Errata and Updates For
Database System Concepts, 6th Edition
Silberschatz, Korth, and Sudarshan

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We list below errors, clarifications, and recent updates. NOTE: Some of the errata described here have been corrected in the 2nd and 3rd printing of the US edition of the book; these are tagged as “(1st pr.).” If you own an international edition, note that these editions follow a different correction schedule, so your copy may still have errata that have been fixed in the US edition. Check your copy for the errata noted here, and ignore those that have been fixed in your copy.

Errata for Part 1: Relational Databases, Chapters 1 to 6

CHAPTER 2

1. Page 47. Figure 2.8: Delete the line between section.time_slot_id and time_slot.time_slot_id. Although there is a referential integrity constraint from section.time_slot_id to time_slot.time_slot_id it is not a foreign key constraint since time_slot.time_slot_id is not a primary key of time_slot. The schema diagram notation does not currently allow us to specify referential integrity constraints that are not foreign key constraints.

2. (1st pr.) Page 54, Exercise 2.9: Add the following to the first line: “Assume that branch names and customer names uniquely identify branches and customers, but loans and accounts can be associated with more than one customer.”

CHAPTER 3

1. (1st pr.) Page 61, at the end of the 3rd para (just before the bullet for “not null”): add the sentence: “(Some databases such as MySQL require an alternative syntax, of the form “foreign key (dept_name) references department(dept_name),” where the referenced attributes in the referenced table are explicitly listed.)”
   (Reported by: Cam Hong Tran)

2. (1st pr.) Page 61: “values (10211, 'Smith', 'Biology', 66000);”
   →
   “values ('10211', 'Smith', 'Biology', 66000);”
   In general, char/varchar values should be enclosed in single quotes.
   (Reported by: Randall Johnson)

3. (1st pr.) Page 69, Figure 3.6: The department name and salary of all instructors except Einstein are wrong (and have been copied incorrectly from Einstein’s values). The correct values can be found in the instructor relation shown in Figure 2.1, Page 40, which should be: (Comp. Sci., 65000) for Srinivasan, (Finance, 90000) for Wu, and (Music, 40000) for Mozart; the same value should occur in all rows for that instructor.

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1Errors reported by: Deepak Aggrawal, G. Aishwarya, Jameel Al-Aziz, Scot Anderson, Yahui Chang, David Chiu, Jonghoon Chun, Matt Cremeens, Dona Dungan, Pham Nguyen Duc Duong, Helena Galhardas, Eric Gossett, Ravindra Guravannavar, Leon Ho, Pranav Jain, Jevitha K. P., Cheqing Jin, Minhua Kang, Celine Kuttler, Daniel Sadoc Menasche, Thimas Nielsen, Linda Null, Judi Paige, Donnie Pinkston, Subhashish Saha, Venireddy Satish, Shan Shimin, Stan Thomas, Cam Hong Tran, Due Tran, Daniel Vieira, and a few others. Their help, and in particular that of Daniel Sadoc Menasche, is deeply appreciated. Also thanks to Juha Haaga for suggestions on improvements for future editions.
Also, the ID of the instructor of FIN-201 has been shown as 10101 in multiple lines in the table, in the column preceding FIN-201; the ID should be 12121.
(Reported by: Celine Kuttler)

4. (1st pr.) Page 73, Footnote 3: Replace the current footnote which states “As a consequence, it is not possible to use attribute names containing the original relation names, for instance instructor.name or teaches.course_id, to refer to attributes in the natural join result; we can, however, use attribute names such as name and course_id, without the relation names.”
→
As a consequence, it may not be possible in some systems to use attribute names containing the original relation names, for instance instructor.name or teaches.course_id, to refer to attributes in the natural join result. While some systems allow it, others don’t, and some allow it for all attributes except the join attributes (that is, those that appear in both relation schemas. We can, however, use attribute names such as name and course_id, without the relation names.

5. (1st pr.) Page 80, paragraph after first query: “... Fall 2010 ...” → “... Spring 2010 ...”

