



POLITECHNIKA RZESZOWSKA

im. Ignacego Łukasiewicza

WYDZIAŁ MATEMATYKI I FIZYKI STOSOWANEJ

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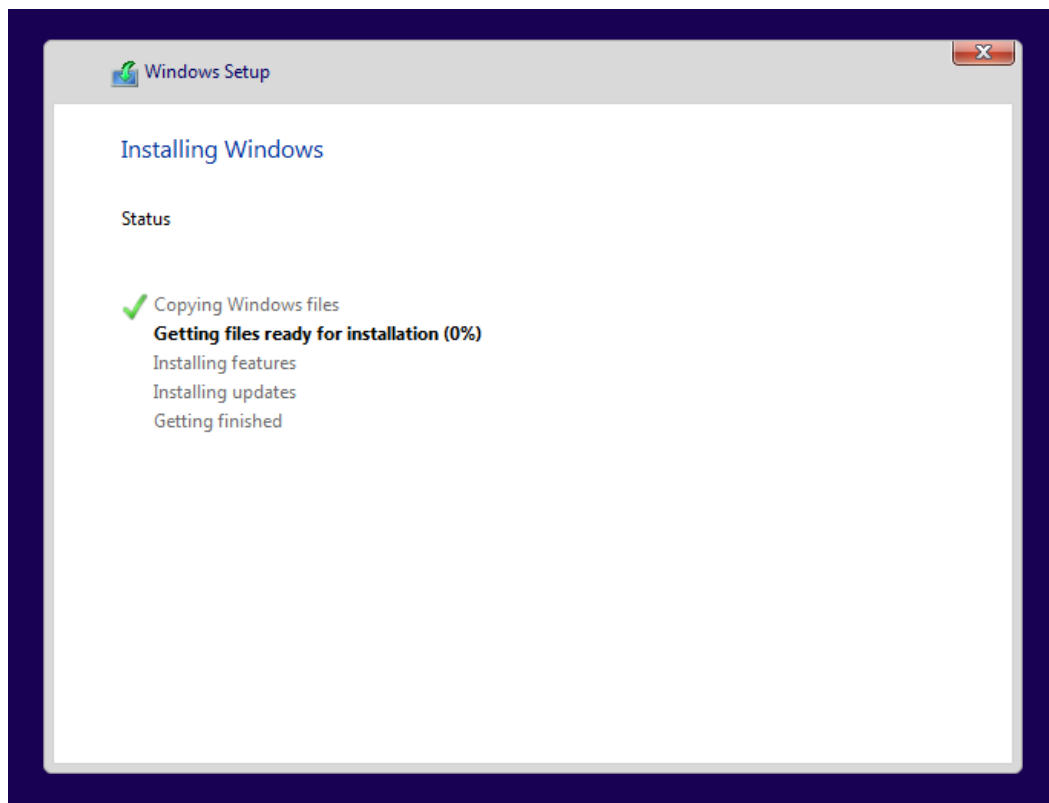
## Spis treści

1.Instalacja systemu Windows.....	5
2.Instalacja Oracle 21c XE .....	5
3. Utworzenie plików parametrów .....	6
Utworzenie plików pfile .....	6
Dodanie parametrów do pliku .....	6
Test uruchomienia z naszego nowego pliku pfile .....	7
Zmiana parametrów NLS .....	8
Opisy wykorzystanych parametrów .....	8
Test uruchomienia z nowymi parametrami NLS.....	9
4.Utworzenie nowych listenerów .....	10
Testowanie listenerów .....	11
Utworzenie aliasów .....	13
Testowanie aliasów .....	14
5. Utworzenie kontenerów .....	15
Utworzenie plików manifestu z danymi lokalizacyjnymi (PL,EN,USA) .....	15
Lista kontenerów .....	16
Utworzone katalogi i pliki do kontenerów .....	16
6. Tworzenie przestrzeni tabel .....	17
Pliki w katalogu .....	18
7.Tworzenie użytkowników .....	18
8.Tworzenie użytkowników wspólnych .....	18
Sprawdzenie czy znajdują się w bazie użytkowników .....	19
9.Przydzielenie listenerów i aliasów kontenerom.....	19
Zmiana dla aliasów w pliku tsnames .....	20
Zatrzymanie i uruchomienie listenerów .....	21
10. Tworzenie i testowanie połączeń w SQL Developerze dla każdego użytkownika i kontenera, z użyciem różnych Listenerów i Aliasów .....	24
Test Połączenie dla niepoprawnego portu.....	25
Nadanie uprawnień użytkownikom .....	25
Testowanie połączeń użytkowników .....	26
Ustawienie ścieżki do tsnames aby sqldeveloper mógł korzystać z aliasów .....	27
Testowanie połączeń przy pomocy aliasów .....	28
11. Instalacja schematów bazy + import danych:.....	30
Wykonanie dla konteneru 1 .....	30

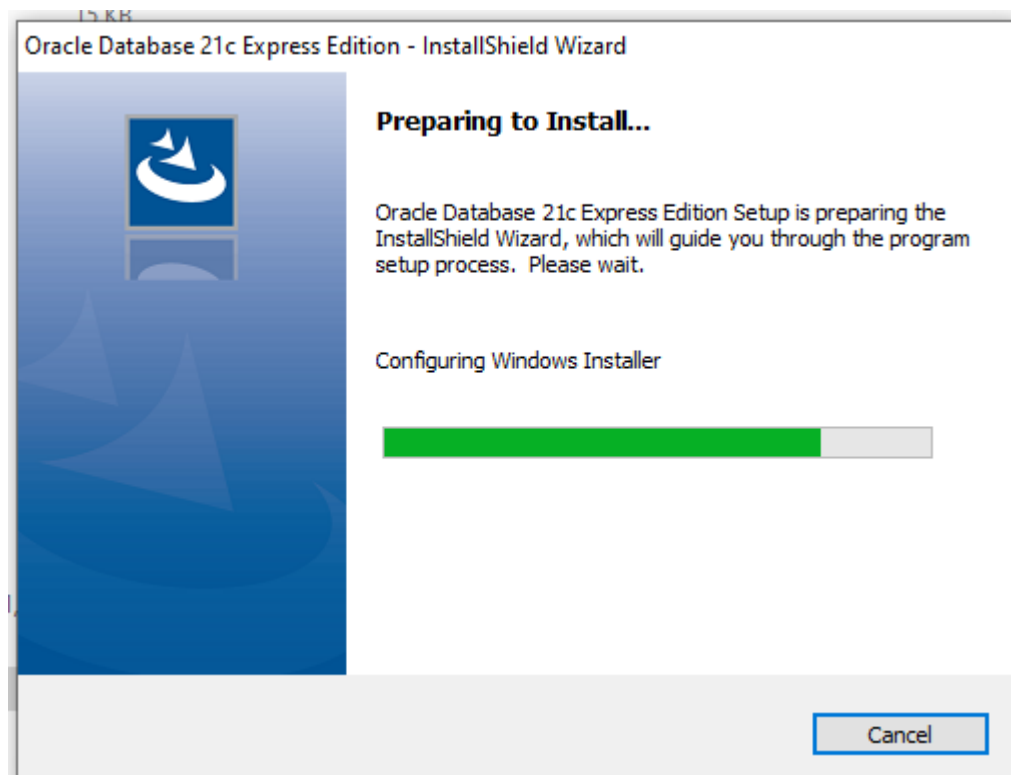
Przeniesienie tabel do przestrzeni PT_1 .....	31
Testowanie danych .....	32
Testowanie uprawnień dla user_1_173148 .....	33
Zweryfikowanie czy user_1_173148 ma dostęp do danych .....	34
Wykonanie dla konteneru 2 .....	35
Dodanie danych do PT_Jakub (wyjaśnienie) .....	35
Sprawdzenie czy dane się załadowały .....	36
Nadanie uprawnień dla user_2_173150 .....	37
Testowanie uprawnień dla user_2_173150 .....	38
Wykonanie dla konteneru 3 .....	38
Importowanie danych z pliku csv przy użyciu data import wizard .....	38
Nadanie uprawnień użytkownikowi USER_3_AMERIKA .....	42
Testowanie uprawnień dla user_3_amerika .....	43
<b>12. Nadanie uprawnień użytkownikom wspólnym .....</b>	<b>44</b>
Użytkownik wspolny_1_173148 .....	44
Użytkownik wspolny_2_173150 .....	45
Dodanie połączeń w Oracle sql developer dla użytkowników wspólnych .....	46
Testowanie uprawnień .....	47
Użytkownik wspolny_1_173148 .....	47
Dla tabeli z PDB_JABLONSKI .....	47
Dla tabeli z PDB_JEDRZEJCZYK .....	48
Dla tabeli z PDB_AMERIKA .....	49
Użytkownik wspolny_2_173150 .....	50
Dla tabeli z PDB_JABLONSKI .....	50
Dla tabeli z PDB_JEDRZEJCZYK .....	51
Dla tabeli z PDB_AMERIKA .....	52
<b>13. Odłączenie konteneru i podłączenie go ponownie .....</b>	<b>52</b>
Wyłączenie .....	52
Odłączenie .....	52
Skopiowanie potrzebnych plików do folderu .....	53
Usunięcie konteneru .....	53
Przeniesienie danych w odpowiednie miejsca .....	53
Odtworzenie konteneru .....	53
Test czy działa dany kontener .....	54
<b>14. Symulacja usunięcia danych oraz ich przywrócenie .....</b>	<b>55</b>
Ustawienie miejsca w którym będzie znajdował się backup .....	55

<b>Zamknięcie konteneru .....</b>	<b>55</b>
<b>Ustawienie w tryb MOUNT .....</b>	<b>55</b>
<b>Uruchomienie trybu archivelog .....</b>	<b>55</b>
<b>Otwarcie bazy danych .....</b>	<b>55</b>
<b>Uruchomienie narzędzia rman do stworzenia backupu.....</b>	<b>55</b>
<b>Utworzenie backupu .....</b>	<b>56</b>
<b>Usunięcie tabeli .....</b>	<b>57</b>
<b>Sprawdzenie czy tabela istnieje .....</b>	<b>58</b>
<b>Sprawdzenie backupu .....</b>	<b>58</b>
<b>Wyłączenie bazy danych.....</b>	<b>59</b>
<b>Uruchomienie bazy w trybie MOUNT.....</b>	<b>59</b>
<b>Uruchomienie odzyskiwania .....</b>	<b>59</b>
<b>Sprawdzenie czy tabela jest dostępna .....</b>	<b>60</b>
<b>15. Zaszycrowanie przestrzeni tabel .....</b>	<b>61</b>
<b>Utworzenie portfela Oracle.....</b>	<b>61</b>
<b>Otwarcie portfela .....</b>	<b>61</b>
<b>Konfiguracja klucza.....</b>	<b>62</b>
<b>Zmiana sesji .....</b>	<b>62</b>
<b>Ustawienie klucza .....</b>	<b>63</b>
<b>Ustawienie klucza dla przestrzeni tabel PT_1.....</b>	<b>63</b>
<b>Testowanie zabezpieczeń .....</b>	<b>64</b>
<b>Wygląda tabeli przed i po szyfrowaniu w edytorze heksadecymalny .....</b>	<b>65</b>
<b>Przed .....</b>	<b>65</b>
<b>Po .....</b>	<b>66</b>

