

The screenshot displays a database management tool interface. On the left, a 'SCHEMAS' tree view shows a hierarchy: 'student' (containing 'Tables', 'Views', 'Stored Procedures', 'Functions'), 'student_enrollment', and 'student_enroll' (containing 'Tables' and 'Views'). The 'student_enroll' schema is selected, and its 'Tables' folder is expanded, showing tables like 'book_adoption', 'course', 'enroll', 'student', and 'text'. Below the tree, the 'Schema: student_enroll' is indicated. The main area shows a SQL script with the following code:

```
1 CREATE DATABASE student_enroll;
2
3 USE student_enroll;
4
5 CREATE TABLE student(
6     reg_no VARCHAR(10) PRIMARY KEY,
7     name VARCHAR(20),
8     major VARCHAR(10),
9     bdate date
10 );
11
12 CREATE TABLE course(
13     course_no INT PRIMARY KEY,
14     cname VARCHAR(20),
15     dept VARCHAR(20)
16 );
17
18 CREATE TABLE enroll(
19     reg_no VARCHAR(10),
20     course_no INT,
21     marks INT,
```

On the right, a tooltip message states: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.' The bottom of the interface includes an 'Output' section with 'Action Output' and tabs for 'Context Help' and 'Snippets'.

The screenshot displays a database management interface with a left-hand sidebar and a main central pane. The sidebar, titled 'SCHEMAS', contains a search bar and a tree view of database objects. The tree view is expanded to show the 'student_enroll' schema, which includes tables like 'book_adoption', 'course', 'enroll', 'student', and 'text', as well as views like 'publisher', 'publishers', and 'publisherview'. The main pane shows SQL code for creating three tables: 'enroll', 'text', and 'book_adoption'. The 'enroll' table has columns 'reg_no' (VARCHAR(10)), 'course_no' (INT), 'marks' (INT), and 'sem' (INT), with a primary key on 'reg_no' and foreign keys to 'student' and 'course'. The 'text' table has columns 'book_isbn' (INT PRIMARY KEY), 'book_title' (VARCHAR(20)), 'publisher' (VARCHAR(20)), and 'author' (VARCHAR(20)). The 'book_adoption' table has columns 'course_no' (INT) and 'sem' (INT). A right-hand pane contains a message about disabled automatic context help. The bottom of the interface includes an 'Output' section with an 'Action Output' tab.

SCHEMAS

Filter objects

- student
 - Tables
 - Views
 - Stored Procedures
 - Functions
 - student_enrollment
 - student_enroll**
 - Tables
 - book_adoption
 - course
 - enroll
 - student
 - text
 - Views
 - publisher
 - publishers
 - publisherview

Administration Schemas

Information

Schema: student_enroll

```
18 CREATE TABLE enroll(  
19     reg_no VARCHAR(10),  
20     course_no INT,  
21     marks INT,  
22     sem INT,  
23     PRIMARY KEY(reg_no, course_no),  
24     FOREIGN KEY(reg_no) REFERENCES student(reg_no) ON DELETE CASCADE,  
25     FOREIGN KEY(course_no) REFERENCES course(course_no) ON DELETE CASCADE  
26 );  
27  
28  
29 CREATE TABLE text(  
30     book_isbn INT PRIMARY KEY,  
31     book_title VARCHAR(20),  
32     publisher VARCHAR(20),  
33     author VARCHAR(20)  
34 );  
35  
36 CREATE TABLE book_adoption(  
37     course_no INT,  
38     sem INT,
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

SCHEMAS

Filter objects

- student
 - Tables
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 - student_enrollment
 - student_enroll**
 - Tables
 - book_adoption
 - course
 - enroll
 - student
 - text
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 - publisher
 - publishers
 - publisherview

Administration Schemas

Information

Schema: **student_enroll**

Object Info Session

Limit to 1000 rows

