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Проект 6_8_1

В этом упражнении необходимо отсортировать данные, возвращаемые при выполнении запроса, добавив фразу ORDER BY в конце инструкции SELECT

Отобразите название команды и количество игроков, отсортировав выходные данные в алфавитном порядке по названию команды. Используйте соответствующие псевдонимы для заголовков столбцов.

SELECT name "team name", number_of_players "number of players"

FROM teams

ORDER BY name;

The screenshot shows a SQL command window with the following details:

- SQL Commands:** The input field contains the query:

```
SELECT name "team name", number_of_players "number of players"
FROM teams
ORDER BY name;
```
- Schema:** RU_A404_SQL_S04
- Run:** A blue button to execute the query.
- Results:** The tab is selected, showing the output table:

team name	number of players
Celtics	42
Jets	10
Rockets	25
Rovers	8

Отобразите название команды и количество игроков, отсортировав выходные данные в порядке убывания количества игроков. Используйте соответствующие псевдонимы для заголовков столбцов.

SELECT name "team name", number_of_players "number of players"

FROM teams

ORDER BY number_of_players DESC;

The screenshot shows a SQL command window with the following details:

- SQL Commands:** The input field contains the query:

```
SELECT name "team name", number_of_players "number of players"
FROM teams
ORDER BY number_of_players DESC;
```
- Schema:** RU_A404_SQL_S04
- Run:** A blue button to execute the query.
- Results:** The tab is selected, showing the output table:

team name	number of players
Celtics	42
Rockets	25
Jets	10
Rovers	8

Отобразите название команды и количество игроков, отсортировав выходные данные в алфавитном порядке по названию команды. Используйте Team Name в качестве псевдонима name и Players в качестве псевдонима number of players. Отсортируйте выходные данные в порядке убывания названия, используя псевдоним во фразе ORDER BY.

```
SELECT name "Team Name", number_of_players "Players"  
FROM teams  
ORDER BY "Team Name" DESC;
```

SQL Commands

Schema: RU_A404_SQL_S04

Rows: 10

Run

```
SELECT name "Team Name", number_of_players "Players"  
FROM teams  
ORDER BY "Team Name" DESC;
```

Team Name	Players
Rovers	8
Rockets	25
Jets	10
Celtics	42

Проект 6_8_2

Клиенты пронумерованы по порядку, и каждому новому клиенту присваивается больший номер клиента. Используйте TOP-N-ANALYSIS, чтобы отображались имена и фамилии трех первых клиентов. Покажите имена и фамилии клиентов в одном столбце, используя Customer Name в качестве псевдонима столбца.

```
SELECT ROWNUM As "number", "Customer Name"  
FROM (SELECT first_name || ' ' || last_name AS "Customer Name"  
      FROM customers)  
WHERE ROWNUM <=3;
```

SQL Commands

Schema: RU_A404_SQL_S04

Rows: 10

Run

```
SELECT ROWNUM As "number", "Customer Name"  
FROM (SELECT first_name || ' ' || last_name AS "Customer Name"  
      FROM customers)  
WHERE ROWNUM <=3;
```

number	Customer Name
1	Jennifer Jones
2	Brian Rogers
3	Robert Thornberry

Используйте подстановочную переменную, которая позволит ввести комиссионную ставку для продавцов-консультантов. На экране должны отображаться имена и фамилии продавцов-консультантов, которые получают эту комиссионную ставку. Выходные данные следует отсортировать по фамилии. Используйте соответствующие псевдонимы для заголовков столбцов.

```
SELECT first_name, last_name
FROM sales_representatives
WHERE commission_rate = :commission_rate_num
ORDER BY last_name;
```

Проверим с данными : 5

EDIT	ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID
	sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01
	sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01
	sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01

Bind Variable		Value
:COMMISSION_RATE_NUM		<input type="text" value="5"/>

SQL Commands
Schema RU_A404_SQL_S04

Rows 10

```
SELECT first_name, last_name
FROM sales_representatives
WHERE commission_rate = :commission_rate_num
ORDER BY last_name;
```

Results
Explain
Describe
Saved SQL
History

FIRST_NAME	LAST_NAME
Barry	Speed
Victoria	Wright

Практика 6_8

1. Выведите все поля для каждой записи в указанных таблицах, расположив их в порядке возрастания:

a. AD_STUDENTS, упорядоченная по REG_YEAR
`SELECT *`
`FROM students`
`ORDER BY RGS_YEA;`

SQL Commands Schema RU_A404_SQL_S04

Rows 10 Save Run

```
SELECT *
FROM students
ORDER BY RGS_YEA;
```

Results	Explain	Describe	Saved SQL	History	
ID	FRST_NAME	LST_NAME	RGS_YEA	EMAIL	PNT_INF_ID
720	JACK	SMITH	01-Jan-2012	JSMITH@SCHOOL.EDU	600
730	NOAH	AUDRY	01-Jan-2012	NAUDRY@SCHOOL.EDU	640
760	JEANNE	BEN	01-Mar-2012	JBEN@SCHOOL.EDU	610
750	ROBERT	BEN	01-Mar-2012	RBEN@SCHOOL.EDU	610
740	RHONDA	TAYLOR	01-Sep-2012	RTAYLOR@SCHOOL.EDU	620
770	MILLS	CARMEN	01-Apr-2013	MCARMEN@SCHOOL.EDU	630

b. AD_EXAM_RESULTS, упорядоченная по STUDENT_ID и COURSE_ID

```
SELECT *
FROM XAM_RESULTS
ORDER BY STU_ID, CRS_ID;
```