## 1.Instalacja systemu Windows



## 2.Instalacja Oracle 21c XE



## 3. Utworzenie plików parametrów

### Utworzenie plików pfile

```
SQL> CREATE PFILE = 'C:\app\projekt\config\init-pfile_1.ora' FROM SPFILE = 'C:\app\173148_173150\product\21c\database\SPFILEXE.ora';
File created.

SQL> CREATE PFILE = 'C:\app\projekt\config\init-pfile_2.ora' FROM SPFILE = 'C:\app\173148_173150\product\21c\database\SPFILEXE.ora';
File created.
```

### Dodanie parametrów do pliku

```
INIT-PFILE_1 - Notepad
File Edit Format View Help
xe._data_transfer_cache_size=0
xe._db_cache_size=1124073472
xe._inmemory_ext_roarea=0
xe._inmemory_ext_rwarea=0
xe._java_pool_size=0
xe._large_pool_size=16777216
xe._oracle_base='C:\app\173148_173150\product\21c'#ORACLE_BASE set from environment
xe._pga_aggregate_target=536870912
xe._sga_target=1610612736
xe._shared_io_pool_size=83886080
xe._shared_pool_size=369098752
xe._streams_pool_size=0
xe._unified_pga_pool_size=0
*.audit_file_dest='C:\app\173148_173150\product\21c\admin\XE\adump'
*.audit_trail='db'
*.compatible='21.0.0'
*.control_files='C:\app\173148_173150\product\21c\oradata\XE\control01.ctl','C:\app\173148_173150\product\21c\oradata\XE\control02.ctl'
*.db_block_size=8192
*.db_name='XE'
*.diagnostic_dest='C:\app\projekt\log'
*.dispatchers='(PROTOCOL=TCP) (SERVICE=XEXDB)'
*.enable_pluggable_database=true
*.local_listener='LISTENER_XE'
*.nls_language='POLISH'
*.nls_territory='POLAND'
*.open_cursors=300
*.pga_aggregate_target=512m
*.processes=640#zmiana
*.remote_login_passwordfile='EXCLUSIVE'
*.sga_target=1536m
*.undo_tablespace='UNDOTBS1'
#dodane
*.sessions=300
*.log_buffer=50m
*.sort_area_size=52428800
*.remote_os_authent=true
*.db_block_checksum=FULL
*.open_links=5
*.parallel_max_servers=100
*.user_dump_dest='C:\app\projekt\'
*.job_queue_processes=20
```

### Opisy dodanych parametrów

**\*.processes=640:** Maksymalna liczba procesów, które mogą jednocześnie działać w bazie danych to 640.

**\*.sessions=300:** Maksymalna liczba sesji, które mogą jednocześnie działać w bazie danych to 300.

**\*.log\_buffer=50m:** Wielkość bufora do zapisywania logów wynosi 50 megabajtów.

**\*.sort\_area\_size=52428800:** Maksymalna ilość pamięci dla sortowania danych wynosi 50 megabajtów.

**\*.remote\_os\_authent=true:** Pozwala na uwierzytelnianie użytkowników zdalnych za pomocą systemu operacyjnego.

**\*.db\_block\_checksum=FULL:** Włącza pełną kontrolę sum kontrolnych dla bloków danych w bazie, co pomaga wykrywać błędy.

- \*.**open\_links=5**: Maksymalna liczba otwartych połączeń do zdalnych baz danych to 5.
- \*.**parallel\_max\_servers=100**: Maksymalna liczba serwerów, które mogą działać równolegle to 100.
- \*.**user\_dump\_dest='C:\app\projekt\'**: Ścieżka do katalogu, gdzie są zapisywane pliki dump użytkownika to 'C:\app\projekt'.
- \*.**job\_queue\_processes=20**: Maksymalna liczba procesów do obsługi zadań w kolejce to 20.

## Test uruchomienia z naszego nowego pliku pfile

```
SQL> startup pfile = 'C:\app\projekt\config\init-pfile_1.ora';
ORA-25138: REMOTE_OS_AUTHENT initialization parameter has been made obsolete
ORA-32006: USER_DUMP_DEST initialization parameter has been deprecated
ORACLE instance started.

Total System Global Area 1610609432 bytes
Fixed Size                  9855768 bytes
Variable Size              385875968 bytes
Database Buffers          1157627904 bytes
Redo Buffers                57249792 bytes
Database mounted.
Database opened.
```

## Zmiana parametrów NLS

```
xe.__data_transfer_cache_size=0|
xe.__db_cache_size=1124073472
xe.__inmemory_ext_roarea=0
xe.__inmemory_ext_rwarea=0
xe.__java_pool_size=0
xe.__large_pool_size=16777216
xe.__oracle_base='C:\app\173148_173150\product\21c'#ORACLE_BASE set from environment
xe.__pga_aggregate_target=536870912
xe.__sga_target=1610612736
xe.__shared_io_pool_size=83886080
xe.__shared_pool_size=369098752
xe.__streams_pool_size=0
xe.__unified_pga_pool_size=0
*.audit_file_dest='C:\app\173148_173150\product\21c\admin\XE\adump'
*.audit_trail='db'
*.compatible='21.0.0'
*.control_files='C:\app\173148_173150\product\21c\oradata\XE\control01.ctl','C:\app\173148_173150\product
*.db_block_size=8192
*.db_name='XE'
*.diagnostic_dest='C:\app\173148_173150\product\21c'
*.dispatchers='(PROTOCOL=TCP) (SERVICE=XEXDB)'
*.enable_pluggable_database=true
*.local_listener='LISTENER_XE'
*.nls_language='POLISH'
*.nls_territory='POLAND'
*.nls_calendar='GREGORIAN'
*.nls_date_format='dd-mm-yyyy'
*.nls_time_format='hh24:mi:ss'
*.nls_currency='PLN'
*.nls_sort='POLISH'
*.nls_iso_currency='POLAND'
*.nls_numeric_characters='POLAND'
*.nls_date_language='POLISH'
*.open_cursors=300
*.pga_aggregate_target=512m
*.processes=320
*.remote_login_passwordfile='EXCLUSIVE'
*.sga_target=1536m
*.undo_tablespace='UNDOTBS1'
```

## Opisy wykorzystanych parametrów

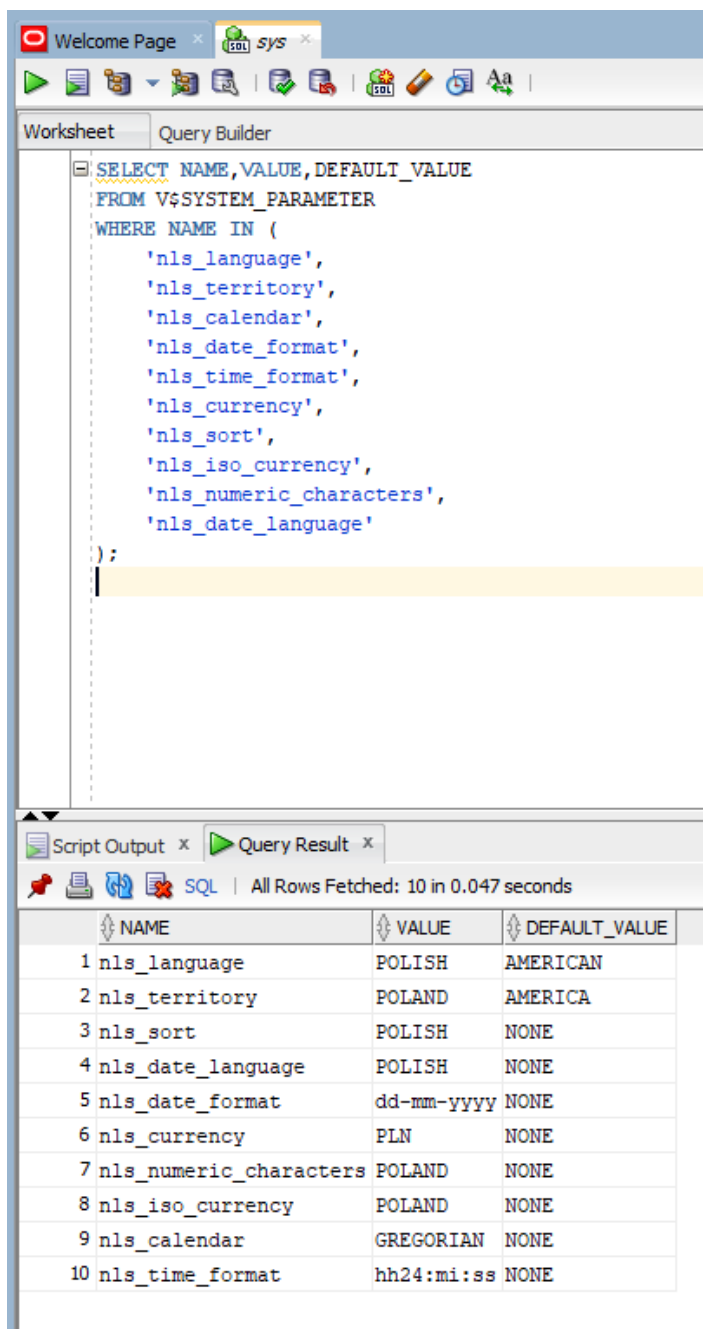
- \*.nls\_language='POLISH':** Ustawia język bazy danych na polski.
- \*.nls\_territory='POLAND':** Ustawia terytorium bazy danych na Polskę.
- \*.nls\_calendar='GREGORIAN':** Ustawia kalendarz na gregoriański.
- \*.nls\_date\_format='dd-mm-yyyy':** Ustawia format daty na dzień-miesiąc-rok.
- \*.nls\_time\_format='hh24:mi:ss':** Ustawia format czasu na godziny:minuty w formacie 24-godzinny.
- \*.nls\_currency='PLN':** Ustawia walutę na polskie złote (PLN).
- \*.nls\_sort='POLISH':** Ustawia sortowanie znaków na polskie.
- \*.nls\_iso\_currency='POLAND':** Ustawia walutę ISO na Polskę.
- \*.nls\_numeric\_characters='POLAND':** Ustawia znaki numeryczne na polskie.
- \*.nls\_date\_language='POLISH':** Ustawia język daty na polski.



## Test uruchomienia z nowymi parametrami NLS

```
SQL> startup pfile = 'C:\app\projekt\config\init-pfile_2.ora';
ORACLE instance started.

Total System Global Area 1610608792 bytes
Fixed Size                  9855128 bytes
Variable Size               385875968 bytes
Database Buffers            1207959552 bytes
Redo Buffers                 6918144 bytes
Database mounted.
Database opened.
```



The screenshot shows the SQL Developer interface. The 'Worksheet' tab is active, displaying the following SQL query:

```
SELECT NAME,VALUE,DEFAULT_VALUE
FROM V$SYSTEM_PARAMETER
WHERE NAME IN (
    'nls_language',
    'nls_territory',
    'nls_calendar',
    'nls_date_format',
    'nls_time_format',
    'nls_currency',
    'nls_sort',
    'nls_iso_currency',
    'nls_numeric_characters',
    'nls_date_language'
);
```

The 'Query Result' tab is also visible, showing the results of the query. The status bar indicates 'All Rows Fetched: 10 in 0.047 seconds'.

