


PRAKTIKUM BASIS DATA

BAB	: OPERATOR	
NAMA	: DANI ADRIAN	
NIM	: 225150201111009	
ASISTEN	: NATHAN DAUD	
	RAKHA HANIF MAHESWARA	
	NAUFAL PUTRA SUTRISNA	
	STANISLAUS FRANS BERNADO	
TGL PRAKTIKUM	: 1/11/2023	TGL PENGUMPULAN :2/11/2023

Pertanyaan

1. Tampilkan data dari tabel **course** yang memiliki **credits** selain 3!

Implementasi

	<pre>USE DBSS_009 SELECT * FROM course WHERE credits <> 3</pre>
	<pre>USE DBSS_009 SELECT * FROM course WHERE credits != 3</pre>

Tampilan Keluaran

SQLQuery4.sql - LA....DBSS_009 (sa (73))* SQLQuery3.sql - LA....DBSS_009 (sa (69))*

```
1 USE DBSS_009
2
3 SELECT * FROM course
4 WHERE credits != 3
```

121 %

Results Messages

	course_id	title	dept_name	credits
1	133	Antidisestablishmentarianism in Modern America	Biology	4
2	139	Number Theory	English	4
3	192	Drama	Languages	4
4	195	Numerical Methods	Geology	4
5	200	The Music of the Ramones	Accounting	4
6	209	International Trade	Cybernetics	4
7	227	Elastic Structures	Languages	4
8	239	The Music of the Ramones	Physics	4
9	265	Thermal Physics	Cybernetics	4
10	267	Hydraulics	Physics	4
11	270	Music of the 90s	Math	4
12	274	Corporate Law	Comp. Sci.	4
13	276	Game Design	Comp. Sci.	4
14	278	Greek Tragedy	Statistics	4
15	284	Topology	Comp. Sci.	4
16	292	Electron Microscopy	English	4
17	304	Music 2 New for your Instructor	Finance	4
18	319	World History	Finance	4
19	344	Quantum Mechanics	Accounting	4
20	345	Race Car Driving	Accounting	4
21	349	Networking	Finance	4
22	352	Compiler Design	Psychology	4
23	359	Game Programming	Comp. Sci.	4
24	362	Embedded Systems	Finance	4
25	376	Cost Accounting	Physics	4
26	377	Differential Geometry	Astronomy	4
27	392	Recursive Function Theory	Astronomy	4
28	399	RPG Programming	Pol. Sci.	4
29	400	Visual BASIC	Psychology	4

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Ln 2, Col 16

✓ Query executed successfully.

SQLQuery3.sql - LA....DBSS_009 (sa (69))*

```

1 USE DBSS_009
2
3 SELECT * FROM course
4 WHERE credits <> 3

```

121 %

Results Messages

	course_id	title	dept_name	credits
1	133	Antidisestablishmentarianism in Modern America	Biology	4
2	139	Number Theory	English	4
3	192	Drama	Languages	4
4	195	Numerical Methods	Geology	4
5	200	The Music of the Ramones	Accounting	4
6	209	International Trade	Cybernetics	4
7	227	Elastic Structures	Languages	4
8	239	The Music of the Ramones	Physics	4
9	265	Thermal Physics	Cybernetics	4
10	267	Hydraulics	Physics	4
11	270	Music of the 90s	Math	4
12	274	Corporate Law	Comp. Sci.	4
13	276	Game Design	Comp. Sci.	4
14	278	Greek Tragedy	Statistics	4
15	284	Topology	Comp. Sci.	4
16	292	Electron Microscopy	English	4
17	304	Music 2 New for your Instructor	Finance	4
18	319	World History	Finance	4
19	344	Quantum Mechanics	Accounting	4
20	345	Race Car Driving	Accounting	4
21	349	Networking	Finance	4
22	352	Compiler Design	Psychology	4
23	359	Game Programming	Comp. Sci.	4
24	362	Embedded Systems	Finance	4
25	376	Cost Accounting	Physics	4
26	377	Differential Geometry	Astronomy	4
27	392	Recursive Function Theory	Astronomy	4
28	399	RPG Programming	Pol. Sci.	4
29	400	Visual BASIC	Psychology	4
30	401	Sanitary Engineering	Athletics	4

Ln 2, Col 16

Query executed successfully.

Pembahasan dan Analisis

Nama : Dani Adrian

NIM : 225150201111009

Perintah SELECT * FROM (tabel) WHERE (kondisi)

Kondisi syarat yang digunakan yaitu operator perbandingan tidak sama dengan (<> atau !=) Untuk menampilkan data dari tabel course yang memiliki Credits selain 3.