SQL Commands Schema RU_A404_SQL_S04

Rows 10 Save Run

```
SELECT *
FROM XAM_RESULTS
ORDER BY STU_ID, CRS_ID;
```

Results	Explain	Describe	Saved SQL	History
GRADE	STU_ID	CRS_ID	XAM_ID	
91	720	190	500	
97	720	193	520	
85	730	194	530	
87	730	195	540	
78	750	191	520	
60	750	192	500	
97	750	195	510	
60	760	191	530	
70	760	192	510	

c. AD_STUDENT_ATTENDANCE, упорядоченная по STUDENT_ID

```
SELECT *
FROM STUDENT_ATTENDANCES
ORDER BY STU_ID;
```

SQL Commands Schema RU_A404_SQL_S04

Rows 10 Save Run

```
SELECT *
FROM STUDENT_ATTENDANCES
ORDER BY STU_ID;
```

Results Explain Describe Saved SQL History

NUMBER_OF_WRK_DAYS	NUMBER_OF_DAYS_OFF	ELIGIBILITY_FOR_XM	STU_ID	ACADEMIC_SESSIONS_ID
180	21	Y	720	100
180	11	Y	730	200
180	12	Y	740	300
180	14	Y	750	200
180	15	Y	760	200
180	13	Y	770	300

d. AD_DEPARTMENTS, упорядоченная по идентификатору подразделения

```
SELECT *
FROM DEPARTMENTS_FOR_AB
ORDER BY ID;
```

SQL Commands Schema RU_A404_SQL_S04

Rows 10 Save Run

```
SELECT *
FROM DEPARTMENTS_FOR_AB
ORDER BY ID;
```

Results Explain Describe Saved SQL History

ID	NAME	HEAD
10	ACCOUNTING	MARK SMITH
20	BIOLOGY	DAVE GOLD
30	COMPUTER SCIENCE	LINDA BROWN
40	LITERATURE	ANITA TAYLOR

2. Выведите процент дней, когда учащиеся брали выходные, и отсортируйте записи по вычисленному проценту.

```
SELECT NUMBER_OF_WRK_DAYS, NUMBER_OF_DAYS_OFF, STU_ID, ACADEMIC_SESSIONS_ID,
(NUMBER_OF_DAYS_OFF*100/(NUMBER_OF_WRK_DAYS+NUMBER_OF_DAYS_OFF)) AS "percent of
days off"
FROM STUDENT_ATTENDANCES
ORDER BY "percent of days off";
```

SQL Commands

Schema RU_A404_SQL_S04

Rows 10 Clear Command Find Tables Save Run

```
SELECT NUMBER_OF_WRK_DAYS, NUMBER_OF_DAYS_OFF, STU_ID, ACADEMIC_SESSIONS_ID, (NUMBER_OF_DAYS_OFF*100/(NUMBER_OF_WRK_DAYS+NUMBER_OF_DAYS_OFF)) AS "percent of days off"
FROM STUDENT_ATTENDANCES
ORDER BY "percent of days off";
```

Results Explain Describe Saved SQL History

NUMBER_OF_WRK_DAYS	NUMBER_OF_DAYS_OFF	STU_ID	ACADEMIC_SESSIONS_ID	percent of days off
180	11	730	200	5.75916230366492146596858638743455497382
180	12	740	300	6.25
180	13	770	300	6.73575129533678756476683937823834196891
180	14	750	200	7.21649484536082474226804123711340206186
180	15	760	200	7.69230769230769230769230769230769230769
180	21	720	100	10.4477611940298507462686567164179104478

6 rows returned in 0.01 seconds Download

3. Выведите 5 лучших учащихся по результатам экзамена.

```
SELECT ROWNUM AS "Num", stu_id, name, grade, crs_id
FROM (SELECT stu_id, frst_name|| ' ' || lst_name AS name, grade, crs_id
      FROM student_course_details JOIN students ON student_course_details.stu_id=students.id
      ORDER BY grade)
WHERE ROWNUM <=5;
```

SQL Commands

Schema RU_A404_SQL_S04

Rows 10 Clear Command Find Tables Save Run

```
SELECT ROWNUM AS "Num", stu_id, name, grade, crs_id
FROM (SELECT stu_id, frst_name|| ' ' || lst_name AS name, grade, crs_id
      FROM student_course_details JOIN students ON student_course_details.stu_id=students.id
      ORDER BY grade)
WHERE ROWNUM <=5;
```

Results Explain Describe Saved SQL History

Num	STU_ID	NAME	GRADE	CRS_ID
1	720	JACK SMITH	A	190
2	770	MILLS CARMEN	A	194
3	750	ROBERT BEN	A	192
4	760	JEANNE BEN	B	190
5	720	JACK SMITH	B	193

4. Отобразите родительские сведения, упорядоченные по родительскому идентификатору.

```
SELECT *
FROM pnt_informations
ORDER BY id;
```

