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|  | Uniwersytet Technologiczno-Przyrodniczy im. J. J. Śniadeckich w Bydgoszczy  Wydział Telekomunikacji, Informatyki i Elektrotechniki Zakład Systemów Teleinformatycznych | | |  | |
| Przedmiot | **Podstawy baz danych - labolatorium** | | | Kierunek/Tryb | **IS/ST** |
| Nr laboratorium | **2** | Data wykonania | **13.03.2018** | Grupa | **1** |
| Ocena |  | Data oddania | **20.03.2018** | Imię Nazwisko | **Emilia Gebler** |
| Nazwa ćwiczenia | Podstawy baz danych – ćwiczenie 2 – Polecenie SELECT | | |

**1.Wyświetlenie daty i godziny systemowej**

**select current\_date(), current\_time(), current\_timestamp();**

**+----------------+----------------+---------------------+**

**| current\_date() | current\_time() | current\_timestamp() |**

**+----------------+----------------+---------------------+**

**| 2018-03-13 | 10:35:10 | 2018-03-13 10:35:10 |**

**+----------------+----------------+---------------------+**

**2.Wyświetlenie daty w określonym formacie**

**select current\_date, date\_format(current\_date,"%a :: %b :: %d :: %Y :: %s:%s:%s") AS data;**

**+--------------+------------------------------------------+**

**| current\_date | data |**

**+--------------+------------------------------------------+**

**| 2018-03-13 | Tue :: Mar :: 13 :: 2018 :: 00:00:00 |**

**+--------------+------------------------------------------+**

**3.Zapytanie z zakresem dat przy użyciu funkcji datediff()**

**select last\_name, start\_date, datediff (current\_date, start\_date) AS 'liczba dni w pracy' from emp order by start\_date desc;**

**+-----------------------------------------------------------------------------+---------------------+--------------------+**

**| last\_name | start\_date | liczba dni w pracy |**

**+-----------------------------------------------------------------------------+---------------------+--------------------+**

**| Catchpole | 1992-02-09 00:00:00 | 9529 |**

**| Maduro | 1992-02-07 00:00:00 | 9531 |**

**| Nguyen | 1992-01-22 00:00:00 | 9547 |**

**| Giljum | 1992-01-18 00:00:00 | 9551 |**

**| Dumas | 1991-10-09 00:00:00 | 9652 |**

**| Patel | 1991-08-06 00:00:00 | 9716 |**

**| Newman | 1991-07-21 00:00:00 | 9732 |**

**| Nagayama | 1991-06-17 00:00:00 | 9766 |**

**| Markarian | 1991-05-26 00:00:00 | 9788 |**

**| Schwartz | 1991-05-09 00:00:00 | 9805 |**

**| Dancs | 1991-03-17 00:00:00 | 9858 |**

**| Havel | 1991-02-27 00:00:00 | 9876 |**

**| Nozaki | 1991-02-09 00:00:00 | 9894 |**

**| Sedeghi | 1991-02-08 00:00:00 | 9895 |**

**| Urguhart | 1991-01-18 00:00:00 | 9916 |**

**| Chang | 1990-11-30 00:00:00 | 9965 |**

**| Patel | 1990-10-17 00:00:00 | 10009 |**

**| Magee | 1990-05-14 00:00:00 | 10165 |**

**| Menchu | 1990-05-14 00:00:00 | 10165 |**

**| Biri | 1990-04-07 00:00:00 | 10202 |**

**| Quick-To-See | 1990-04-07 00:00:00 | 10202 |**

**| Smith | 1990-03-08 00:00:00 | 10232 |**

**| Ngao | 1990-03-08 00:00:00 | 10232 |**

**| Ropeburn | 1990-03-04 00:00:00 | 10236 |**

**| Velasquez | 1990-03-03 00:00:00 | 10237 |**

**+-----------------------------------------------------------------------------+---------------------+--------------------+**

**4.Ograniczenie zwróconych danych do 5 rekordów, pomijając 2 pierwsze**

**select last\_name FROM emp ORDER BY last\_name LIMIT 5 OFFSET 1;**

**+-----------------------------------------------------------------------------+**

**| last\_name |**

**+-----------------------------------------------------------------------------+**

**| Catchpole |**

**| Chang |**

**| Dancs |**

**| Dumas |**

**| Giljum |**

**+-----------------------------------------------------------------------------+**

**5. Zwrócenie rekordów zaczynających się wybranymi literami**

**select name from product where (name LIKE 'A%' OR name LIKE 'B%' OR name LIKE 'C%') ORDER BY name DESC;**

**+--------------------------+**

**| name |**

**+--------------------------+**

**| Chapman Helmet |**

**| Cabrera Bat |**

**| Bunny Ski Pole |**

**| Bunny Boot |**

**| Black Hawk Knee Pads |**

**| Black Hawk Elbow Pads |**

**| Alomar Glove |**

**| Alexeyer Pro Lifting Bar |**

**| Ace Ski Pole |**

**| Ace Ski Boot |**

**+--------------------------+**

**6. Wyświetlenie rekordów gdzie nie występuje wartość NULL**

**select first\_name as 'Imie', last\_name as 'Nazwisko', commission\_pct from emp where commission\_pct not LIKE 'null' ORDER BY commission\_pct desc;**