	NAME	VALUE	DEFAULT_VALUE
1	nls_language	POLISH	AMERICAN
2	nls_territory	POLAND	AMERICA
3	nls_sort	POLISH	NONE
4	nls_date_language	POLISH	NONE
5	nls_date_format	dd-mm-yyyy	NONE
6	nls_currency	PLN	NONE
7	nls_numeric_characters	POLAND	NONE
8	nls_iso_currency	POLAND	NONE
9	nls_calendar	GREGORIAN	NONE
10	nls_time_format	hh24:mi:ss	NONE

## 4. Utworzenie nowych listenerów

```
listener - Notepad
File Edit Format View Help
LISTENER_1_173148 =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = DESKTOP-VJ1U7CC)(PORT = 1522))
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
    )
  )

SID_LIST_LISTENER_1_173148 =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = XE)
      (SID_NAME = XE)
    )
  )

LISTENER_2_173150 =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = DESKTOP-VJ1U7CC)(PORT = 1544))
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
    )
  )

SID_LIST_LISTENER_2_173150 =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = XE)
      (SID_NAME = XE)
    )
  )

LISTENER_3 =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = DESKTOP-VJ1U7CC)(PORT = 1588))
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
    )
  )

SID_LIST_LISTENER_3 =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = XE)
      (SID_NAME = XE)
    )
  )
```

## Testowanie listenerów

```
C:\Windows\system32>lsnrctl start listener_1_173148

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 05-JUN-2024 13:09:00

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Starting tnslnsr: please wait...

TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
System parameter file is C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Log messages written to C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_1_173148>alert\log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
STATUS of the LISTENER
-----
Alias                     listener_1_173148
Version                  TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
Start Date               05-JUN-2024 13:09:07
Uptime                   0 days 0 hr. 0 min. 13 sec
Trace Level              off
Security                 ON: Local OS Authentication
SNMP                     OFF
Listener Parameter File  C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Listener Log File        C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_1_173148>alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))
Services Summary...
Service "XE" has 1 instance(s).
  Instance "XE", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully
```

```
C:\Windows\system32>lsnrctl start listener_2_173150

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 05-JUN-2024 13:12:06

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Starting tnslnsr: please wait...

TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
System parameter file is C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Log messages written to C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_2_173150>alert\log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
STATUS of the LISTENER
-----
Alias                     listener_2_173150
Version                  TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
Start Date               05-JUN-2024 13:12:13
Uptime                   0 days 0 hr. 0 min. 11 sec
Trace Level              off
Security                 ON: Local OS Authentication
SNMP                     OFF
Listener Parameter File  C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Listener Log File        C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_2_173150>alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))
Services Summary...
Service "XE" has 1 instance(s).
  Instance "XE", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully
```

```

C:\Windows\system32>lsnrctl start listener_3

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 05-JUN-2024 13:13:05

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Starting tnslnsr: please wait...

TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
System parameter file is C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Log messages written to C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_3\alert\log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
STATUS of the LISTENER
-----
Alias                     listener_3
Version                   TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
Start Date                05-JUN-2024 13:13:11
Uptime                    0 days 0 hr. 0 min. 11 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File   C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Listener Log File         C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_3\alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))
Services Summary...
Service "XE" has 1 instance(s).
  Instance "XE", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully

```

## Utworzenie aliasów

```
tnsnames - Notepad
File Edit Format View Help
Alias_1_173148 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1522))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = XE)
    )
  )

Alias_2_173150 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1544))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = XE)
    )
  )

Alias_3 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1588))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = XE)
    )
  )
```

## Testowanie aliasów

Command Prompt - sqlplus

```
Microsoft Windows [Version 10.0.19045.3803]
(c) Microsoft Corporation. All rights reserved.

C:\Users\173148_173150>sqlplus

SQL*Plus: Release 21.0.0.0.0 - Production on Wed Jun 5 13:19:20 2024
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle. All rights reserved.

Enter user-name: system/system@Alias_1_173148
Last Successful login time: Sun Apr 21 2024 18:17:38 +02:00

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

SQL> exit
Disconnected from Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

C:\Users\173148_173150>sqlplus

SQL*Plus: Release 21.0.0.0.0 - Production on Wed Jun 5 13:20:35 2024
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle. All rights reserved.

Enter user-name: system/system@Alias_2_173150
Last Successful login time: Wed Jun 05 2024 13:19:41 +02:00

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

SQL> exit
Disconnected from Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

C:\Users\173148_173150>sqlplus

SQL*Plus: Release 21.0.0.0.0 - Production on Wed Jun 5 13:21:58 2024
Version 21.3.0.0.0

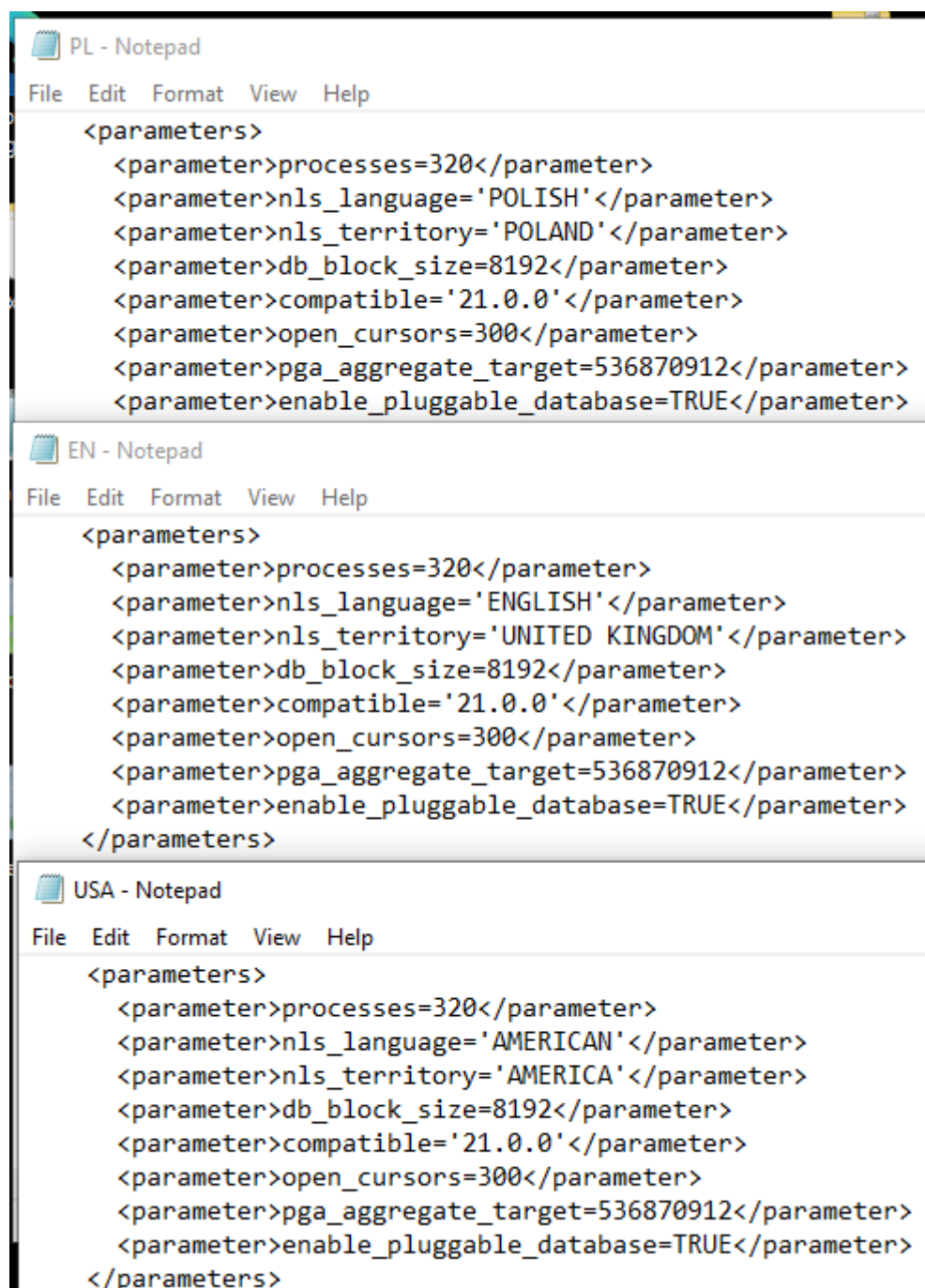
Copyright (c) 1982, 2021, Oracle. All rights reserved.

Enter user-name: system/system@Alias_3
Last Successful login time: Wed Jun 05 2024 13:21:10 +02:00

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0
```

## 5. Utworzenie kontenerów

### Utworzenie plików manifestu z danymi lokalizacyjnymi (PL,EN,USA)



The image displays three Notepad windows stacked vertically, each containing an XML manifest file for a different locale: Polish (PL), English (EN), and American English (USA). Each file defines database parameters within a structured XML format.

```
PL - Notepad
File Edit Format View Help
<parameters>
  <parameter>processes=320</parameter>
  <parameter>nls_language='POLISH'</parameter>
  <parameter>nls_territory='POLAND'</parameter>
  <parameter>db_block_size=8192</parameter>
  <parameter>compatible='21.0.0'</parameter>
  <parameter>open_cursors=300</parameter>
  <parameter>pga_aggregate_target=536870912</parameter>
  <parameter>enable_pluggable_database=TRUE</parameter>
</parameters>

EN - Notepad
File Edit Format View Help
<parameters>
  <parameter>processes=320</parameter>
  <parameter>nls_language='ENGLISH'</parameter>
  <parameter>nls_territory='UNITED KINGDOM'</parameter>
  <parameter>db_block_size=8192</parameter>
  <parameter>compatible='21.0.0'</parameter>
  <parameter>open_cursors=300</parameter>
  <parameter>pga_aggregate_target=536870912</parameter>
  <parameter>enable_pluggable_database=TRUE</parameter>
</parameters>

USA - Notepad
File Edit Format View Help
<parameters>
  <parameter>processes=320</parameter>
  <parameter>nls_language='AMERICAN'</parameter>
  <parameter>nls_territory='AMERICA'</parameter>
  <parameter>db_block_size=8192</parameter>
  <parameter>compatible='21.0.0'</parameter>
  <parameter>open_cursors=300</parameter>
  <parameter>pga_aggregate_target=536870912</parameter>
  <parameter>enable_pluggable_database=TRUE</parameter>
</parameters>
```

Tworzenie kontenerów polegało na odtwarzaniu konteneru XEPDB1 i następnie tworzenie naszych z odpowiednimi parametrami. Późniejsze kontenery powstawały już z PDB\_JABLONSKI.





