time, December 3th, 00:00:00

Assignment3 Review

Assignment3 Review

Assignment3 Review

Assignment3 Review

- 优秀作业

可以看出，"老师贡献题目"是 1:N 的关系，"学生作答题目"是 N:N 的关系。由此，我们绘制 ER 图：