**+--------+----------+----------------+**

**| Imie | Nazwisko | commission\_pct |**

**+--------+----------+----------------+**

**| Andre | Dumas | 17.50 |**

**| Henry | Giljum | 12.50 |**

**| Colin | Magee | 10.00 |**

**| Mai | Nguyen | 15.00 |**

**| Yasmin | Sedeghi | 10.00 |**

**+--------+----------+----------------+**

**7. kwerenda z posortowanymi danymi**

**select id, name, region\_id from dept order by region\_id;**

**+-------------+-----------------------------------------------------------------------------+-------------+**

**| id | name | region\_id |**

**+-------------+-----------------------------------------------------------------------------+-------------+**

**| 10 | Finance | 1 |**

**| 31 | Sales | 1 |**

**| 41 | Operations | 1 |**

**| 50 | Administration | 1 |**

**| 32 | Sales | 2 |**

**| 42 | Operations | 2 |**

**| 33 | Sales | 3 |**

**| 43 | Operations | 3 |**

**| 34 | Sales | 4 |**

**| 44 | Operations | 4 |**

**| 35 | Sales | 5 |**

**| 45 | Operations | 5 |**

**+-------------+-----------------------------------------------------------------------------+-------------+**

**8. Kwerenda z warunkiem where, użycie = oraz like nie zmieniło wyniku**

**select name, credit\_rating FROM customer WHERE credit\_rating='GOOD';**

**select name, credit\_rating FROM customer WHERE credit\_rating LIKE "GOOD";**

**+-------------------+---------------+**

**| name | credit\_rating |**

**+-------------------+---------------+**

**| Delhi Sports | GOOD |**

**| Sweet Rock Sports | GOOD |**

**| Muench Sports | GOOD |**

**+-------------------+---------------+**

**9. usunięte powtórzone dane klauzulą distinct**

**select distinct name from dept;**

**+-----------------------------------------------------------------------------+**

**| name |**

**+-----------------------------------------------------------------------------+**

**| Administration |**

**| Finance |**

**| Operations |**

**| Sales |**

**+-----------------------------------------------------------------------------+**

**10. Wykorzystanie funkcji min(), max(), avg() i sum()**

select min(salary) AS MIN, max(salary) AS MAX, avg(salary) AS Srednia, Sum(salary) AS SUMA, count(salary) AS 'Ilosc pracownikow' from emp;

+--------+---------+-------------+----------+-------------------+

| MIN | MAX | Srednia | SUMA | Ilosc pracownikow |

+--------+---------+-------------+----------+-------------------+

| 750.00 | 2500.00 | 1255.080000 | 31377.00 | 25 |

+--------+---------+-------------+----------+-------------------+

**11. Kwerenda z warunkiem between**

select count(salary) as 'od 1000 do 3000' from emp where salary between 1000 and 3000;

+-----------------+

| od 1000 do 3000 |

+-----------------+

| 18 |

+-----------------+

**12. Wykorzystanie funkcji count() i sum()**

select dept\_id as 'Numer dzialu', sum(salary) as 'Suma zarobkow', count(id) as 'Liczba pracownikow' from emp group by dept\_id;

+--------------+---------------+--------------------+

| Numer dzialu | Suma zarobkow | Liczba pracownikow |

+--------------+---------------+--------------------+

| 10 | 1450.00 | 1 |

| 31 | 2800.00 | 2 |

| 32 | 1490.00 | 1 |

| 33 | 1515.00 | 1 |

| 34 | 2320.00 | 2 |

| 35 | 1450.00 | 1 |

| 41 | 4990.00 | 4 |

| 42 | 3245.00 | 3 |

| 43 | 2700.00 | 3 |

| 44 | 2100.00 | 2 |

| 45 | 3267.00 | 3 |

| 50 | 4050.00 | 2 |

+--------------+---------------+--------------------+

**13. Kwerenda z funkcją sum() ograniczona warunkiem where**

select dept\_id as 'Numer dzialu', sum(salary) as 'Suma zarobkow', count(id) as 'Liczba pracownikow' from emp where dept\_id=41 or dept\_id=42 or dept\_id=43 group by dept\_id;