6. Page 81, first line: “... Fall 2010 ...” → “... Spring 2010 ...”
(Reported by: Jameel Al-Aziz)

7. (1st pr.) Page 85, para 2: “The average balance is ...” → “The average salary is ...”.
(Reported by: Daniel Vieira)

8. (1st pr.) Page 85, para 3: “58.000” → “58,000”.
(Reported by: Fu Luke)

9. (1st pr.) Page 88, Figure 3.17: in the second column header: “avg(avg_salary)” → “avg_salary”

10. (1st pr.) Page 94, top of page: in “select distinct S.ID, S.name”, the use of distinct is not required, although it is not incorrect.
(Reported by: Jonghoon Chun)

11. (1st pr.) Page 95, In the query at the top of the page:
“where 1 <= (select count(R.course_id) ...”
→
“where 1 >= (select count(R.course_id) ...”
(Reported by: Duc Tran)

12. (1st pr.) Page 96, Para 3:
“However, some SQL implementations, notably Oracle, do not support renaming of the result relation in the from clause.”
→
“Note that some SQL implementations require that each subquery result relation be given a name, even if the name is never referenced; Oracle allows a subquery result relation to be given a name (with the keyword as omitted) but does not allow renaming of attributes of the relation.”
Oracle does allow renaming of result relations (although it does not require it), but as in other kinds of renaming in Oracle, the keyword as should be omitted.

13. Page 99, last para, line 3: “all tuples that fail the test” → “all tuples that pass the test”.
(Reported by: Pranav Jain)

14. (1st pr.) Page 101, third SQL query:
\[
\text{select student} \\
\text{from student}
\]
select ID
from student

15. (1st pr.) Page 105, Practice Exercise 3.1, Parts e, f, g: “Autumn” → “Fall”

16. (1st pr.) Page 109, Exercise 3.12, Part b: “Autumn” → “Fall”

CHAPTER 4

1. (1st pr.) Page 126, Figure 4.7: In the last row of the department relation, change ‘Painter’ to ‘Taylor’.

2. (1st pr.) Page 130, Section 4.4.3: “...form a candidate key...” → “...form a superkey...”, and “However, candidate key attributes...” → “However attributes declared as unique...”
   (Reported by: Cheqing Jin)

3. (1st pr.) Page 131, para 5: After the 1st sentence of this paragraph (which begins “By default, in SQL,...”), add the sentence:
   For example, the foreign key declaration for the course relation can be specified as:
   
   \[
   \text{foreign key (dept\_name) references department(dept\_name)}
   \]

4. (1st pr.) Page 148, Para 1: “branch\_name of the branch relation” → “dept\_name of the department relation”
   (Reported by: Daniel Sadoc Menasche)

5. (1st pr.) Page 155, Question 4.11: “Music” → “Taylor”. (We need a building name, not a department name here.)

CHAPTER 5

1. (1st pr.) Page 163, Para 1 (Java expression):

   " + dept\_name + "," + balance + ")"

   →

   " + dept\_name + "," + salary + ")"

   (Reported by: Daniel Sadoc Menasche)

2. (1st pr.) Page 167, Figure 5.4, in the printf statement: “depthname” → “deptname”

3. (1st pr.) Page 174, first query of Section 5.2.1: “from instructor” → “from department”.

4. (1st pr.) Page 175, Figure 5.6, Line 1: “instructors\_of” → “instructor\_of”

5. (1st pr.) Page 184, Figure 5.10: “update on takes” → “update of takes”

6. (1st pr.) Page 185, Figure 5.11, first line: “amount” → “level”.

7. (1st pr.) Page 189, Figure 5.13: Change

   \[
   \text{insert into temp}
   \]
   \[
   \text{(select prereq.course\_id}
   \]
   \[
   \text{from new\_c_prereq, prereq}
   \]
   \[
   \text{where new\_c_prereq.course\_id = prereq.prereq\_id}
   \]
→

\[ \text{insert into } \text{temp} \]

\( (\text{select prereq.prereq}\_\text{id} \)

\( \text{from new}\_\text{cprereq, prereq} \)

\( \text{where new}\_\text{cprereq.course}\_\text{id} = \text{prereq.course}\_\text{id} \)

8. (1st pr.) Page 191 Fig 5.15:
(a) Change all 5 occurrences of c\_prereq \( \rightarrow \) rec\_prereq;
(b) “select prereq.prereq\_id, c\_prereq.course\_id”
→
“select rec\_prereq.course\_id, prereq.prereq\_id”

9. (1st pr.) Page 194, Section 5.5.1: “select ID, GPA)” \( \rightarrow \) “select ID, GPA”

10. (1st pr.) Page 200, Figure 5.18, in the cell for “white” “dress”: “8” \( \rightarrow \) “5”

11. (1st pr.) Page 212, Exercise 5.8:
“for each owner of the account, check if the owner has any remaining accounts, and if she does not, delete her from the depositor relation.”
→
“for each depositor of the account, check if the depositor has any remaining accounts, and if she does not, delete her from the customer relation.”