Pertanyaan

2. Tampilkan data dari tabel **course** yang memiliki **course_id** mulai 140 sampai ke atas!

Implementasi

```
USE DBSS_009

SELECT * FROM course
WHERE course_id >= 140
```

Tampilan Keluaran

SQLQuery4.sql - LA....DBSS_009 (sa (73))* SQLQuery3.sql - LA....DBSS_009 (sa (69))*

```

1 USE DBSS_009
2
3 SELECT * FROM course
4 WHERE course_id >= 140

```

121 %

Results Messages

	course_id	title	dept_name	credits
1	158	Elastic Structures	Cybernetics	3
2	169	Marine Mammals	Elec. Eng.	3
3	190	Romantic Literature	Civil Eng.	3
4	192	Drama	Languages	4
5	195	Numerical Methods	Geology	4
6	200	The Music of the Ramones	Accounting	4
7	209	International Trade	Cybernetics	4
8	224	International Finance	Athletics	3
9	227	Elastic Structures	Languages	4
10	235	International Trade	Math	3
11	236	Design and Analysis of Algorithms	Mech. Eng.	3
12	237	Surfing	Cybernetics	3
13	238	The Music of Donovan	Mech. Eng.	3
14	239	The Music of the Ramones	Physics	4
15	241	Biostatistics	Geology	3
16	242	Rock and Roll	Marketing	3
17	254	Security	Cybernetics	3
18	258	Colloid and Surface Chemistry	Math	3
19	265	Thermal Physics	Cybernetics	4
20	267	Hydraulics	Physics	4
21	270	Music of the 90s	Math	4
22	272	Geology	Mech. Eng.	3
23	274	Corporate Law	Comp. Sci.	4
24	275	Romantic Literature	Languages	3
25	276	Game Design	Comp. Sci.	4
26	278	Greek Tragedy	Statistics	4
27	284	Topology	Comp. Sci.	4
28	292	Electron Microscopy	English	4
29	304	Music 2 New for your Instructor	Finance	4

Query executed successfully.

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Pembahasan dan Analisis

Nama = Dani Adrian

NIM : 225150201111009

Perintah `SELECT * FROM (tabel) WHERE (kondisi)` digunakan untuk menampilkan data dari tabel `course` yang memiliki `course_id` mulai dari 140 ke atas.

Kondisi syarat yang digunakan yaitu Operator Perbandingan lebih dari sama dengan (`>=`) Untuk menampilkan data dari tabel `course` yang memiliki `course_id` lebih dari sama dengan 140

Pertanyaan

3. Tampilkan data (dari *join*) **student_id**, **nama**, **course**, **grade** (dari tabel **takes**) dengan syarat **grade** mengandung huruf “C” (bisa C/C+/C-)!

```
SELECT s.id, s.name, t.semester, t.year, c.title, t.grade
FROM takes t
join student s
on t.ID=s.ID
join course c
on t.course_id=c.course_id
where s.name='colin' and (t.grade='B' or t.grade='A')
```

Implementasi

	<pre>USE DBSS_009 SELECT s.ID, name, course_id, grade FROM takes t join student s ON s.ID = t.ID WHERE grade LIKE '%C%'</pre>
	<pre>USE DBSS_009 SELECT s.ID, name, course_id, grade FROM takes t join student s ON s.ID = t.ID WHERE grade IN ('C', 'C+', 'C-')</pre>

Tampilan Keluaran

SQLQuery3.sql - LA....DBSS_009 (sa (69))* SQLQuery4.sql - LA....DBSS_009 (sa (73))*

1 USE DBSS_009

2

3 SELECT s.ID, name, course_id, grade

4 FROM takes t

5 join student s

6 ON s.ID = t.ID

7 WHERE grade LIKE '%C%'

121 %

Results Messages

	ID	name	course_id	grade
1	1000	Manber	239	C
2	1000	Manber	571	C+
3	1000	Manber	642	C-
4	1000	Manber	663	C+
5	1000	Manber	802	C+
6	10033	Zelty	334	C-
7	10033	Zelty	338	C
8	10033	Zelty	408	C-
9	10033	Zelty	443	C-
10	10033	Zelty	445	C
11	10033	Zelty	457	C-
12	10033	Zelty	486	C
13	10033	Zelty	493	C-
14	10033	Zelty	791	C
15	10033	Zelty	960	C+
16	10033	Zelty	972	C+
17	10076	Duan	105	C-
18	10076	Duan	629	C
19	10076	Duan	962	C+
20	1018	Colin	319	C
21	1018	Colin	401	C
22	1018	Colin	421	C-
23	1018	Colin	603	C+
24	1018	Colin	972	C-
25	10204	Mediratta	137	C

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Query executed successfully.

