ERRATA FOR FIRST PRINTING:

Chapter 2
Page 62: The last-but-one paragraph in this page (starting with “There are cases .”) should be moved above the query $\sum_{\text{distinct(\text{branch\_name})}}(p/\text{\_works})$

Page 71, Column 2, Line 1: “Division /” → “Division ÷”

Chapter 3
Page 76, lines 2 and 3: “(2)” → “(Chapter 2)”; “(5)” → “(Chapter 5)”, and “It includes also ..” → “It also includes ..”

Page 78, para 2 (the paragraph starting with Figure 3.2): Change “would not be a primary key customer;” → “would not be a primary key for the customer relation;”

Page 98, Section 3.8.2: This section uses the term “view” which is defined only later in Section 3.9.1. We suggest reading the entire Section 3.8 (Complex Queries) after reading Section 3.9.

Page 106, para 2: Change “which we discuss in Section 3.2.” → “as we discuss later in Section 4.2.2.”

Page 111, line 1: Change “condition joins” → “theta joins”.

Page 111, para 2, line 2: Change “simple example of inner joins.” → “simple example of a join; SQL uses the term inner join to denote a join, to distinguish it from an outer join.”

Page 116, Figure 3.11: Change the second attribute of participated from car to license,

Page 120, Exercise 3.22: Attribute student\_id of relation student, and attributes student\_id and course\_id of relation registered should be underlined to denote that they are primary key attributes.

Page 120, Exercise 3.23: Attribute student\_id of relation marks should be underlined to denote that it is a primary key attribute.

Chapter 4
Page 152, Figure 4.12, last-but-one line: Add a space between table and empl.

Page 155, Section 4.8, Para 1: Drop the sentence “We covered the basics of SQL earlier in this chapter.”.

Change “some of the more complex features of SQL” → “some new features added to SQL as part of SQL:2003.”

Replace the sentence starting with “Many of these features ..” by “You should be aware that not all database systems support these features.”

1Errors reported by: H. K. Park, Fernando Senz Prez, Barry Soroka, Rajarshi Rakshit, Sandeep Satpal, Amon Seagull and Praveen Ranjan Srivastava. Your help is deeply appreciated.
Chapter 5

Page 197, Figure 5.15: Change the second attribute of participated from car to license.

Chapter 6

Page 211, Bullet 1: Change “Oneto-one” → “One-to-one”.
Page 211, Bullet 2: Change “One-to-many” → “One-to-many”.
Page 212 Para 3 (the paragraph just before Section 6.2.3.1 Entity Sets): At the end of this para, add the sentence:
“Recall the definition of keys for relations, from Section 2.1.3; we now define corresponding notions of keys for entities and relationships.”
Page 241, Section 6.9.1: loan = (loan_number, amount) → loan = (loan_number, amount)
Page 244, Section 6.9.3.2:

\[
\begin{align*}
account &= (account_number, balance, branch_name) \\
branch &= (branch_name, branch_city, assets)
\end{align*}
\]

→ \[
\begin{align*}
account &= (account_number, balance, branch_name) \\
branch &= (branch_name, branch_city, assets)
\end{align*}
\]
Page 244, Figure 6.27: Attribute account_number should be underlined.
Page 246, bullet 2:

\[
\begin{align*}
employee &= (person_id, name, street, city, salary) \\
customer &= (person_id, name, street, city, credit_rating)
\end{align*}
\]

→ \[
\begin{align*}
employee &= (person_id, name, street, city, salary) \\
customer &= (person_id, name, street, city, credit_rating)
\end{align*}
\]

Chapter 7

Page 270 (4th line from bottom): In “.. a pair of attributes (customer_id, loan_amount) ..” change loan_amount → loan_number
Page 288: Change the heading of Section 7.5 from “Decomposition Using Functional Dependencies” → “Algorithms for Decomposition” here, and also in the table of contents. (Section 7.3 also has the heading “Decomposition Using Functional Dependencies”, which should not be changed.)
Page 290, first bullet: “.. holds on , but ..” → “.. holds, ..”
Page 291, last-but-one para: (customer_id, employee_id → branch_name, type)

→ customer_id, employee_id → branch_name, type

Chapter 8

Page 322, Figure 8.6: “result.setContentType("text/html");” → “response.setContentType("text/html");”
Page 338, 3rd line from bottom: “system-administrator” → “system administrator”
Page 354, Exercise 8.22: In “https://mybank.com, the HTTPS protocol”, delete one of the two occurrences of “the”.

Chapter 9
Page 365: In “city varchar(20) 
zipcode varchar(9)”, add a comma after “zipcode”.
Page 366: In “name row(...lastname varchar(20)) 
address row(...” 
add a comma after “varchar(20))”.
Page 366: In “city varchar(20) 
zipcode varchar(9)”, add a comma after “zipcode”.
Page 378, last-but-one bullet item: In “Each table stores the primary key (...) and the attributes are defined locally”, change “attributes are” → “attributes that are”.

Chapter 10
Page 415, 1st query: change “for $d in /bank/...” → “for $d in /bank/...”

Chapter 11
Page 449, 3 lines from bottom: In “NV-RAM buffers are ... found in in RAID controllers” change “in in” → “in”.
Page 458, last line: Change “They have a fairly large capacity (640 megabytes),...” → “They have a storage capacity of 640 to 700 megabytes,..”

Chapter 12
Page 483, Figure 12.1: The left part of this figure (with the table containing “Brighton”, “Mianus” and “Redwood”, and associated pointers) should be deleted.
Page 495, Figure 12.13: In procedure insert in leaf,
“Let $K_i$ be the least value in $L$ that is less than $K$” → “Let $K_i$ be the highest value in $L$ that is less than $K$”.

Chapter 13
Page 542, Para 2, Line 2: In “Run generation requires seeks for reading data for each of the two runs and as well as for writing the run.” change “two runs” → “runs”, and “the run.” → “the runs.”.
Page 549, bullet numbered 1: In “Sorting the relation customer ... 400 * (2[log_{24}(400/25)] + 1) = 1200 block transfers.” change “400 * (2[log_{24}(400/25)] + 1)” → “400 * (2[log_{24}(400/25)] + 1)”.
Page 552, third para, one line from bottom: Change “We can use a memory ... up to 3K * 3K, which is is 36 gigabytes” → “We can use a memory ... up to 3K * 3K blocks, which is 36 gigabytes”
Chapter 14

Page 600, Exercise 14.2(a): \( \sigma_{B<4}(A\mathcal{G}_{\text{max}}(B)(R)) \) and \( A\mathcal{G}_{\text{max}}(B)(\sigma_{B<4}(R)) \)

\[ \rightarrow \]

\( \sigma_{B<4}(A\mathcal{G}_{\text{max}}(B)\text{ as }B(R)) \) and \( A\mathcal{G}_{\text{max}}(B)\text{ as }B(\sigma_{B<4}(R)) \).

Chapter 16

Page 637, Figure 16.4, replace \( \text{grant-}X(A,T_2) \rightarrow \text{grant-}X(A,T_1) \)

Chapter 28

Page 1037, in the heading of Section 28.5: “Multidimensional” → “Multidimensional”.