CHAPTER 6

1. (1st pr.) Page 224, Figure 6.8: All corrections noted for Figure 3.6 (Page 69) above should be applied to Figure 6.8 also.
(Reported by: David Chiu)

2. (1st pr.) Page 230, par before last para, line 4: \( (ID, name, dept\_name, salary, course\_id) \rightarrow (ID, name, dept\_name, salary, course\_id, sec\_id, semester, year) \).
(Reported by: Matt Cremeens)

3. (1st pr.) Page 235, Section 6.1.4.1: Replace \( \div \) by \( / \) in two occurrences in this section (this is to avoid confusion with the division operator of relational algebra).

4. Page 239:

\[ A_1, A_2 \Join \text{sum}(A_3)\left(\Pi_{A_1, A_2, \ldots, A_n}(\sigma_P (r_1 \times r_2 \times \cdots \times r_m))\right) \]

→

\[ A_1, A_2 \Join \text{sum}(A_3)(\sigma_P (r_1 \times r_2 \times \cdots \times r_m)) \]

(Reported by: Eric Gossett)

5. (1st pr.) Page 241, in both tuple relational calculus queries on this page:
“s[year] = 2009)” \( \rightarrow \) “s[year] = 2009” and “t[course\_id]” \( \rightarrow \) “t[course\_id]”

6. (1st pr.) Page 242, in the tuple relation calculus query at the top of the page:
“s[year] = 2009)” \( \rightarrow \) “s[year] = 2009”, and
“t[course\_id]” \( \rightarrow \) “t[course\_id]”.

4
7. (1st pr.) Page 244, Section 6.2.4, Line 2: “σ, and ρ, ...” → “σ, Π, and ρ, ...”
(Reported by: Ravindra Guravannavar)

8. Page 246:
\[
\{ <n> | \exists i,d,s (<i,n,d,s> \in instructor \land s > 80000) \}
\]
\[
\{ <n> | \exists n,d,s (<i,n,d,s> \in instructor \land s > 80000) \}
\]
(Reported by: Ravindra Guravannavar)

9. (1st pr.) Page 246, 3rd bullet:
\[
\{ <n,c> | \exists i,a (<i,c,a,s> \in teaches ... \}
\]
\[
\{ <n,c> | \exists i,a,se,y (<i,c,a,se,y> \in teaches ... \}
\]

10. (1st pr.) Page 246, 4th bullet:
\[
\{ <c> | \exists <c,a,s,y,b,r,t> \in section
\begin{align*}
&\land s = "Fall" \land y = "2009" \\
&\lor \exists u (<c,a,s,y,b,r,t> \in section \\
&\land s = "Spring" \land y = "2010")
\end{align*}
\]
\[
\{ <c> | \exists a,s,y,b,r,t (<c,a,s,y,b,r,t> \in section \\
&\land s = "Fall" \land y = "2009" \\
&\lor \exists a,s,y,b,r,t (<c,a,s,y,b,r,t> \in section \\
&\land s = "Spring" \land y = "2010")
\}
\]

11. (1st pr.) Page 246, bottom of page:
\[
\{ <i> | \exists n,d,t (<i,n,d,t> \in student) \land \\
&\forall x,y,z,w (<x,y,z,w> \in course \land z = "Biology" \Rightarrow \\
&\exists a,b (<a,x,b,r,p,q> \in takes \land <c,a> \in > depositor))\}
\]
\[
\{ <i> | \exists n,d,tc (<i,n,d,tc> \in student) \land \\
&\forall ci,ti,du,cr (<ci,ti,du,cr> \in course \land du = "Biology" \Rightarrow \\
&\exists si,se,y,g (<ci,si,se,y,g> \in takes ))\}
\]