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SQLQuery4.sql - LA....DBSS_009 (sa (73))*

SQLQuery3.sql - LA....DBSS_009 (sa (69))*

```

1 USE DBSS_009
2
3 SELECT s.ID, name, course_id, grade
4 FROM takes t
5 join student s
6 ON s.ID = t.ID
7 WHERE grade IN ('C', 'C+', 'C-')

```

121 %

Results

Messages

	ID	name	course_id	grade
1	1000	Manber	239	C
2	1000	Manber	571	C+
3	1000	Manber	642	C-
4	1000	Manber	663	C+
5	1000	Manber	802	C+
6	10033	Zelty	334	C-
7	10033	Zelty	338	C
8	10033	Zelty	408	C-
9	10033	Zelty	443	C-
10	10033	Zelty	445	C
11	10033	Zelty	457	C-
12	10033	Zelty	486	C
13	10033	Zelty	493	C-
14	10033	Zelty	791	C
15	10033	Zelty	960	C+
16	10033	Zelty	972	C+
17	10076	Duan	105	C-
18	10076	Duan	629	C
19	10076	Duan	962	C+
20	1018	Colin	319	C
21	1018	Colin	401	C
22	1018	Colin	421	C-
23	1018	Colin	603	C+
24	1018	Colin	972	C-
25	10204	Mediratta	137	C
26	10204	Mediratta	408	C
27	10204	Mediratta	443	C

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Query executed successfully.

Pembahasan dan Analisis

Nama = Dani Adrian

NIM = 225150201111009

Perintah SELECT (atribur) FROM (tabel) JOIN (tabel) ON (Persamaan kolom) WHERE (syarat) digunakan Untuk menampilkan data (dari join) student_id, name, course, grade (dari tabel takes) dengan syarat grade mengandung huruf "C" (dapat pula C / C+ / C-).

Kondisi menggunakan Operator logika LIKE atau operator IN dengan Cara penggunaan yang berbeda. Operator LIKE dipadukan dengan % agar dapat menampilkan data yang terdapat kata yang diinginkan. Operator IN Untuk menampilkan spesifik data.

Pertanyaan

4. Modifikasi query untuk menampilkan semua nilai Colin semester spring dan tahun 2007 dan 2008!

Implementasi

```
USE DBSS_009
```

```
SELECT s.ID, name, semester, year, title, grade  
FROM takes t  
join student s ON t.ID = s.ID  
join course c ON t.course_id = c.course_id  
WHERE name = 'Colin' AND semester = 'Spring' AND year  
IN (2007, 2008)
```

Tampilan Keluaran

SQLQuery3.sql - LA....DBSS_009 (sa (69))* SQLQuery4.sql - LA....DBSS_009 (sa (73))*

```

1  USE DBSS_009
2
3  SELECT s.ID, name, semester, year, title, grade
4  FROM takes t
5  join student s
6  ON s.ID = t.ID
7  join course c ON t.course_id = c.course_id
8  WHERE name = 'Colin' AND semester = 'Spring' AND year IN (2007,2008)

```

121 %

Results Messages

	ID	name	semester	year	title	grade
1	1018	Colin	Spring	2007	Graph Theory	A
2	1018	Colin	Spring	2008	Networking	A-
3	1018	Colin	Spring	2008	Embedded Systems	B

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Pembahasan dan Analisis

Nama : Dani Adrian

NIM : 225150201111009

Modifikasi bagian WHERE, pada syarat grade, untuk menampilkan semua nilai Colin Semester Spring dan tahun 2007 dan tahun 2008.

o Bisa dilakukan penambahan kondisi syarat semester = 'Spring' untuk nilai pada Semester Spring saja.

o year IN ('2007', '2008') untuk memilih nilai pada tahun 2007 dan 2008 saja

Semuanya dihubungkan dengan operator logika AND karena kedua syarat harus dipenuhi

Pertanyaan

5. Tampilkan gaji bersih **instructor** dengan **pembulatan**!

Implementasi

```

USE DBSS_009

SELECT ID, name, dept_name, ROUND(salary, 0) AS salary
FROM instructor

```

	<pre>USE DBSS_009 SELECT ID, name, dept_name, FLOOR(salary) AS salary FROM instructor</pre>
	<pre>USE DBSS_009 SELECT ID, name, dept_name, CEILING(salary) AS salary FROM instructor</pre>