```
35
36 CREATE TABLE book_adoption(
37     course_no INT,
38     sem INT,
39     book_isbn INT,
40     FOREIGN KEY(course_no) REFERENCES course(course_no) ON DELETE CASCADE ON UPDATE CASCADE,
41     FOREIGN KEY(book_isbn) REFERENCES text(book_isbn) ON DELETE CASCADE ON UPDATE CASCADE
42 );
43
44 INSERT INTO student VALUES('CS01','RAM','DS','1986-03-12');
45 INSERT INTO student VALUES('IS02','SMITH','USP','1987-12-23');
46 INSERT INTO student VALUES('EC03','AHMED','SNS','1985-04-17');
47 INSERT INTO student VALUES('CS03','SNEHA','DBMS','1987-01-01');
48 INSERT INTO student VALUES('TC05','AKHILA','EC','1986-10-06');
49 select * from student;
50
51 INSERT INTO course VALUES(11,'DS','CS');
52 INSERT INTO course VALUES(22,'USP','IS');
53 INSERT INTO course VALUES(33,'SNS','EC');
54 INSERT INTO course VALUES(44,'DBMS','CS');
55 INSERT INTO course VALUES(55,'EC','TC');
```

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Context Help Snippets

Output

Action Output

The screenshot displays a database management application interface. On the left, a 'SCHEMAS' tree shows a hierarchy starting with 'student', which contains 'Tables', 'Views', 'Stored Procedures', and 'Functions'. The 'student_enroll' table is selected under the 'Tables' folder. Below the tree, the 'Schema: student_enroll' is indicated. The main area is a SQL editor with a toolbar at the top. The script contains the following SQL statements:

```
56 • select * from course;
57
58 • INSERT INTO enroll VALUES('CS01',11,4,85);
59 • INSERT INTO enroll VALUES('IS02',22,6,80);
60 • INSERT INTO enroll VALUES('EC03',33,2,80);
61 • INSERT INTO enroll VALUES('CS03',44,6,75);
62 • INSERT INTO enroll VALUES('TC05',55,2,8);
63 • select * from enroll;
64
65 • INSERT INTO text VALUES(1,'DS and C','Princeton','Reddy');
66 • INSERT INTO text VALUES(2,'Fundamentals of DS','Princeton','Shanbhag');
67 • INSERT INTO text VALUES(3,'Fundamentals of DBMS','Princeton','Robin');
68 • INSERT INTO text VALUES(4,'SQL','Princeton','Cotran');
69 • INSERT INTO text VALUES(5,'Electronic circuits','TMH','Tripathi');
70 • select * from text;
71
72 • INSERT INTO book_adoption VALUES(11,4,1);
73 • INSERT INTO book_adoption VALUES(11,4,2);
74 • INSERT INTO book_adoption VALUES(44,6,3);
75 • INSERT INTO book_adoption VALUES(44,6,4);
76 • INSERT INTO book_adoption VALUES(55,2,5);
```

On the right side, a help panel displays the message: "Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help." At the bottom of the interface, there is an 'Output' section with a tab for 'Action Output'.

The screenshot displays a database management tool interface. On the left, a 'SCHEMAS' pane shows a tree view of the database structure. The 'student' schema is expanded, showing 'Tables', 'Views', 'Stored Procedures', and 'Functions'. The 'student_enroll' schema is also expanded, showing 'Tables' (book_adoption, course, enroll, student, text) and 'Views' (publisher, publishers, publisherview). The 'Schema: student_enroll' is selected. The main area is a SQL query editor with a toolbar at the top. The toolbar includes icons for file operations, editing, and execution, along with a 'Limit to 1000 rows' dropdown. The query editor contains two SQL queries. Query 1 is a multi-statement query that inserts a new text book and then selects from the book_adoption table. Query 2 is a single-statement query that selects text books from the course and book_adoption tables, filtered by department 'CS' and grouped by course number. The bottom of the interface has an 'Output' pane with 'Action Output' selected. A help message is displayed on the right side of the interface.

SCHEMAS

Filter objects

- student
 - Tables
 - Views
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 - Functions
- student_enrollment
- student_enroll
 - Tables
 - book_adoption
 - course
 - enroll
 - student
 - text
 - Views
 - publisher
 - publishers
 - publisherview

Administration Schemas

Information

Schema: student_enroll

Object Info Session

Limit to 1000 rows