## 6. Tworzenie przestrzeni tabel

```
SQL> CREATE TABLESPACE PT_1 DATAFILE 'C:\app\projekt\pt_1.dbf' SIZE 500M;
Tablespace created.
```

```
SQL> CREATE TABLESPACE PT_2 DATAFILE 'C:\app\projekt\PT_2.dbf' SIZE 500M;
CREATE TABLESPACE PT_2 DATAFILE 'C:\app\projekt\PT_2.dbf' SIZE 500M
*
ERROR at line 1:
ORA-01109: database not open
```

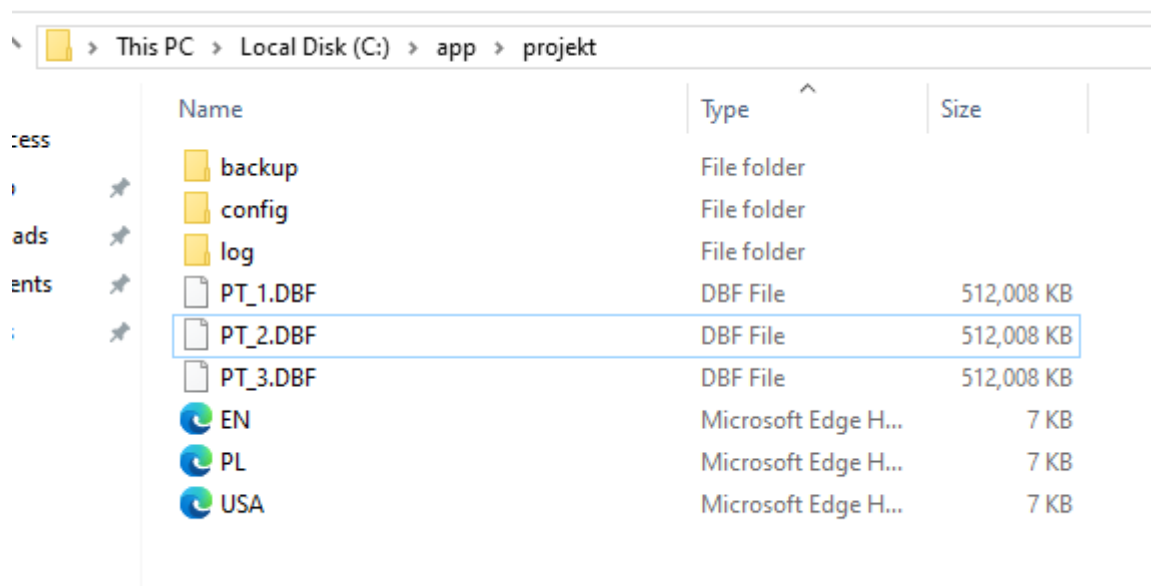
```
SQL> startup
Pluggable Database opened.
SQL> CREATE TABLESPACE PT_2 DATAFILE 'C:\app\projekt\PT_2.dbf' SIZE 500M;
Tablespace created.
```

```
SQL> CREATE USER user_2_173148 IDENTIFIED BY system;
User created.
```

```
SQL> CREATE TABLESPACE PT_3 DATAFILE 'C:\app\projekt\PT_3.dbf' SIZE 500M;
CREATE TABLESPACE PT_3 DATAFILE 'C:\app\projekt\PT_3.dbf' SIZE 500M
*
ERROR at line 1:
ORA-01109: database not open
```

```
SQL> startup
Pluggable Database opened.
SQL> CREATE TABLESPACE PT_3 DATAFILE 'C:\app\projekt\PT_3.dbf' SIZE 500M;
Tablespace created.
```

## Pliki w katalogu



Name	Type	Size
backup	File folder	
config	File folder	
log	File folder	
PT_1.DBF	DBF File	512,008 KB
PT_2.DBF	DBF File	512,008 KB
PT_3.DBF	DBF File	512,008 KB
EN	Microsoft Edge H...	7 KB
PL	Microsoft Edge H...	7 KB
USA	Microsoft Edge H...	7 KB

## 7.Tworzenie użytkowników

```
SQL> CREATE USER USER_1_173148 IDENTIFIED BY system DEFAULT TABLESPACE PT_1;  
User created.
```

Pozostali użytkownicy zostali utworzeni identycznie jak user\_1\_173148 we właściwych kontenerach oraz z odpowiednimi przestrzeniami tabel.

## 8.Tworzenie użytkowników wspólnych

```
SQL> CREATE USER C##WSPOLNY_1_173148 IDENTIFIED BY system;  
User created.  
  
SQL> CREATE USER C##WSPOLNY_2_173150 IDENTIFIED BY system;  
User created.
```

## Sprawdzenie czy znajdują się w bazie użytkowników

```
USERNAME
-----
SYSBACKUP
REMOTE_SCHEDULER_AGENT
GSMUSER
SYSRAC
GSMROOTUSER
SI_INFORMTN_SCHEMA
C##WSPOLNY_1_173148
C##WSPOLNY_2_173150
DIP
ORDPLUGINS
SYSKM
```

## 9. Przydzielenie listenerów i aliasów kontenerom

```
SID_LIST_LISTENER_1_173148 =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = PDB_JABLONSKI)
      (SID_NAME = XE)
    )
  )

LISTENER_2_173150 =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = DESKTOP-VJ1U7CC)(PORT = 1544))
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
    )
  )

SID_LIST_LISTENER_2_173150 =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = PDB_JEDRZEJCZYK)
      (SID_NAME = XE)
    )
  )

LISTENER_3 =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = DESKTOP-VJ1U7CC)(PORT = 1588))
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
    )
  )

SID_LIST_LISTENER_3 =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = PDB_AMERIKA)
      (SID_NAME = XE)
    )
  )
```

## Zmiana dla aliasów w pliku tsnames

```
Alias_1_173148 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1522))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = PDB_JABLONSKI)
    )
  )

Alias_2_173150 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1544))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = PDB_JEDRZEJCZYK)
    )
  )

Alias_3 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1588))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = PDB_AMERIKA)
    )
  )
```

## Zatrzymanie i uruchomienie listenerów

```
C:\Windows\system32>lsnrctl stop listener_1_173148

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 08-JUN-2024 11:20:19

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
TNS-12541: TNS:no listener
TNS-12560: TNS:protocol adapter error
TNS-00511: No listener
64-bit Windows Error: 61: Unknown error
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=EXTPROC1521)))
The command completed successfully

C:\Windows\system32>lsnrctl start listener_1_173148

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 08-JUN-2024 11:20:37

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Starting tnslnsr: please wait...

TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
System parameter file is C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Log messages written to C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_1_173148>alert\log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
STATUS of the LISTENER
-----
Alias                listener_1_173148
Version              TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
Start Date          08-JUN-2024 11:20:40
Uptime              0 days 0 hr. 0 min. 8 sec
Trace Level         off
Security            ON: Local OS Authentication
SNMP                OFF
Listener Parameter File C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Listener Log File   C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_1_173148>alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1522)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))
Services Summary...
Service "PDB_JABLONSKI" has 1 instance(s).
  Instance "XE", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully
```

```

C:\Windows\system32>lsnrctl stop listener_2_173150

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 08-JUN-2024 11:22:51

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
TNS-12541: TNS:no listener
TNS-12560: TNS:protocol adapter error
TNS-00511: No listener
64-bit Windows Error: 61: Unknown error
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=EXTPROC1521)))
The command completed successfully

C:\Windows\system32>lsnrctl start listener_2_173150

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 08-JUN-2024 11:23:51

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Starting tnslnsr: please wait...

TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
System parameter file is C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Log messages written to C:\app\173148_173150\product\21c\diag\tnslnsr\DESKTOP-VJ1U7CC\listener_2_173150\alert\log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
STATUS of the LISTENER
-----
Alias                listener_2_173150
Version              TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
Start Date           08-JUN-2024 11:23:56
Uptime                0 days 0 hr. 0 min. 10 sec
Trace Level           off
Security              ON: Local OS Authentication
SNMP                 OFF
Listener Parameter File C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Listener Log File     C:\app\173148_173150\product\21c\diag\tnslnsr\DESKTOP-VJ1U7CC\listener_2_173150\alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1544)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))
Services Summary...
Service "PDB_JEDRZEJCZYK" has 1 instance(s).
  Instance "XE", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully

```

```

C:\Windows\system32>lsnrctl stop listener_3

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 08-JUN-2024 11:24:29

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
TNS-12541: TNS:no listener
TNS-12560: TNS:protocol adapter error
TNS-00511: No listener
64-bit Windows Error: 61: Unknown error
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=EXTPROC1521)))
The command completed successfully

C:\Windows\system32>lsnrctl start listener_3

LSNRCTL for 64-bit Windows: Version 21.0.0.0.0 - Production on 08-JUN-2024 11:24:41

Copyright (c) 1991, 2021, Oracle. All rights reserved.

Starting tnslnsr: please wait...

TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
System parameter file is C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Log messages written to C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_3\alert\log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
STATUS of the LISTENER
-----
Alias                     listener_3
Version                  TNSLSNR for 64-bit Windows: Version 21.0.0.0.0 - Production
Start Date               08-JUN-2024 11:24:43
Uptime                   0 days 0 hr. 0 min. 5 sec
Trace Level              off
Security                 ON: Local OS Authentication
SNMP                     OFF
Listener Parameter File  C:\app\173148_173150\product\21c\homes\OraDB21Home1\network\admin\listener.ora
Listener Log File        C:\app\173148_173150\product\21c\diag\tnslsnr\DESKTOP-VJ1U7CC\listener_3\alert\log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=DESKTOP-VJ1U7CC)(PORT=1588)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(PIPENAME=\\.\pipe\EXTPROC1521ipc)))
Services Summary...
Service "PDB_AMERIKA" has 1 instance(s).
  Instance "XE", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully

```

## 10. Tworzenie i testowanie połączeń w SQL Developerze dla każdego użytkownika i kontenera, z użyciem różnych Listenerów i Aliasów

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
sys	sys@//localhost:...

Name: PDB\_JABLONSKI

Database Type: Oracle

User Info: Proxy User

Authentication Type: Default

Username: sys

Password: \*\*\*\*\*

Role: SYSDBA

Save Password: ☐

Connection Type: Basic

Details: Advanced

Hostname: localhost

Port: 1522

☐ SID: xe

☒ Service name: PDB\_JABLONSKI

Status: Success

Help Save Clear Test Connect Cancel

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
sys	sys@//localhost:...