Tampilan Keluaran

```
1 USE DBSS_009
```

```
2
```

```
3 SELECT ID, name, dept_name, ROUND(salary, 0) AS salary
```

```
4 FROM instructor
```

121 %

Results

Messages

	ID	name	dept_name	salary
1	14365	Lembr	Accounting	32242.00
2	15347	Bawa	Athletics	72141.00
3	16807	Yazdi	Athletics	98334.00
4	19368	Wieland	Pol. Sci.	124651.00
5	22591	DAGostino	Psychology	59706.00
6	25946	Liley	Languages	90892.00
7	28097	Kean	English	35023.00
8	28400	Atanassov	Statistics	84983.00
9	31955	Moreira	Accounting	71351.00
10	3199	Gustafsson	Elec. Eng.	82534.00
11	3335	Bourrier	Comp. Sci.	80798.00
12	34175	Bondi	Comp. Sci.	115469.00
13	35579	Soisalon-Soininen	Psychology	62580.00
14	36897	Morris	Marketing	43770.00
15	37687	Arias	Statistics	104563.00
16	4034	Murata	Athletics	61388.00
17	41930	Tung	Athletics	50482.00
18	4233	Luo	English	88791.00
19	42782	Vicentino	Elec. Eng.	34273.00
20	43779	Romero	Astronomy	79070.00
21	48507	Lent	Mech. Eng.	107978.00
22	48570	Sarkar	Pol. Sci.	87550.00
23	50330	Shuming	Physics	108012.00
24	50885	Konstantinides	Languages	32571.00
25	52647	Bancilhon	Pol. Sci.	87958.00
26	57180	Hau	Accounting	43966.00
27	58558	Dusserre	Marketing	66143.00
28	59795	Desyl	Languages	48803.00
29	63287	Jaekel	Athletics	103147.00



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✓ Query executed successfully.

```

1 USE DBSS_009
2
3 SELECT ID, name, dept_name, FLOOR(salary) AS salary
4 FROM instructor

```

121 %

Results Messages

	ID	name	dept_name	salary
1	14365	Lembr	Accounting	32241
2	15347	Bawa	Athletics	72140
3	16807	Yazdi	Athletics	98333
4	19368	Wieland	Pol. Sci.	124651
5	22591	D'Agostino	Psychology	59706
6	25946	Liley	Languages	90891
7	28097	Kean	English	35023
8	28400	Atanassov	Statistics	84982
9	31955	Moreira	Accounting	71351
10	3199	Gustafsson	Elec. Eng.	82534
11	3335	Bourrier	Comp. Sci.	80797
12	34175	Bondi	Comp. Sci.	115469
13	35579	Soisalon-Soininen	Psychology	62579
14	36897	Morris	Marketing	43770
15	37687	Arias	Statistics	104563
16	4034	Murata	Athletics	61387
17	41930	Tung	Athletics	50482
18	4233	Luo	English	88791
19	42782	Vicentino	Elec. Eng.	34272
20	43779	Romero	Astronomy	79070
21	48507	Lent	Mech. Eng.	107978
22	48570	Sedra	Pol. Sci.	87540



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Ln 2, Col 16

Query executed successfully.

SQLQuery3.sql - LA....DBSS_009 (sa (69))* SQLQuery5.sql - LA....DBSS_009 (sa (77))* SQL

```
1 USE DBSS_009
2
3 SELECT ID, name, dept_name, CEILING(salary) AS salary
4 FROM instructor
```

121 %

Results Messages

	ID	name	dept_name	salary
1	14365	Lembr	Accounting	32242
2	15347	Bawa	Athletics	72141
3	16807	Yazdi	Athletics	98334
4	19368	Wieland	Pol. Sci.	124652
5	22591	DAgostino	Psychology	59707
6	25946	Liley	Languages	90892
7	28097	Kean	English	35024
8	28400	Atanassov	Statistics	84983
9	31955	Moreira	Accounting	71352
10	3199	Gustafsson	Elec. Eng.	82535
11	3335	Bourrier	Comp. Sci.	80798
12	34175	Bondi	Comp. Sci.	115470
13	35579	Soisalon-Soininen	Psychology	62580
14	36897	Morris	Marketing	43771
15	37687	Arias	Statistics	104564
16	4034	Murata	Athletics	61388
17	41930	Tung	Athletics	50483
18	4233	Luo	English	88792
19	42782	Vicentino	Elec. Eng.	34273
20	43779	Romero	Astronomy	79071

Query executed successfully.