SQL Commands

Schema: RU_A404_SQL_S04

Rows: 10

Clear Command Find Tables Save Run

```
SELECT *
FROM pnt_informations
ORDER BY id;
```

Results Explain Describe Saved SQL History

ID	PNT_1_FRST_NAME	PNT_1_LST_NAME	PNT_2_FRST_NAME	PNT_2_LST_NAME
600	NEIL	SMITH	DORIS	SMITH
610	WILLIAM	BEN	NITA	BEN
620	SEAN	TAYLOR	RHEA	TAYLOR
630	DAVE	CARMEN	CATHY	CARMEN
640	JOHN	AUDRY	JANE	AUDRY

Проект 6_9_1

Задание 1

Отобразите всю информацию о продавцах-консультантах и их адресах, используя естественное соединение.

```
SELECT *
FROM sales_representatives NATURAL JOIN SALES REP ADDRESSES;
```

SQL Commands

Schema: RU_A404_SQL_S04

Rows: 10

Clear Command Find Tables Save Run

```
SELECT *
FROM sales_representatives NATURAL JOIN SALES REP ADDRESSES;
```

Results Explain Describe Saved SQL History

ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COMMISSION_RATE	SUPERVISOR_ID	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	ZIP_CODE
sr01	chray@obl.com	Charles	Raymond	0134598761	10	sr01	12 Cherry Lane	Denton	Detroit	DT48211
sr02	vwright@obl.com	Victoria	Wright	0134598762	5	sr01	87 Blossom Hill	Uptown	Detroit	DT52314
sr03	bspeed@obl.com	Barry	Speed	0134598763	5	sr01	12 Junction Row	Skinflats	Detroit	DT52564

Адаптируйте запрос из предыдущего вопроса, чтобы отображать только данные из полей id, first name, last name, address line 1, address line 2, city, email и phone_number для продавцов-консультантов

```
SELECT id, first_name, last_name, address_line_1, address_line_2, city, email , phone_number
FROM sales_representatives NATURAL JOIN SALES REP ADDRESSES;
```

SQL Commands

Schema: RU_A404_SQL_S04

Rows: 10

Clear Command Find Tables Save Run

```
SELECT id, first_name, last_name, address_line_1, address_line_2, city, email , phone_number
FROM sales_representatives NATURAL JOIN SALES REP ADDRESSES;
```

Results Explain Describe Saved SQL History

ID	FIRST_NAME	LAST_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	EMAIL	PHONE_NUMBER
sr01	Charles	Raymond	12 Cherry Lane	Denton	Detroit	chray@obl.com	0134598761
sr02	Victoria	Wright	87 Blossom Hill	Uptown	Detroit	vwright@obl.com	0134598762
sr03	Barry	Speed	12 Junction Row	Skinflats	Detroit	bspeed@obl.com	0134598763

Задание 2

Адаптируйте предыдущий запрос, чтобы использовать фразу USING, а не естественное соединение.

```
SELECT id, first_name, last_name, address_line_1, address_line_2, city, email , phone_number  
FROM sales_representatives JOIN SALES REP ADDRESSES  
USING (id);
```

The screenshot shows a SQL editor interface with the following details:

- SQL Commands:** SELECT id, first_name, last_name, address_line_1, address_line_2, city, email , phone_number FROM sales_representatives JOIN SALES REP ADDRESSES USING (id);
- Schema:** RU_A404_SQL_S04
- Results:** A table with columns ID, FIRST_NAME, LAST_NAME, ADDRESS_LINE_1, ADDRESS_LINE_2, CITY, EMAIL, and PHONE_NUMBER. The data is as follows:

ID	FIRST_NAME	LAST_NAME	ADDRESS_LINE_1	ADDRESS_LINE_2	CITY	EMAIL	PHONE_NUMBER
sr01	Charles	Raymond	12 Cherry Lane	Denton	Detroit	chray@obl.com	0134598761
sr02	Victoria	Wright	87 Blossom Hill	Uptown	Detroit	vwright@obl.com	0134598762
sr03	Barry	Speed	12 Junction Row	Skinflats	Detroit	bspeed@obl.com	0134598763

Отобразите всю информацию о товарах и истории цен, соединив таблицы items и price_history

```
SELECT *  
FROM items JOIN price_history  
USING (itm_number);
```

The screenshot shows a SQL editor interface with the following details:

SQL Commands

Schema: RU_A404_SQL_S04

Results

SELECT *
FROM items JOIN price_history
USING (itm_number);

The Results table has columns: ITM_NUMBER, NAME, DESCRIPTION, CATEGORY, COLOR, SIZE, ILT_ID, START_DATE, START_TIME, PRICE, END_DATE, END_TIME. The data is as follows:

ITM_NUMBER	NAME	DESCRIPTION	CATEGORY	COLOR	SIZE	ILT_ID	START_DATE	START_TIME	PRICE	END_DATE	END_TIME
im01101044	gloves	catcher mitt	clothing	brown	m	il010230124	17-Jun-2017	17-Jun-2016	4.99	15-Apr-2020	15-Apr-2020
im01101045	under shirt	top worn under the game top	clothing	white	s	il010230125	25-Nov-2016	25-Nov-2016	14.99	25-Jan-2017	25-Jan-2017
im01101045	under shirt	top worn under the game top	clothing	white	s	il010230125	25-Jan-2017	25-Jan-2017	8.99	25-Jan-2017	25-Jan-2017
im01101045	under shirt	top worn under the game top	clothing	white	s	il010230125	26-Jan-2017	26-Jan-2017	15.99	15-Apr-2020	15-Apr-2020
im01101046	socks	team socks with emblem	clothing	range	l	il010230126	12-Feb-2017	12-Feb-2017	7.99	15-Apr-2020	15-Apr-2020
im01101047	game top	team shirt with emblem	clothing	range	m	il010230127	25-Apr-2017	25-Apr-2017	24.99	15-Apr-2020	15-Apr-2020
im01101048	premium bat	high quality baseball bat	equipment	-	-	il010230128	31-May-2017	31-May-2017	149	15-Apr-2020	15-Apr-2020
im01101048	premium bat	high quality baseball bat	equipment	-	-	il010230128	15-Apr-2020	15-Apr-2020	99.99	-	-

Задание 3

Используйте фразу ON для соединения таблиц customer и sales representative, чтобы отобразить номер клиента, имя клиента, фамилию клиента, номер телефона клиента, адрес электронной почты клиента, идентификатор продавца-консультанта, имя продавца-консультанта, фамилию продавца-консультанта и адрес электронной почты продавца-консультанта. Потребуется использовать псевдоним таблицы, потому что обе таблицы имеют столбцы с одинаковым именем.

```
SELECT c.ctr_number, c.first_name, c.last_name, c.phone_number, c.email,
r.id, r.first_name, r.last_name, r.email
FROM customers c JOIN sales_representatives r
ON (c.sre_id = r.id);
```

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 10
- Buttons: Save, Run

The SQL code is:

```
SELECT c.ctr_number, c.first_name, c.last_name, c.phone_number, c.email,
r.id, r.first_name, r.last_name, r.email
FROM customers c JOIN sales_representatives r
ON (c.sre_id = r.id);
```

The results table has the following columns: CTR_NUMBER, FIRST_NAME, LAST_NAME, PHONE_NUMBER, EMAIL, ID, FIRST_NAME, LAST_NAME, EMAIL. The data is:

CTR_NUMBER	FIRST_NAME	LAST_NAME	PHONE_NUMBER	EMAIL	ID	FIRST_NAME	LAST_NAME	EMAIL
c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com
c00101	John	Doe	03216547808	unknown@here.com	sr01	Charles	Raymond	chray@obl.com
c01986	Maria	Galant	01442736589	margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com

Задание 4

Используя ответ задачи 3, добавьте соединение, которое позволит включить в результаты имя команды, представляющей клиента.

```
SELECT c.ctr_number, c.first_name, c.last_name, c.phone_number, c.email,
r.id, r.first_name, r.last_name, r.email, t.name
FROM customers c
JOIN sales_representatives r
ON (c.sre_id = r.id)
JOIN teams t
ON c.tem_id = t.id;
```

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 10
- Buttons: Save, Run

The SQL code is:

```
SELECT c.ctr_number, c.first_name, c.last_name, c.phone_number, c.email,
r.id, r.first_name, r.last_name, r.email, t.name
FROM customers c
JOIN sales_representatives r
ON (c.sre_id = r.id)
JOIN teams t
ON c.tem_id = t.id;
```

The results table has the following columns: CTR_NUMBER, FIRST_NAME, LAST_NAME, PHONE_NUMBER, EMAIL, ID, FIRST_NAME, LAST_NAME, EMAIL, NAME. The data is:

CTR_NUMBER	FIRST_NAME	LAST_NAME	PHONE_NUMBER	EMAIL	ID	FIRST_NAME	LAST_NAME	EMAIL	NAME
c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com	Rockets
c00101	John	Doe	03216547808	unknown@here.com	sr01	Charles	Raymond	chray@obl.com	Celtics
c01986	Maria	Galant	01442736589	margal87@delphiview.com	sr03	Barry	Speed	bspeed@obl.com	Rovers

Задание 5

Используя ответ задачи 4, добавьте дополнительное условие, чтобы показать результаты для клиента, имеющего номер c00001.

```
SELECT c.ctr_number, c.first_name, c.last_name, c.phone_number, c.email,
r.id, r.first_name, r.last_name, r.email, t.name
FROM customers c
JOIN sales_representatives r
ON (c.sre_id = r.id)
JOIN teams t
ON c.tem_id = t.id
WHERE c.ctr_number = 'c00001';
```

The screenshot shows a SQL command window with the following details:

- SQL Commands tab is selected.
- Schema: RU_A404_SQL_S04
- Run button is visible.
- Query text:

```
SELECT c.ctr_number, c.first_name, c.last_name, c.phone_number, c.email,
r.id, r.first_name, r.last_name, r.email, t.name
FROM customers c
JOIN sales_representatives r
ON (c.sre_id = r.id)
JOIN teams t
ON c.tem_id = t.id
WHERE c.ctr_number = 'c00001';
```
- Results tab is selected.
- Table headers: CTR_NUMBER, FIRST_NAME, LAST_NAME, PHONE_NUMBER, EMAIL, ID, FIRST_NAME, LAST_NAME, EMAIL, NAME.
- Table data:

CTR_NUMBER	FIRST_NAME	LAST_NAME	PHONE_NUMBER	EMAIL	ID	FIRST_NAME	LAST_NAME	EMAIL	NAME
c00001	Robert	Thornberry	01234567898	bob.thornberry@heatmail.com	sr01	Charles	Raymond	chray@obl.com	Rockets

Задание 6

Напишите запрос, чтобы отобразить название и стоимость товара с номером im01101045 на 12 декабря 2016 г.

```
SELECT 'The cost of the ' || i.name || ' on this day was ' || p.price AS message
FROM items i JOIN price_history p
USING (itm_number)
WHERE itm_number = 'im01101045' AND start_date < '12-Dec-2016';
```

Исправила

```
SELECT 'The cost of the ' || i.name || ' on this day was ' || p.price AS message
FROM items i JOIN price_history p
USING (itm_number)
WHERE itm_number = 'im01101045' AND start_date <= '12-Dec-2016' AND (end_date >= '12-Dec-2016'
OR end_date IS NULL);
```

Может случиться такое, что эта цена является настоящей, тогда дата конца действия будет null

EDIT	START_DATE	START_TIME	PRICE	END_DATE	END_TIME	ITM_NUMBER
	17-Jun-2017	17-Jun-2016	4.99	15-Apr-2020	15-Apr-2020	im01101044
	25-Nov-2016	25-Nov-2016	14.99	25-Jan-2017	25-Jan-2017	im01101045
	25-Jan-2017	25-Jan-2017	8.99	25-Jan-2017	25-Jan-2017	im01101045
	26-Jan-2017	26-Jan-2017	15.99	15-Apr-2020	15-Apr-2020	im01101045
	12-Feb-2017	12-Feb-2017	7.99	15-Apr-2020	15-Apr-2020	im01101046
	25-Apr-2017	25-Apr-2017	24.99	15-Apr-2020	15-Apr-2020	im01101047
	31-May-2017	31-May-2017	149	15-Apr-2020	15-Apr-2020	im01101048
	15-Apr-2020	15-Apr-2020	99.99	-	-	im01101048

SQL Commands Schema RU_A404_SQL_S04 ?

Rows 10 Save Run

`SELECT 'The cost of the ' ||i.name|| ' on this day was ' || p.price AS message
 FROM items i JOIN price_history p
 USING (itm_number)
 WHERE itm_number = 'im01101045' AND start_date <= '12-Dec-2016' AND (end_date >= '12-Dec-2016' OR end_date IS
 NULL);`

Results	Explain	Describe	Saved SQL	History
MESSAGE				
The cost of the under shirt on this day was 14.99				

Проект 6_9_2

Задание 1

Напишите запрос, чтобы отобразить руководителя каждого из продавцовконсультантов. Информация должна отображаться в двух столбцах: в первом столбце — имя и фамилия продавца-консультанта, во втором столбце — имя и фамилия руководителя. Используйте псевдонимы столбцов: Rep и Supervisor.

```
SELECT s1.first_name || ' ' || s1.last_name AS Rep, s2.first_name || ' ' || s2.last_name AS Supervisor
FROM sales_representatives s1 JOIN sales_representatives s2
ON (s1.supervisor_id = s2.id);
```

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 100
- Buttons: Save, Run
- SQL Query:

```
SELECT s1.first_name || ' ' || s1.last_name AS Rep, s2.first_name || ' ' || s2.last_name AS Supervisor
FROM sales_representatives s1 JOIN sales_representatives s2
ON (s1.supervisor_id = s2.id);
```
- Results Tab: Active
- Table Headers: REP, SUPERVISOR
- Data Rows:

REP	SUPERVISOR
Barry Speed	Charles Raymond
Victoria Wright	Charles Raymond
Charles Raymond	Charles Raymond

Задание 2

Напишите запрос, чтобы отобразить всю информацию о команде и клиенте, не совпадающую с данными в таблице слева (team).

```
SELECT *
FROM teams LEFT OUTER JOIN customers
ON teams.id = customers.team_id;
```

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 100
- Buttons: Save, Run
- SQL Query:

```
SELECT *
FROM teams LEFT OUTER JOIN customers
ON teams.id = customers.team_id;
```
- Results Tab: Active
- Table Headers: ID, NAME, NUMBER_OF_PLAYERS, DISCOUNT, CTR_NUMBER, EMAIL, FIRST_NAME, LAST_NAME, PHONE_NUMBER, CURRENT_BALANCE, SRE_ID, TEAM_ID, LOYALTY_CARD_NUMBER
- Data Rows:

ID	NAME	NUMBER_OF_PLAYERS	DISCOUNT	CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CURRENT_BALANCE	SRE_ID	TEAM_ID	LOYALTY_CARD_NUMBER
t001	Rockets	25	10	c00001	bob.thornberry@heatmail.com	Robert	Thornberry	01234567898	150	sr01	1001	-
t002	Celtics	42	20	c00101	unknown@here.com	John	Doe	03216547808	987.5	sr01	1002	-
t003	Rovers	8	-	c01986	margal87@delphiview.com	Maria	Galant	01442736589	125.65	sr03	1003	-
t004	Jets	10	5	-	-	-	-	-	-	-	-	-

Задание 3

Создайте декартово произведение таблиц customer и sales representative

```
SELECT *
FROM customers, sales_representatives;
```

Получившаяся таблица расположена ниже. Скрин сделать не получилось, так как таблица оказалась слишком большой.