Name: PDB\_JEDRZEJCZYK

Database Type: Oracle

User Info: Proxy User

Authentication Type: Default

Username: sys

Password: \*\*\*\*\*

Role: SYSDBA

Save Password: ☒

Connection Type: Basic

Details: Advanced

Hostname: localhost

Port: 1544

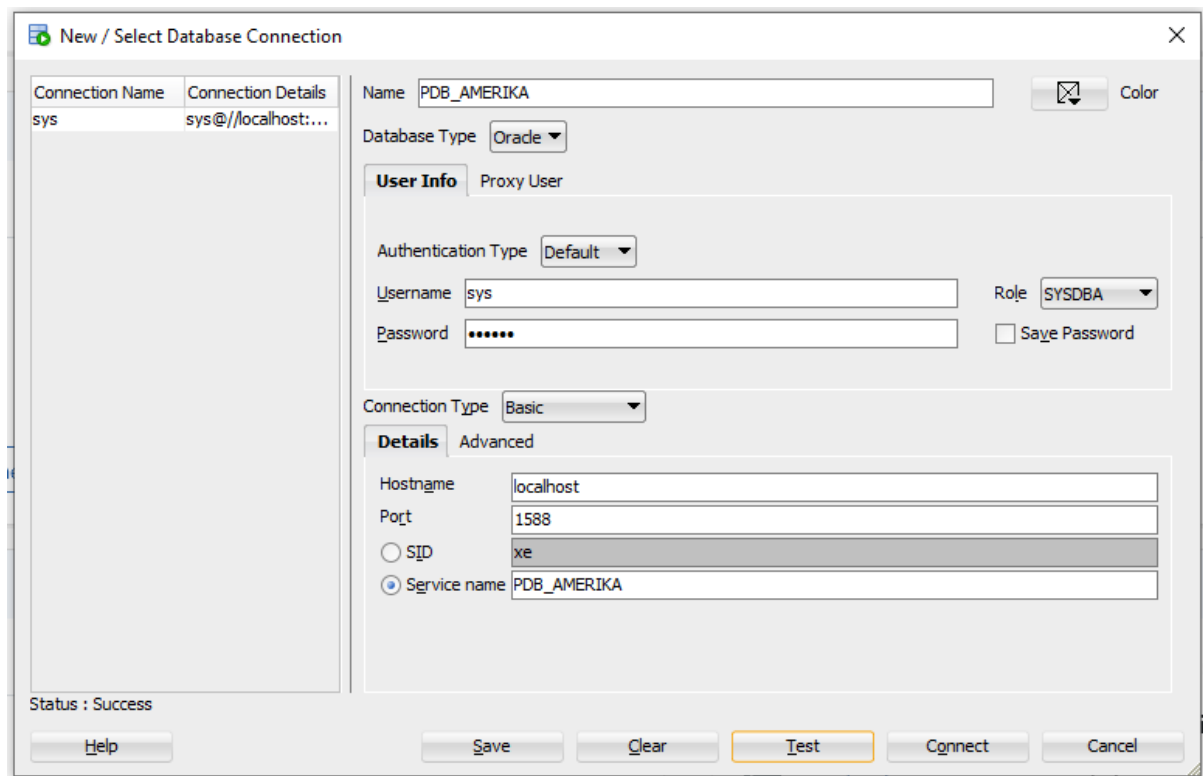
☐ SID: xe

☒ Service name: PDB\_JEDRZEJCZYK

Status: Success

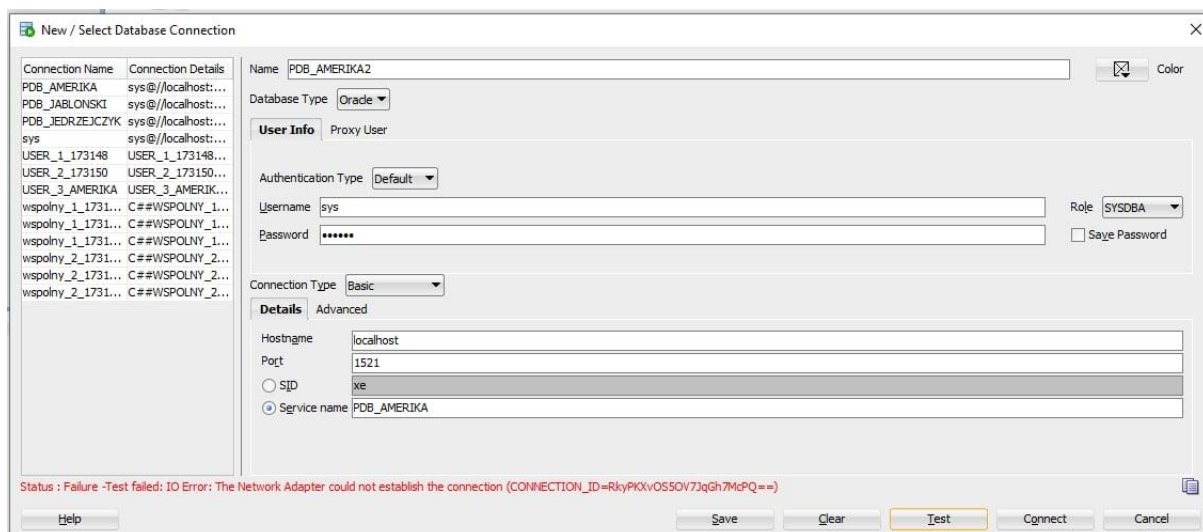
Help Save Clear Test Connect Cancel





## Test Połączenie dla niepoprawnego portu

Jak widać poniżej jeśli podamy zły port, nie dojdzie to połączenia.



## Nadanie uprawnień użytkownikom

```
SQL> GRANT CREATE SESSION TO USER_1_173148;
Grant succeeded.
```

```
SQL> GRANT CREATE SESSION TO USER_2_173150;
Grant succeeded.
```

```
SQL> GRANT CREATE SESSION TO USER_3_AMERIKA;  
Grant succeeded.
```

## Testowanie połączeń użytkowników

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
sys	sys@//localhost:...

Name:

Database Type:

**User Info** Proxy User

Authentication Type:

Username:  Role:

Password:  ☒ Save Password

Connection Type:

**Details** Advanced

Hostname:

Port:

☐ SID

☒ Service name

Status: Success

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
sys	sys@//localhost:...
USER_2_173150	USER_2_173150...

Name:

Database Type:

**User Info** Proxy User

Authentication Type:

Username:  Role:

Password:  ☒ Save Password

Connection Type:

**Details** Advanced

Hostname:

Port:

☐ SID

☒ Service name

Status: Success

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
sys	sys@//localhost:...
USER_1_173148	USER_1_173148...
USER_2_173150	USER_2_173150...
USER_3_AMERIKA	USER_3_AMERIK...

Name:

Database Type:

**User Info** Proxy User

Authentication Type:

Username:  Role:

Password:  ☒ Save Password

Connection Type:

**Details** Advanced

Hostname:

Port:

☐ SID

☒ Service name

Status: Success

## Ustawienie ścieżki do tsnames aby sqldeveloper mógł korzystać z aliasów

Preferences

Database: Advanced

Sql Array Fetch Size (between 50 and 200):

Display Null Value As:

Display Null Using Background Color:

Display Struct Value In Grid: ☐

Display XML Value In Grid: ☐

Autocommit: ☐

Kerberos Thin Config

Config File (krb5.conf):

Credential Cache File:

Use Oracle Client: ☐

Use OCI/Thick driver: ☐

Tnsnames Directory:

## Testowanie połączeń przy pomocy aliasów

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
sys	sys@//localhost:...
USER_1_173148	USER_1_173148...
USER_2_173150	USER_2_173150...
USER_3_AMERIKA	USER_3_AMERIK...

Name: PDB\_JABLONSKI

Database Type: Oracle

User Info: Proxy User

Authentication Type: Default

Username: sys

Role: SYSDBA

Password: .....

Save Password: ☐

Connection Type: TNS

Details: Advanced

☒ Network Alias: Alias\_1\_173148

☐ Connect Identifier:

Status: Success

Help Save Clear Test Connect Cancel

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
PDB_JEDRZEJCZYK	sys@//localhost:...
sys	sys@//localhost:...
USER_1_173148	USER_1_173148...
USER_2_173150	USER_2_173150...
USER_3_AMERIKA	USER_3_AMERIK...

Name: PDB\_JEDRZEJCZYK

Database Type: Oracle

User Info: Proxy User

Authentication Type: Default

Username: sys

Role: SYSDBA

Password: .....

Save Password: ☐

Connection Type: TNS

Details: Advanced

☒ Network Alias: Alias\_2\_173150

☐ Connect Identifier:

Status: Success

Help Save Clear Test Connect Cancel

New / Select Database Connection

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:...
PDB_JABLONSKI	sys@//localhost:...
PDB_JEDRZEJCZYK	sys@//localhost:...
sys	sys@//localhost:...
USER_1_173148	USER_1_173148...
USER_2_173150	USER_2_173150...
USER_3_AMERIKA	USER_3_AMERIK...