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Ln 2, Col 16

Pembahasan dan Analisis

Nama = Dani Adrian

NIM = 22515020111009

Perintah `SELECT (atribut), ROUND / FLOOR / CEILING` (atribut yang ingin dibulatkan) `FROM` (tabel) digunakan untuk menampilkan gaji bersih Instructor dengan pembulatan

- **ROUND**

Untuk membulatkan angka ke sejumlah desimal yang ditentukan

- **FLOOR**

Untuk membulatkan angka ke bawah

- **CEILING**

Untuk membulatkan angka ke atas

Pertanyaan

6. Tampilkan gabungan field **name** dan **dept_name** dari student menjadi bentuk “**name is a student of department**” (contoh **Colin is student of Civil eng.**) dengan salah satu fungsi string!

Implementasi

	<pre>USE DBSS_009 SELECT CONCAT(name, ' is a student of ', dept_name) AS name_dept FROM student</pre>
	<pre>USE DBSS_009 SELECT name + ' is a student of ' + dept_name AS name_dept FROM student</pre>

Tampilan Keluaran

SQLQuery4.sql - LA....DBSS_009 (sa (73))*SQLQuery5.sql - LA....DBSS_009 (sa (77))*SQLQuery3.sql - LA....D

```
1 USE DBSS_009
2
3 SELECT CONCAT(name, ' is a student of ', dept_name) AS name_dept
4 FROM student
```

121 %

ResultsMessages

	name_dept
1	Manber is a student of Civil Eng.
2	Zelty is a student of Mech. Eng.
3	Duan is a student of Civil Eng.
4	Colin is a student of Civil Eng.
5	Mediratta is a student of Geology
6	Rzecz is a student of Comp. Sci.
7	Hilberg is a student of Psychology
8	Ugarte is a student of Pol. Sci.
9	Grosch is a student of Astronomy
10	Kieras is a student of Physics
11	Reed is a student of English
12	Okaf is a student of Geology
13	Zabary is a student of Statistics
14	Shabuno is a student of Math
15	Terauchi is a student of Physics
16	Allard is a student of Physics
17	Veselovsky is a student of Elec. Eng.
18	Dhav is a student of Biology
19	Xue is a student of Languages
20	Waks is a student of Elec. Eng.
21	More is a student of Geology
22	Marlet is a student of Accounting
23	Roses is a student of Accounting
24	Jerns is a student of History
25	Morales is a student of Cybernetics
26	Arnoux is a student of Geology
27	Robinson is a student of Marketing
28	Prasad is a student of Pol. Sci.
29	Kerridge is a student of Statistics

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Ln 2, Col 16100%Wind

Query executed successfully.

SQLQuery4.sql - LA....DBSS_009 (sa (73))* SQLQuery5.sql - LA....DBSS_009 (sa (77))* SQLQuery3

```

1 USE DBSS_009
2
3 SELECT name + ' is a student of ' + dept_name AS name_dept
4 FROM student

```

121 %

Results Messages

	name_dept
1	Manber is a student of Civil Eng.
2	Zely is a student of Mech. Eng.
3	Duan is a student of Civil Eng.
4	Colin is a student of Civil Eng.
5	Mediratta is a student of Geology
6	Rzecz is a student of Comp. Sci.
7	Hilberg is a student of Psychology
8	Ugarte is a student of Pol. Sci.
9	Grosch is a student of Astronomy
10	Kieras is a student of Physics
11	Reed is a student of English
12	Okaf is a student of Geology
13	Zabary is a student of Statistics
14	Shabuno is a student of Math
15	Terauchi is a student of Physics
16	Allard is a student of Physics
17	Veselovsky is a student of Elec. Eng.
18	Dhav is a student of Biology
19	Xue is a student of Languages
20	Waks is a student of Elec. Eng.
21	More is a student of Geology
22	Marlet is a student of Accounting
23	Roses is a student of Accounting
24	Jerns is a student of History
25	Morales is a student of Cybernetics
26	Arnoux is a student of Geology
27	Robinson is a student of Marketing
28	Prasad is a student of Pol. Sci.
29	Kerridge is a student of Statistics
30	Schultz is a student of Languages

Ln 2, Col 16 100%

Query executed successfully.

Pembahasan dan Analisis

Nama : Dani Adrian

NIM : 225150201111009

Perintah `SELECT CONCAT` (atribut dan tambahan kera / string) `FROM` (tabel) digunakan Untuk menampilkan gabungan field name dan dept_name dari student menjadi bentuk "name is a student of department" dengan salah satu fungsi String. Bisa juga dengan Operator `+` dengan Perintah `SELECT` (atribut / String digabungkan dengan Operator `+`) `FROM` (tabel)