```
79  /* QUERY1: Demonstrate how you add a new text book to the database and make this book be
80  adopted by some department. */
81
82  INSERT INTO text VALUES(7,'Linear alzebra','Pearson','Narayana');
83  INSERT INTO course VALUES(77,'LA','CS');
84  INSERT INTO book_adoption VALUES(77,4,7);
85  SELECT * FROM book_adoption;
86
87  /* QUERY2: Produce a list of text books (include Course #, Book-ISBN, Book-title) in the
88  alphabetical order for courses offered by the 'CS' department that use more than two
89  books. */
90
91  SELECT c.course_no,c.cname FROM course c,text t,book_adoption b
92  WHERE c.course_no=b.course_no
93  AND
94  b.book_isbn=t.book_isbn
95  AND
96  c.dept='CS'
97  GROUP BY c.course_no
98  HAVING COUNT(b.course_no)>=2
99  ORDER BY t.book_title;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

The screenshot displays a database management application with the following components:

- SCHEMAS Panel (Left):** A tree view showing a database structure. The 'student' schema is expanded, showing 'Tables', 'Views', 'Stored Procedures', and 'Functions'. Under 'Tables', 'student_enroll' is selected, which contains 'book_adoption', 'course', 'enroll', 'student', and 'text'. Under 'Views', 'publisher', 'publishers', and 'publisherview' are listed. The 'Schema: student_enroll' is highlighted at the bottom.
- SQL Editor (Center):** A text area for writing SQL queries. It contains two queries:
 - QUERY3:** A SELECT statement to find departments with all adopted books from a specific publisher.

```
100
101 /* QUERY3: List any department that has all its adopted books published by a specific publisher.
102 */
103
104 SELECT c.course_no,c.dept,b.book_isbn,t.publisher FROM course c,book_adoption b,text t
105 WHERE c.course_no=b.course_no
106 AND
107 b.book_isbn=t.book_isbn
108 AND
109 t.publisher='Princeton';
110
```
 - QUERY4:** A CREATE VIEW statement to create a view named 'publisherview' based on the 'book_adoption' table and its joins.

```
111 /* QUERY4: Create a View which contains(Course, TotalBook-ISBN,Publisher)from the above
112 relation schemas. */
113
114 CREATE view publisherview as
115 SELECT c.cname, b.book_isbn, t.publisher from book_adoption b
116 inner join course c
117 on c.course_no= b.course_no
118 inner join text t
119 on t.book_isbn= b.book_isbn;
120
```
- Help Panel (Right):** A message stating: "Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help." It includes navigation icons and a 'Jump to' field.
- Output Panel (Bottom):** A section for displaying results, currently showing 'Action Output'.

The screenshot displays a database management tool interface. On the left, a 'SCHEMAS' tree shows a hierarchy: 'student' (Tables, Views, Stored Procedures, Functions), 'student_enrollment', and 'student_enroll' (Tables: book_adoption, course, enroll, student, text; Views: publisher, publishers, publisherview). The 'publisherview' view is selected, and the 'Schema: student_enroll' is indicated below. The main SQL editor shows two queries:

```
109 t.publisher='Princeton';
110
111 /* QUERY4: Create a View which contains(Course, TotalBook-ISBN,Publisher)from the above
112 relation schemas. */
113
114 CREATE view publisherview as
115 SELECT c.cname, b.book_isbn, t.publisher from book_adoption b
116 inner join course c
117 on c.course_no= b.course_no
118 inner join text t
119 on t.book_isbn= b.book_isbn;
120
121
122 /* QUERY5: Retrieve the Course Names where that Courses are Published by Springer Publisher. */
123
124 SELECT c.cname from book_adoption b
125 inner join course c
126 on c.course_no= b.course_no
127 inner join text t
128 on t.book_isbn= b.book_isbn
129 WHERE t.publisher= "springer";
```

On the right, a context help panel displays the text: 'Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.' Below the SQL editor is an 'Output' section with a tab for 'Action Output'.