Name

PDB\_AMERIKA

Color

Database Type

Oracle

User Info

Proxy User

Authentication Type

Default

Username

sys

Role

SYSDBA

Password

\*\*\*\*\*

☒ Save Password

Connection Type

TNS

Details

Advanced

☒ Network Alias

Alias\_3

☐ Connect Identifier

Status : Success

Help

Save

Clear

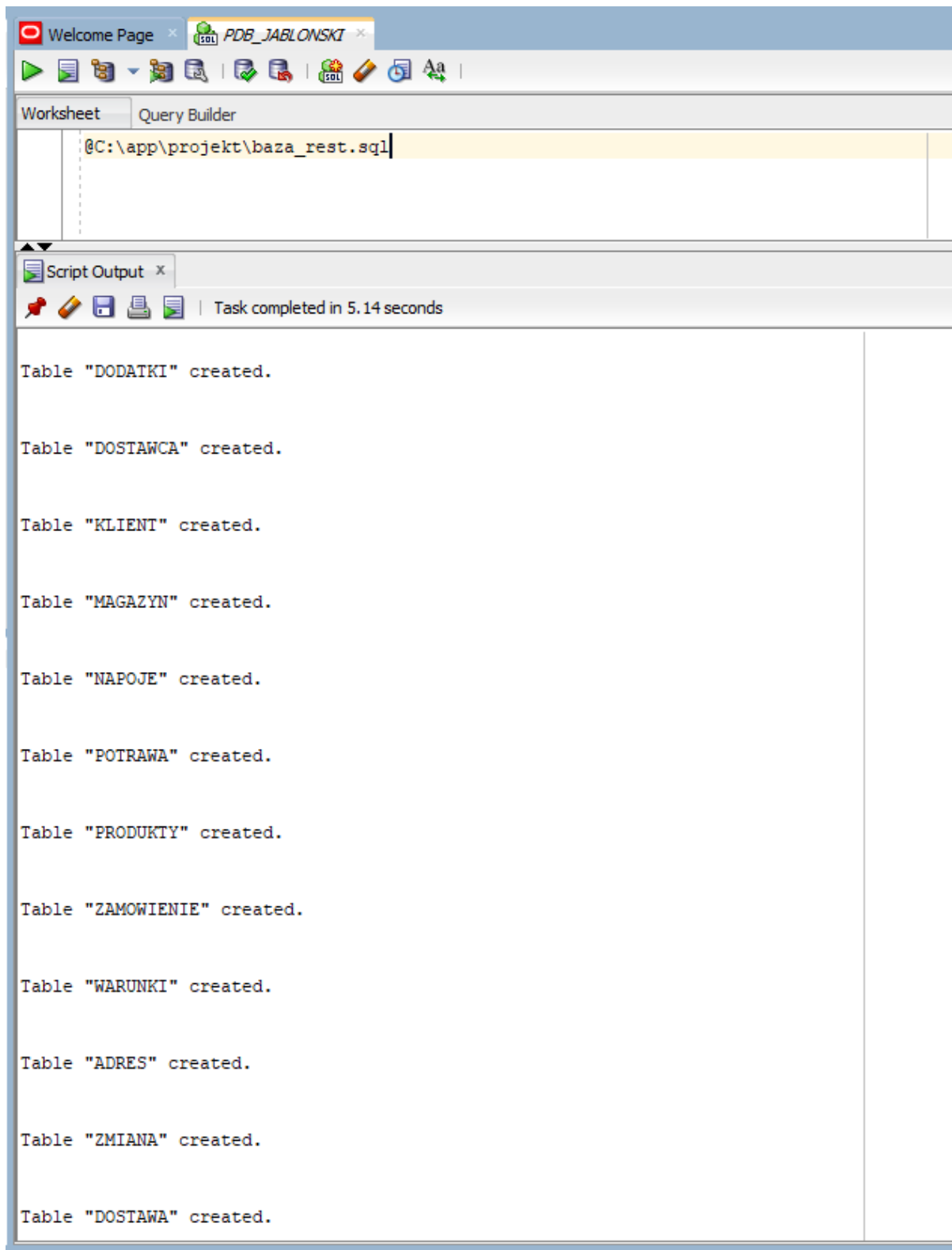
Test

Connect

Cancel

# 11. Instalacja schematów bazy + import danych:

## Wykonanie dla konteneru 1



## Przeniesienie tabel do przestrzeni PT\_1

The screenshot displays the SQL Developer interface. The top toolbar includes icons for running, saving, and editing. The 'Query Builder' tab is active, showing a script to move 15 tables to the PT\_1 tablespace. The last line of the script, 'ALTER TABLE REZERWACJA MOVE TABLESPACE PT\_1;', is highlighted. Below the script, the 'Script Output' window shows the execution results, indicating that the task was completed in 1.594 seconds and listing the tables that were altered.

```
ALTER TABLE DODATKI MOVE TABLESPACE PT_1;
ALTER TABLE DOSTAWCA MOVE TABLESPACE PT_1;
ALTER TABLE KLIENT MOVE TABLESPACE PT_1;
ALTER TABLE MAGAZYN MOVE TABLESPACE PT_1;
ALTER TABLE NAPOJE MOVE TABLESPACE PT_1;
ALTER TABLE POTRAWA MOVE TABLESPACE PT_1;
ALTER TABLE PRODUKTY MOVE TABLESPACE PT_1;
ALTER TABLE ZAMOWIENIE MOVE TABLESPACE PT_1;
ALTER TABLE WARUNKI MOVE TABLESPACE PT_1;
ALTER TABLE ADRES MOVE TABLESPACE PT_1;
ALTER TABLE ZMIANA MOVE TABLESPACE PT_1;
ALTER TABLE DOSTAWA MOVE TABLESPACE PT_1;
ALTER TABLE PRACOWNICY MOVE TABLESPACE PT_1;
ALTER TABLE REZERWACJA MOVE TABLESPACE PT_1;
```

Script Output x

Task completed in 1.594 seconds

Table KLIENT altered.

Table MAGAZYN altered.

Table NAPOJE altered.

Table POTRAWA altered.

Table PRODUKTY altered.

Table ZAMOWIENIE altered.

Table WARUNKI altered.

Table ADRES altered.

## Testowanie danych

Worksheet Query Builder

`SELECT * FROM sys.adres;`

Query Result x

All Rows Fetched: 20 in 0.01 seconds

	ID	WOJEWODZTWO	MIASTO	ULICA	NUMER	KOD
1	1	Podkarpackie	Rzeszow	Matuszczaka	28 36	040
2	2	Podkarpackie	Rzeszów	3 Maja	33 35	001
3	3	Świętokrzyskie	Kielce	Sienkiewicza	12 25	001
4	4	Małopolskie	Kraków	Rynek Główny	15 30	062
5	5	Lubelskie	Lublin	Krakowskie Przedmieście	19 20	001
6	6	Podkarpackie	Przemysław	Sienkiewicza	28 37	700
7	7	Świętokrzyskie	Ostrowiec Świętokrzyski	Piłsudskiego	30 27	400
8	8	Małopolskie	Nowy Sącz	Kościuszki	9 33	300
9	9	Lubelskie	Chełm	Armii Krajowej	14 22	100
10	10	Świętokrzyskie	Końskie	Siemowackiego	5 26	200
11	11	Małopolskie	Tarnów	Krakowska	15 33	100
12	12	Lubelskie	Łęczyzna	Boczna	7 21	010
13	13	Podkarpackie	Krosno	Leśna	11 38	400
14	14	Świętokrzyskie	Sandomierz	Mickiewicza	3 27	600
15	15	Małopolskie	Oświęcim	Dworcowa	5 32	600
16	16	Lubelskie	Białą Podlaska	Lipowa	10 21	500
17	17	Podkarpackie	Jasło	Kościuszki	14 38	200
18	18	Świętokrzyskie	Opatów	Sienkiewicza	16 27	500
19	19	Małopolskie	Zakopane	Krupiówki	1 34	500
20	20	Lubelskie	Puławy	Kriewska	22 24	100



## Testowanie uprawnień dla user\_1\_173148

The screenshot displays the SQL Enterprise Manager interface. The top pane, titled 'Query Builder', contains a batch of 15 SQL statements, each granting SELECT, INSERT, UPDATE, and DELETE permissions to the user 'USER\_1\_173148' on a specific table. The last statement is highlighted in yellow. The bottom pane, titled 'Script Output', shows the execution results, with each statement returning 'Grant succeeded.'.

Worksheet Query Builder

```
GRANT SELECT, INSERT, UPDATE, DELETE ON DODATKI TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON DOSTAWCA TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON KLIENT TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON MAGAZYN TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON NAPOJE TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON POTRAWA TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON PRODUKTY TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON ZAMOWIENIE TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON WARUNKI TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON ADRES TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON ZMIANA TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON DOSTAWA TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON PRACOWNICY TO USER_1_173148;  
GRANT SELECT, INSERT, UPDATE, DELETE ON REZERWACJA TO USER_1_173148;
```

Script Output x

Task completed in 0.153 seconds

Grant succeeded.

Grant succeeded.

Grant succeeded.

Grant succeeded.

Grant succeeded.

Grant succeeded.

## Zweryfikowanie czy user\_1\_173148 ma dostęp do danych

Worksheet Query Builder

```
select * from sys.adres
```

Query Result x

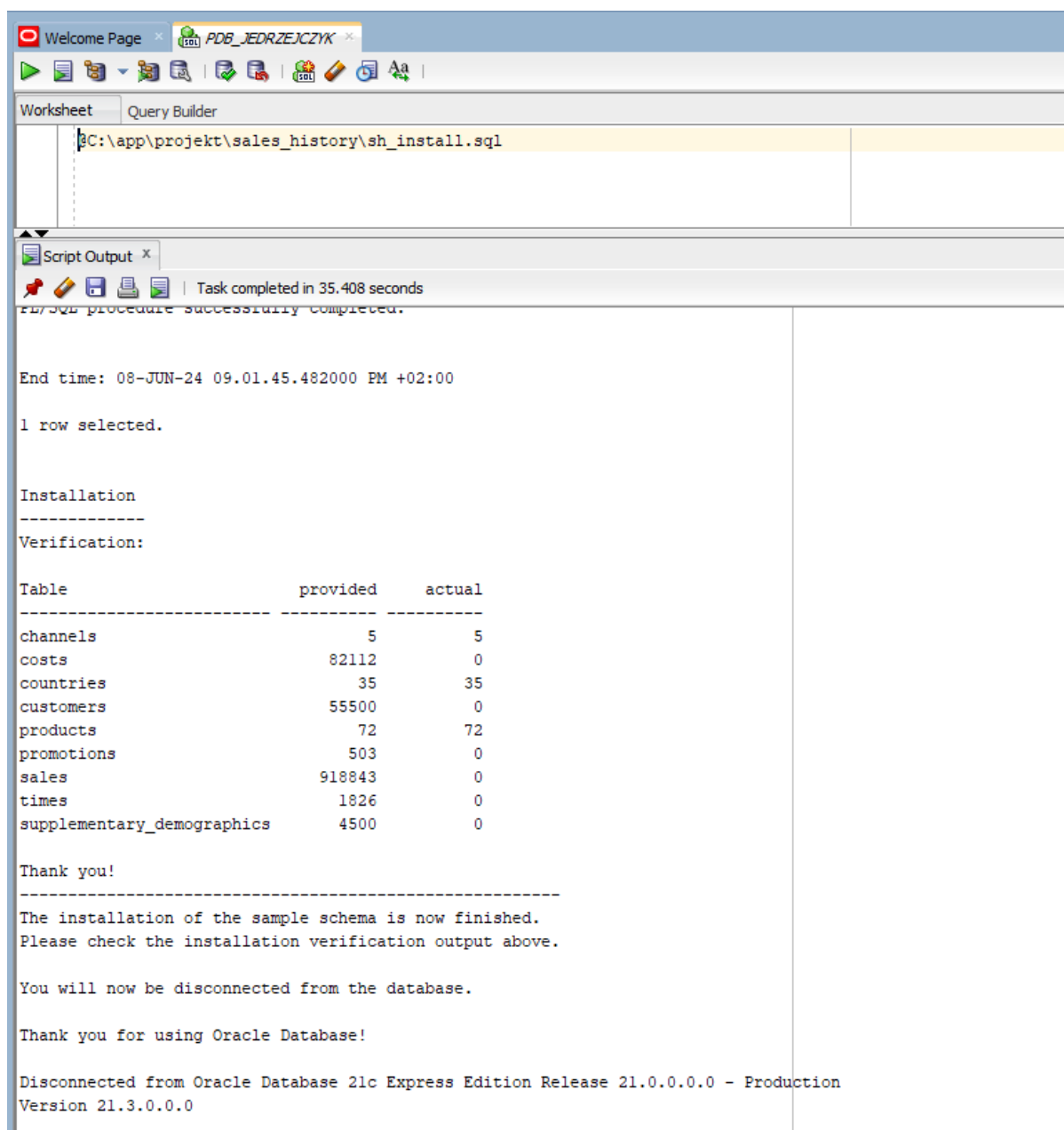
SQL | All Rows Fetched: 20 in 0.013 seconds

ID	WOJEWODZTWO	MIASTO	ULICA	NUMER	KOD
1	Podkarpackie	Rzeszow	Matuszczaka	28 36-040	
2	Podkarpackie	Rzeszów	3 Maja	33 35-001	
3	Świętokrzyskie	Kielce	Sienkiewicza	12 25-001	
4	Małopolskie	Kraków	Rynek Główny	15 30-062	
5	Lubelskie	Lublin	Krakowskie Przedmieście	19 20-001	
6	Podkarpackie	Przemysław	Sienkiewicza	28 37-700	
7	Świętokrzyskie	Ostrowiec Świętokrzyski	Piłsudskiego	30 27-400	
8	Małopolskie	Nowy Sącz	Kołbuszki	9 33-300	
9	Lubelskie	Chełm	Armii Krajowej	14 22-100	
10	Świętokrzyskie	Końskie	Siemowackiego	5 26-200	
11	Małopolskie	Tarnów	Krakowska	15 33-100	
12	Lubelskie	Łęczna	Boczna	7 21-010	
13	Podkarpackie	Krosno	Leśna	11 38-400	
14	Świętokrzyskie	Sandomierz	Mickiewicza	3 27-600	
15	Małopolskie	Oświęcim	Dworcowa	5 32-600	
16	Lubelskie	Biała Podlaska	Lipowa	10 21-500	

## Wykonanie dla konteneru 2

### Dodanie danych do PT\_Jakub (wyjaśnienie)

Z powodu niewiadomych problemów z przestrzenią tabel PT\_2 postanowiliśmy ją usunąć i stworzyć na nowo. Niestety jak wyszło w trakcie tego procesu Oracle nie pozwala na ponowne używanie nazw więc musieliśmy utworzyć nową przestrzeń tabel.