CTR_NUMBER	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	CUT_B	SRE_ID	TEM_ID	LOY_C_NUM	ID	EMAIL	FIRST_NAME	LAST_NAME	PHONE_NUMBER	COM_RAT	SUPERVISOR_ID
c00012	Jjones@freemail.com	Jennifer	Jones	1505214598	0	-	-	lc1015	sr01	chray@obl.com	Charles	Raymond	134598761	10	sr01
c02001	brianrog@hootech.com	Brain	Rogers	1654564898	50	-	-	lc4587	sr01	chray@obl.com	Charles	Raymond	134598761	10	sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	1234567898	150	sr01	t001	-	sr01	chray@obl.com	Charles	Raymond	134598761	10	sr01
c00101	unknown@here.com	John	Doe	3216547808	987.5	sr01	t002	-	sr01	chray@obl.com	Charles	Raymond	134598761	10	sr01
c00103	MurciaA@globaltech.com	Andrew	Murcia	7715246890	85	-	-	lc2341	sr01	chray@obl.com	Charles	Raymond	134598761	10	sr01
c01986	margal87@delphiview.com	Maria	Galant	1442736589	125.65	sr03	t003	-	sr01	chray@obl.com	Charles	Raymond	134598761	10	sr01
c00012	Jjones@freemail.com	Jennifer	Jones	1505214598	0	-	-	lc1015	sr02	vwright@obl.com	Victoria	Wright	134598762	5	sr01
c02001	brianrog@hootech.com	Brain	Rogers	1654564898	50	-	-	lc4587	sr02	vwright@obl.com	Victoria	Wright	134598762	5	sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	1234567898	150	sr01	t001	-	sr02	vwright@obl.com	Victoria	Wright	134598762	5	sr01
c00101	unknown@here.com	John	Doe	3216547808	987.5	sr01	t002	-	sr02	vwright@obl.com	Victoria	Wright	134598762	5	sr01
c00103	MurciaA@globaltech.com	Andrew	Murcia	7715246890	85	-	-	lc2341	sr02	vwright@obl.com	Victoria	Wright	134598762	5	sr01
c01986	margal87@delphiview.com	Maria	Galant	1442736589	125.65	sr03	t003	-	sr02	vwright@obl.com	Victoria	Wright	134598762	5	sr01
c00012	Jjones@freemail.com	Jennifer	Jones	1505214598	0	-	-	lc1015	sr03	bspeed@obl.com	Barry	Speed	134598763	5	sr01
c02001	brianrog@hootech.com	Brain	Rogers	1654564898	50	-	-	lc4587	sr03	bspeed@obl.com	Barry	Speed	134598763	5	sr01
c00001	bob.thornberry@heatmail.com	Robert	Thornberry	1234567898	150	sr01	t001	-	sr03	bspeed@obl.com	Barry	Speed	134598763	5	sr01
c00101	unknown@here.com	John	Doe	3216547808	987.5	sr01	t002	-	sr03	bspeed@obl.com	Barry	Speed	134598763	5	sr01
c00103	MurciaA@globaltech.com	Andrew	Murcia	7715246890	85	-	-	lc2341	sr03	bspeed@obl.com	Barry	Speed	134598763	5	sr01
c01986	margal87@delphiview.com	Maria	Galant	1442736589	125.65	sr03	t003	-	sr03	bspeed@obl.com	Barry	Speed	134598763	5	sr01

Практика 6_9

Задание 1

Выведите различные курсы, предлагаемые подразделениями школы.

```
SELECT *  
FROM courses;
```

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 100
- Buttons: Save, Run

The SQL query is:

```
SELECT *  
FROM courses;
```

The results table has the following columns:

ID	NAME	DPT_ID	ONLINES_LGN_ID	STD_BLD	STD_ROOM	DATE_TIME	ACADEMIC_SESSIONS_ID
194	GENERAL BIOLOGY	20	BIO123	-	-	-	200
193	STRATEGIC TAX PLANNING FOR BU	10	TAX123	-	-	-	100
195	CELL BIOLOGY	20	-	BUILDING D	401	MWF 9-10	200
190	PRINCIPLES OF ACCOUNTING	10	-	BUILDING A	101	MWF 12-1	100
191	INTRODUCTION TO BUSINESS LAW	10	-	BUILDING B	201	THUR 2-4	100
192	COST ACCOUNTING	10	-	BUILDING C	301	TUES 5-7	100

Задание 2

Выведите курсы, предлагаемые в осенний период.

```
SELECT *  
FROM courses  
WHERE academic_session_id = 100;
```

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 100
- Buttons: Save, Run

The SQL query is:

```
SELECT *  
FROM courses  
WHERE academic_session_id = 100;
```

The results table has the following columns:

ID	NAME	DPT_ID	ONLINES_LGN_ID	STD_BLD	STD_ROOM	DATE_TIME	ACADEMIC_SESSIONS_ID
193	STRATEGIC TAX PLANNING FOR BU	10	TAX123	-	-	-	100
190	PRINCIPLES OF ACCOUNTING	10	-	BUILDING A	101	MWF 12-1	100
191	INTRODUCTION TO BUSINESS LAW	10	-	BUILDING B	201	THUR 2-4	100
192	COST ACCOUNTING	10	-	BUILDING C	301	TUES 5-7	100

Задание 3

Выведите сведения о курсах, подразделении, предлагающем эти курсы, и учащихся, зарегистрировавшихся на эти курсы

```

SELECT c.name AS course, s.frst_name || ' ' || s.lst_name AS student, d.name AS department
FROM courses c
JOIN student_course_details scd ON scd.crs_id = c.id
JOIN students s ON scd.stu_id = s.id
JOIN departments_for_ab d ON c.dpt_id = d.id
ORDER BY c.name;

```

The screenshot shows a SQL command window with the following details:

- SQL Commands:** The query is pasted here.
- Schema:** RU_A404_SQL_S04
- Run:** A blue button to execute the query.
- Results:** The output is displayed in a table with three columns: COURSE, STUDENT, and DEPARTMENT.
- Data:**

COURSE	STUDENT	DEPARTMENT
CELL BIOLOGY	RHONDA TAYLOR	BIOLOGY
COST ACCOUNTING	JEANNE BEN	ACCOUNTING
COST ACCOUNTING	MILLS CARMEN	ACCOUNTING
COST ACCOUNTING	ROBERT BEN	ACCOUNTING
GENERAL BIOLOGY	MILLS CARMEN	BIOLOGY
INTRODUCTION TO BUSINESS LAW	NOAH AUDRY	ACCOUNTING
PRINCIPLES OF ACCOUNTING	JACK SMITH	ACCOUNTING
PRINCIPLES OF ACCOUNTING	JEANNE BEN	ACCOUNTING
STRATEGIC TAX PLANNING FOR BU	MILLS CARMEN	ACCOUNTING
STRATEGIC TAX PLANNING FOR BU	JACK SMITH	ACCOUNTING

Задание 4

Выведите сведения о курсах, подразделении 20, предлагающем эти курсы, и учащихся, зарегистрировавшихся на эти курсы.

```

SELECT c.name AS course, s.frst_name || ' ' || s.lst_name AS student, d.name AS department
FROM courses c
JOIN student_course_details scd ON scd.crs_id = c.id
JOIN students s ON scd.stu_id = s.id
JOIN departments_for_ab d ON c.dpt_id = d.id
WHERE d.id = 20
ORDER BY c.name;

```

SQL Commands Schema RU_A404_SQL_S04

Rows 100 Save Run

```
SELECT c.name AS course, s.frst_name || ' ' || s.lst_name AS student, d.name AS department
FROM courses c
JOIN student_course_details scd ON scd.crs_id = c.id
JOIN students s ON scd.stu_id = s.id
JOIN departments_for_ab d ON c.dpt_id = d.id
WHERE d.id = 20
```

Results Explain Describe Saved SQL History

COURSE	STUDENT	DEPARTMENT
CELL BIOLOGY	RHONDA TAYLOR	BIOLOGY
GENERAL BIOLOGY	MILLS CARMEN	BIOLOGY

Задание 5

Напишите запрос, чтобы отобразить сведения об экзаменационных баллах, полученных учащимися, зарегистрировавшимися на курс COURSE_ID в диапазоне от 190 до 192.

```
SELECT s.frst_name || ' ' || s.lst_name AS student, c.name course, grade
FROM xam_results xr JOIN students s ON xr.stu_id = s.id
JOIN courses c ON c.id = xr.crs_id
WHERE xr.crs_id BETWEEN 190 AND 192;
```

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SQL Commands Schema RU_A404_SQL_S04

Rows 100 Save Run

```
SELECT s.frst_name || ' ' || s.lst_name AS student, c.name course, grade
FROM xam_results xr JOIN students s ON xr.stu_id = s.id
JOIN courses c ON c.id = xr.crs_id
WHERE xr.crs_id BETWEEN 190 AND 192;
```

Results Explain Describe Saved SQL History

STUDENT	COURSE	GRADE
JACK SMITH	PRINCIPLES OF ACCOUNTING	91
ROBERT BEN	INTRODUCTION TO BUSINESS LAW	78
JEANNE BEN	COST ACCOUNTING	70
ROBERT BEN	COST ACCOUNTING	60
JEANNE BEN	COST ACCOUNTING	65
JEANNE BEN	INTRODUCTION TO BUSINESS LAW	60

Задание 6

Извлеките строки из таблицы AD_EXAM_RESULTS, даже если в таблице AD_COURSES нет соответствующих строк.