+--------------+---------------+--------------------+

| Numer dzialu | Suma zarobkow | Liczba pracownikow |

+--------------+---------------+--------------------+

| 41 | 4990.00 | 4 |

| 42 | 3245.00 | 3 |

| 43 | 2700.00 | 3 |

+--------------+---------------+--------------------+

**14. Połączenie klucza podstawowego tabeli dept z kluczem obcym tabeli emp**

select region\_id AS numer\_regionu, dept\_id AS numer\_dzialu, name AS nazwa\_dzialu, sum(salary) AS suma\_zarobkow, count(dept\_id) AS liczba\_pracownikow from emp inner join dept on emp.dept\_id=dept.id group by dept\_id;

+---------------+--------------+----------------+---------------+--------------------+

| numer\_regionu | numer\_dzialu | nazwa\_dzialu | suma\_zarobkow | liczba\_pracownikow |

+---------------+--------------+----------------+---------------+--------------------+

| 1 | 10 | Finance | 1450.00 | 1 |

| 1 | 31 | Sales | 2800.00 | 2 |

| 2 | 32 | Sales | 1490.00 | 1 |

| 3 | 33 | Sales | 1515.00 | 1 |

| 4 | 34 | Sales | 2320.00 | 2 |

| 5 | 35 | Sales | 1450.00 | 1 |

| 1 | 41 | Operations | 4990.00 | 4 |

| 2 | 42 | Operations | 3245.00 | 3 |

| 3 | 43 | Operations | 2700.00 | 3 |

| 4 | 44 | Operations | 2100.00 | 2 |

| 5 | 45 | Operations | 3267.00 | 3 |

| 1 | 50 | Administration | 4050.00 | 2 |

+---------------+--------------+----------------+---------------+--------------------+

**15 Połączenie klucza podstawowego tabeli region z obcym dept i podstawowego dept z obcym emp**

select region\_id AS id, region.name AS name, sum(salary) AS 'Suma zarobków', count(dept\_id) AS 'Liczba pracowników' from emp inner join dept on emp.dept\_id=dept.id inner join region on dept.region\_id=region.id group by region\_id order by region\_id;

+------+----------------------+---------------+--------------------+

| id | name | Suma zarobków | Liczba pracowników |

+------+----------------------+---------------+--------------------+

| 1 | North America | 13290.00 | 9 |

| 2 | South America | 4735.00 | 4 |

| 3 | Africa / Middle East | 4215.00 | 4 |

| 4 | Asia | 4420.00 | 4 |

| 5 | Europe | 4717.00 | 4 |

+------+----------------------+---------------+--------------------+

**16 Obliczenia na zwracanych danych**

select ord.total AS 'total, ord', sum(item.price \* item.quantity) AS 'price \* quantity, item', ord.total-SUM(item.price \* item.quantity) AS 'różnica' from ord inner join item on ord.id=item.ord\_id group by total;

+------------+------------------------+---------+

| total, ord | price \* quantity, item | różnica |

+------------+------------------------+---------+

| 377.00 | 377.00 | 0.00 |

| 550.00 | 550.00 | 0.00 |

| 595.00 | 595.00 | 0.00 |

| 1539.13 | 1539.13 | 0.00 |

| 2722.24 | 2722.24 | 0.00 |

| 2770.00 | 2770.00 | 0.00 |

| 7707.00 | 7707.00 | 0.00 |

| 8056.60 | 8056.60 | 0.00 |

| 8335.00 | 8335.00 | 0.00 |

| 15634.00 | 15634.00 | 0.00 |

| 32430.00 | 32430.00 | 0.00 |

| 84000.00 | 84000.00 | 0.00 |

| 142171.00 | 142171.00 | 0.00 |

| 149570.00 | 149570.00 | 0.00 |

| 601100.00 | 601100.00 | 0.00 |

| 1020935.00 | 1020935.00 | 0.00 |

+------------+------------------------+---------+

**17**

**Połączenie kilku stringów w 1 za pomocą polecenia concat()**

select concat("z regionu ", region.name, " pochodzi ", count(customer.id), " klientów.") from region inner join customer on region.id=customer.region\_id group by region.id order by count(customer.id) desc, region.name;

+-----------------------------------------------------------------------------------+

| concat("z regionu ", region.name, " pochodzi ", count(customer.id), " klientów.") |

+-----------------------------------------------------------------------------------+

| z regionu Europe pochodzi 4 klientów. |

| z regionu North America pochodzi 4 klientów. |

| z regionu Asia pochodzi 3 klientów. |

| z regionu Africa / Middle East pochodzi 2 klientów. |

| z regionu South America pochodzi 2 klientów. |

+-----------------------------------------------------------------------------------+