The screenshot shows the Oracle SQL Developer interface. The top toolbar includes icons for running, saving, and other database operations. The 'Worksheet' tab is active, displaying the path `@C:\app\projekt\sales_history\sh_install.sql`. Below the worksheet, the 'Script Output' window shows the results of the script execution. It indicates that the task was completed in 35.408 seconds and that 1 row was selected. The output includes a table with columns 'Table', 'provided', and 'actual', listing various database tables and their respective values. The script concludes with a 'Thank you!' message and a disconnect message from the Oracle Database.

```
End time: 08-JUN-24 09.01.45.482000 PM +02:00

1 row selected.

Installation
-----
Verification:

Table                provided    actual
-----
channels              5          5
costs                 82112      0
countries             35         35
customers             55500      0
products              72         72
promotions            503         0
sales                 918843     0
times                 1826         0
supplementary_demographics 4500         0

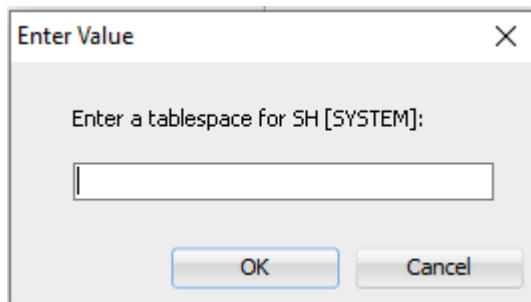
Thank you!
-----
The installation of the sample schema is now finished.
Please check the installation verification output above.

You will now be disconnected from the database.

Thank you for using Oracle Database!

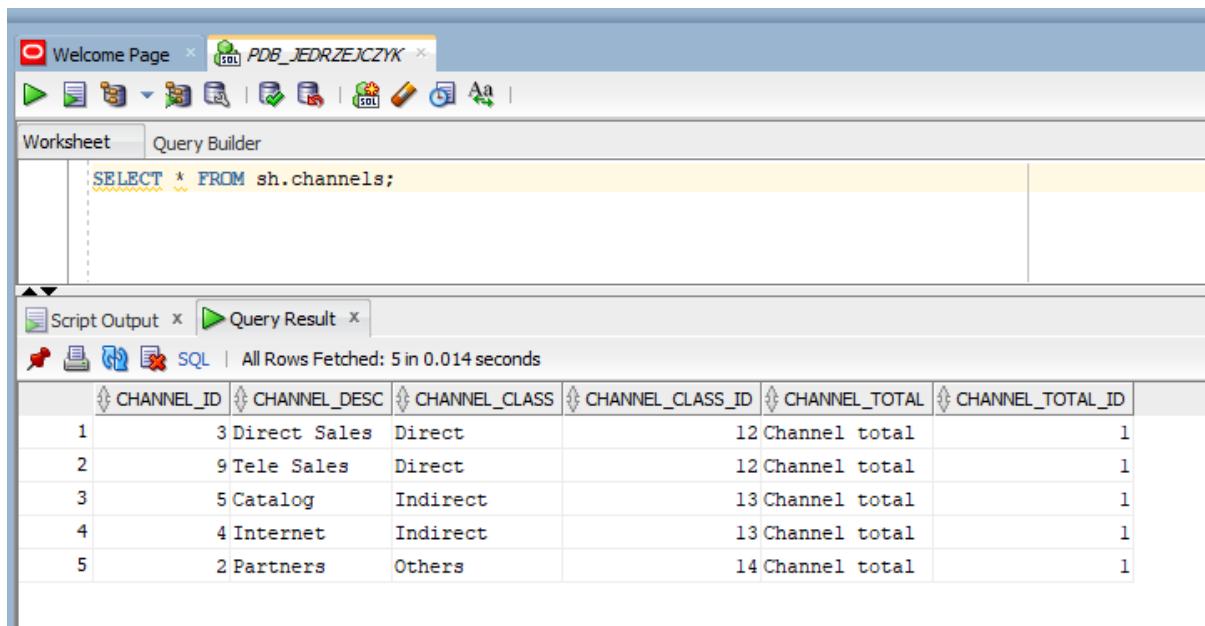
Disconnected from Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0
```

Podczas instalacji danych jeden z kroków wymagał aby podać przestrzeń tabelowa.



A dialog box titled "Enter Value" with a close button (X) in the top right corner. The text inside says "Enter a tablespace for SH [SYSTEM]:". Below the text is a text input field. At the bottom are two buttons: "OK" and "Cancel".

## Sprawdzenie czy dane się załadowały



The screenshot shows the SQL Developer interface. The top bar includes a "Welcome Page" tab and a "PDB\_JEDRZEJCZYK" tab. Below the toolbar, the "Query Builder" tab is active, showing the SQL query: `SELECT * FROM sh.channels;`. The "Query Result" tab is also visible, showing the results of the query. The status bar indicates "All Rows Fetched: 5 in 0.014 seconds".

	CHANNEL_ID	CHANNEL_DESC	CHANNEL_CLASS	CHANNEL_CLASS_ID	CHANNEL_TOTAL	CHANNEL_TOTAL_ID
1	3	Direct Sales	Direct	12	Channel total	1
2	9	Tele Sales	Direct	12	Channel total	1
3	5	Catalog	Indirect	13	Channel total	1
4	4	Internet	Indirect	13	Channel total	1
5	2	Partners	Others	14	Channel total	1

## Nadanie uprawnień dla user\_2\_173150

The screenshot displays the SQL Developer interface. The top toolbar includes icons for running queries, saving, and undo/redo. The 'Query Builder' tab is active, showing a list of SQL statements in the 'Worksheet' area. The statements are GRANT commands for various tables: channels, costs, countries, products, promotions, sales, times, and supplementary\_demographics. The last statement, 'GRANT SELECT, INSERT, UPDATE, DELETE ON supplementary\_demographics TO USER\_2\_173150;', is highlighted. Below the query builder, the 'Script Output' window shows the results of the execution, with each 'Grant' statement returning 'Grant succeeded.' The status bar at the bottom indicates 'Task completed in 0.208 seconds'.

```
GRANT SELECT, INSERT, UPDATE, DELETE ON channels TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON costs TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON countries TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON products TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON promotions TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON sales TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON times TO USER_2_173150;
GRANT SELECT, INSERT, UPDATE, DELETE ON supplementary_demographics TO USER_2_173150;
```

Script Output x Query Result x

Task completed in 0.208 seconds

Grant succeeded.

Grant succeeded.

Grant succeeded.

Grant succeeded.

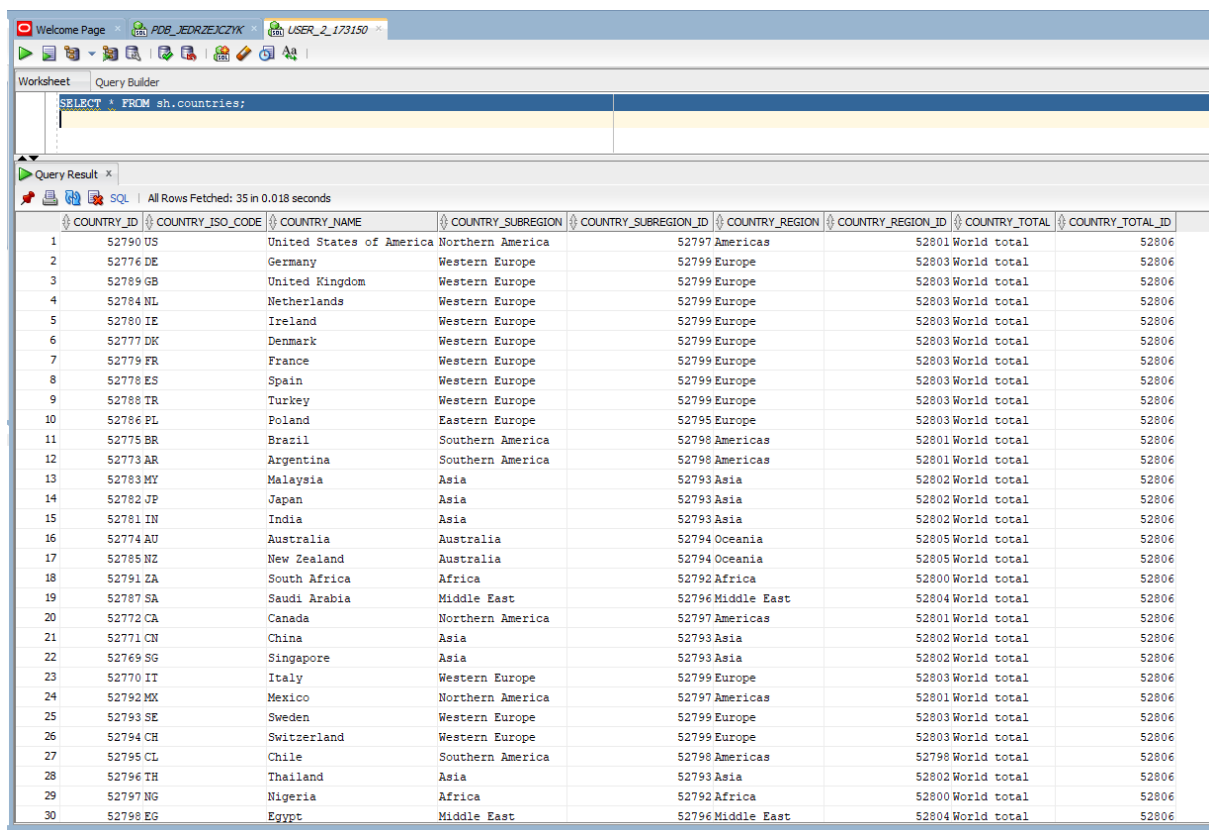
Grant succeeded.

Grant succeeded.

Grant succeeded.

Grant succeeded.