SELECT *

FROM xam_results xr LEFT OUTER JOIN courses c ON c.id = xr.crs_id;

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 100
- Buttons: Save, Run

The query entered is:

```
SELECT *  
FROM xam_results xr LEFT OUTER JOIN courses c ON c.id = xr.crs_id;
```

The results table has the following columns and data:

GRADE	STU_ID	CRS_ID	XAM_ID	ID	NAME	DPT_ID	ONLINES_LGN_ID	STD_BLD	STD_ROOM	DATE_TIME	ACADEMIC_SESSIONS_ID
91	720	190	500	190	PRINCIPLES OF ACCOUNTING	10	-	BUILDING A	101	MWF 12-1	100
87	730	195	540	195	CELL BIOLOGY	20	-	BUILDING D	401	MWF 9-10	200
85	730	194	530	194	GENERAL BIOLOGY	20	BIO123	-	-	-	200
97	750	195	510	195	CELL BIOLOGY	20	-	BUILDING D	401	MWF 9-10	200
78	750	191	520	191	INTRODUCTION TO BUSINESS LAW	10	-	BUILDING B	201	THUR 2-4	100
70	760	192	510	192	COST ACCOUNTING	10	-	BUILDING C	301	TUES 5-7	100
97	720	193	520	193	STRATEGIC TAX PLANNING FOR BU	10	TAX123	-	-	-	100
60	750	192	500	192	COST ACCOUNTING	10	-	BUILDING C	301	TUES 5-7	100
65	760	192	540	192	COST ACCOUNTING	10	-	BUILDING C	301	TUES 5-7	100
60	760	191	530	191	INTRODUCTION TO BUSINESS LAW	10	-	BUILDING B	201	THUR 2-4	100

Задание 7

Что получится, если выполнить данную инструкцию?

SELECT * FROM EXAMS CROSS JOIN EXAM_TYPES;

Создадим векторное произведение или декартовое произведение двух таблиц

The screenshot shows a SQL command window with the following details:

- Schema: RU_A404_SQL_S04
- Rows: 100
- Buttons: Save, Run

The query entered is:

```
SELECT * FROM EXAMS CROSS JOIN EXAM_TYPES;
```

The results table has the following columns and data:

Results	Explain	Describe	Saved SQL	History		
ID	STR_DATE	XAM_TYPES_TYP	COURSE_ID	TYP	NAME	DSC
540	02-Apr-2014	TF	194	MCE	Multiple Choice Exams	CHOOSE MORE THAN ONE ANSWER
540	02-Apr-2014	TF	194	TF	TRUE AND FALSE Exams	CHOOSE EITHER TRUE OR FALSE
540	02-Apr-2014	TF	194	ESS	ESSAY Exams	WRITE PARAGRAPHS
540	02-Apr-2014	TF	194	SA	SHORT ANSWER Exams	WRITE SHORT ANSWERS
540	02-Apr-2014	TF	194	FIB	FILL IN THE BLANKS Exams	TYPE IN THE CORRECT ANSWER
500	12-Sep-2013	MCE	190	MCE	Multiple Choice Exams	CHOOSE MORE THAN ONE ANSWER

500	12-Sep-2013	MCE	190	TF	TRUE AND FALSE Exams	CHOOSE EITHER TRUE OR FALSE
500	12-Sep-2013	MCE	190	ESS	ESSAY Exams	WRITE PARAGRAPHS
500	12-Sep-2013	MCE	190	SA	SHORT ANSWER Exams	WRITE SHORT ANSWERS
500	12-Sep-2013	MCE	190	FIB	FILL IN THE BLANKS Exams	TYPE IN THE CORRECT ANSWER
510	15-Sep-2013	SA	191	MCE	Multiple Choice Exams	CHOOSE MORE THAN ONE ANSWER
510	15-Sep-2013	SA	191	TF	TRUE AND FALSE Exams	CHOOSE EITHER TRUE OR FALSE
510	15-Sep-2013	SA	191	ESS	ESSAY Exams	WRITE PARAGRAPHS

510	15-Sep-2013	SA	191	SA	SHORT ANSWER Exams	WRITE SHORT ANSWERS
510	15-Sep-2013	SA	191	FIB	FILL IN THE BLANKS Exams	TYPE IN THE CORRECT ANSWER
520	18-Sep-2013	FIB	192	MCE	Multiple Choice Exams	CHOOSE MORE THAN ONE ANSWER
520	18-Sep-2013	FIB	192	TF	TRUE AND FALSE Exams	CHOOSE EITHER TRUE OR FALSE
520	18-Sep-2013	FIB	192	ESS	ESSAY Exams	WRITE PARAGRAPHS
520	18-Sep-2013	FIB	192	SA	SHORT ANSWER Exams	WRITE SHORT ANSWERS
520	18-Sep-2013	FIB	192	FIB	FILL IN THE BLANKS Exams	TYPE IN THE CORRECT ANSWER

530	21-Mar-2014	ESS	193	MCE	Multiple Choice Exams	CHOOSE MORE THAN ONE ANSWER
530	21-Mar-2014	ESS	193	TF	TRUE AND FALSE Exams	CHOOSE EITHER TRUE OR FALSE
530	21-Mar-2014	ESS	193	ESS	ESSAY Exams	WRITE PARAGRAPHS
530	21-Mar-2014	ESS	193	SA	SHORT ANSWER Exams	WRITE SHORT ANSWERS
530	21-Mar-2014	ESS	193	FIB	FILL IN THE BLANKS Exams	TYPE IN THE CORRECT ANSWER