## Testowanie uprawnień dla user\_2\_173150

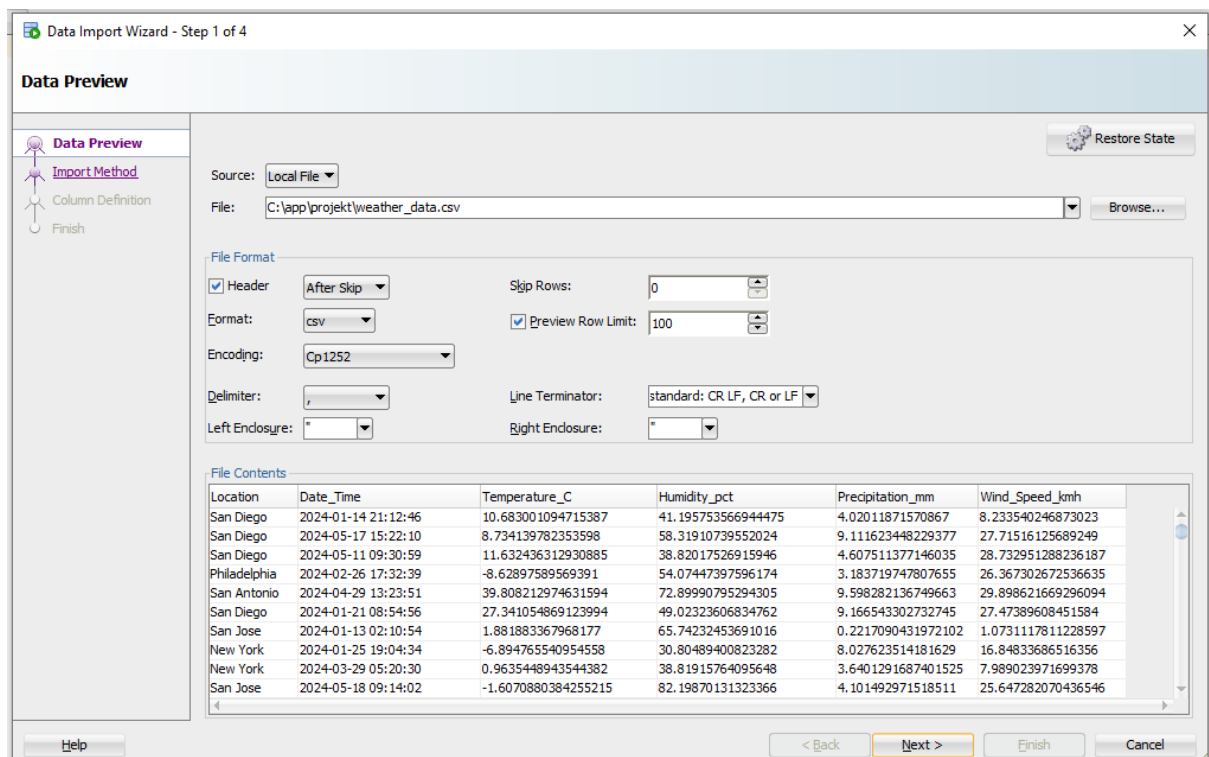


The screenshot shows a database query result for the query: `SELECT * FROM sh.countries;`. The result displays 35 rows of data. The columns are: COUNTRY\_ID, COUNTRY\_ISO\_CODE, COUNTRY\_NAME, COUNTRY\_SUBREGION, COUNTRY\_SUBREGION\_ID, COUNTRY\_REGION, COUNTRY\_REGION\_ID, COUNTRY\_TOTAL, and COUNTRY\_TOTAL\_ID. The data lists various countries and their regional groupings, such as 'United States of America' in 'Northern America' and 'World total'.

COUNTRY_ID	COUNTRY_ISO_CODE	COUNTRY_NAME	COUNTRY_SUBREGION	COUNTRY_SUBREGION_ID	COUNTRY_REGION	COUNTRY_REGION_ID	COUNTRY_TOTAL	COUNTRY_TOTAL_ID
1	52790 US	United States of America	Northern America	52797 Americas		52801 World total	52806	
2	52776 DE	Germany	Western Europe	52799 Europe		52803 World total	52806	
3	52789 GB	United Kingdom	Western Europe	52799 Europe		52803 World total	52806	
4	52784 NL	Netherlands	Western Europe	52799 Europe		52803 World total	52806	
5	52780 IE	Ireland	Western Europe	52799 Europe		52803 World total	52806	
6	52777 DK	Denmark	Western Europe	52799 Europe		52803 World total	52806	
7	52779 FR	France	Western Europe	52799 Europe		52803 World total	52806	
8	52778 ES	Spain	Western Europe	52799 Europe		52803 World total	52806	
9	52788 TR	Turkey	Western Europe	52799 Europe		52803 World total	52806	
10	52786 PL	Poland	Eastern Europe	52795 Europe		52803 World total	52806	
11	52775 BR	Brazil	Southern America	52798 Americas		52801 World total	52806	
12	52773 AR	Argentina	Southern America	52798 Americas		52801 World total	52806	
13	52783 MY	Malaysia	Asia	52793 Asia		52802 World total	52806	
14	52782 JP	Japan	Asia	52793 Asia		52802 World total	52806	
15	52781 IN	India	Asia	52793 Asia		52802 World total	52806	
16	52774 AU	Australia	Australia	52794 Oceania		52805 World total	52806	
17	52785 NZ	New Zealand	Australia	52794 Oceania		52805 World total	52806	
18	52791 ZA	South Africa	Africa	52792 Africa		52800 World total	52806	
19	52787 SA	Saudi Arabia	Middle East	52796 Middle East		52804 World total	52806	
20	52772 CA	Canada	Northern America	52797 Americas		52801 World total	52806	
21	52771 CN	China	Asia	52793 Asia		52802 World total	52806	
22	52769 SG	Singapore	Asia	52793 Asia		52802 World total	52806	
23	52770 IT	Italy	Western Europe	52799 Europe		52803 World total	52806	
24	52792 MX	Mexico	Northern America	52797 Americas		52801 World total	52806	
25	52793 SE	Sweden	Western Europe	52799 Europe		52803 World total	52806	
26	52794 CH	Switzerland	Western Europe	52799 Europe		52803 World total	52806	
27	52795 CL	Chile	Southern America	52798 Americas		52798 World total	52806	
28	52796 TH	Thailand	Asia	52793 Asia		52802 World total	52806	
29	52797 NG	Nigeria	Africa	52792 Africa		52800 World total	52806	
30	52798 EG	Egypt	Middle East	52796 Middle East		52804 World total	52806	

## Wykonanie dla konteneru 3

## Importowanie danych z pliku csv przy uzyciu data import wizard



The screenshot shows the 'Data Import Wizard - Step 1 of 4' window. The 'Data Preview' tab is selected, showing a preview of the data from the 'weather\_data.csv' file. The data includes columns for Location, Date\_Time, Temperature\_C, Humidity\_pct, Precipitation\_mm, and Wind\_Speed\_kmh. The wizard is configured to import data from a local file, with the file path set to 'C:\app\projekt\weather\_data.csv'. The file format is set to 'csv' with 'Header' and 'Preview Row Limit' options. The encoding is set to 'Cp1252' and the delimiter is set to ','. The wizard is ready to proceed to the next step.

**Data Preview**

Source: Local File  
File: C:\app\projekt\weather\_data.csv

File Format:  
☒ Header After Skip Skip Rows: 0  
Format: csv ☒ Preview Row Limit: 100  
Encoding: Cp1252  
Delimiter: , Line Terminator: standard: CR LF, CR or LF  
Left Enclosure: " Right Enclosure: "

File Contents

Location	Date_Time	Temperature_C	Humidity_pct	Precipitation_mm	Wind_Speed_kmh
San Diego	2024-01-14 21:12:46	10.683001094715387	41.195753566944475	4.02011871570867	8.233540246873023
San Diego	2024-05-17 15:22:10	8.734139782353598	58.31910739552024	9.11623448229377	27.71516125689249
San Diego	2024-05-11 09:30:59	11.632436312930885	38.82017526915946	4.607511377146035	28.732951288236187
Philadelphia	2024-02-26 17:32:39	-8.62897589569391	54.07447397596174	3.183719747807655	26.367302672536635
San Antonio	2024-04-29 13:23:51	39.808212974631594	72.89990795294305	9.598282136749663	29.898621669296094
San Diego	2024-01-21 08:54:56	27.341054869123994	49.02323606834762	9.166543302732745	27.47389608451584
San Jose	2024-01-13 02:10:54	1.881883367968177	65.74232453691016	0.2217090431972102	1.0731117811228597
New York	2024-01-25 19:04:34	-6.894765540954558	30.80489400823282	8.027623514181629	16.84833686516356
New York	2024-03-29 05:20:30	0.9635448943544382	38.81915764095648	3.6401291687401525	7.989023971699378
San Jose	2024-05-18 09:14:02	-1.6070880384255215	82.19870131323366	4.101492971518511	25.647282070436546

### Import Method

Data Preview
Import Method
Column Definition
Finish

Specify the method for importing data. For External Table method, an external table will be created to read the data in the file. For Staging External Table method, an external table will be created as a staging table for importing the target table. For other methods, a new table is created and the data is imported.

Import Method: Insert

☐ Send Create Script to SQL Worksheet

Table Name: temperature

☐ Import Row Limit: 100

File Contents

Location	Date_Time	Temperature_C	Humidity_pct	Precipitation_mm	Wind_Speed_kmh
San Diego	2024-01-14 21:12:46	10.683001094715387	41.195753566944475	4.02011871570867	8.233540246873023
San Diego	2024-05-17 15:22:10	8.734139782353598	58.31910739552024	9.111623448229377	27.71516125689249
San Diego	2024-05-11 09:30:59	11.632436312930885	38.82017526915946	4.607511377146035	28.732951288236187
Philadelphia	2024-02-26 17:32:39	-8.62897589569391	54.07447397596174	3.183719747807655	26.367302672536635
San Antonio	2024-04-29 13:23:51	39.808212974631594	72.89990795294305	9.598282136749663	29.898621669296094
San Diego	2024-01-21 08:54:56	27.341054869123994	49.02323606834762	9.166543302732745	27.47389608451584
San Jose	2024-01-13 02:10:54	1.881883367968177	65.74232453691016	0.2217090431972102	1.0731117811228597
New York	2024-01-25 19:04:34	-6.894765540954558	30.80489400823282	8.027623514181629	16.84833686516356
New York	2024-03-29 05:20:30	0.9635448943544382	38.81915764095648	3.6401291687401525	7.989023971699378
San Jose	2024-05-18 09:14:02	-1.6070880384255215	82.19870131323366	4.101492971518511	25.647282070436546
New York	2024-03-04 13:47:15	35.14555906501712	54.7528656584597	8.349194966148637	25.430310019530673
Houston	2024-03-07 22:03:36	15.816763568100587	80.11990203459081	3.7600041861580316	16.75213220623646
Dallas	2024-02-27 21:07:10	32.016897607941914	53.1943706422686	3.552671054425888	3.0501963855642513
Houston	2024-05-09 00:53:10	38.641269264068626	85.95272555594032	0.4707818426036259	20.77926401089995
Houston	2024-05-12 15:57:55	39.66677191836734	72.74702581150828	1.2637221588915803	6.479492097370642
Philadelphia	2024-03-09 01:51:24	28.290114688292803	35.2391696910979	9.347204732507425	14.06676464016529
San Antonio	2024-02-10 15:05:28	16.349789500368708	65.81260731013612	0.10909021772622318	6.597039039560281

### Choose Columns

Data Preview
Import Method
Choose Columns
Column Definition
Finish

Select the columns to import from the data set and arrange them in the order you want.

Available Columns

Selected Columns

Location
Date\_Time
Temperature\_C
Humidity\_pct
Precipitation\_mm
Wind\_Speed\_kmh

39

Data Import Wizard - Step 4 of 5

### Column Definition

For each column on left, define the column details of the database table that will be created to import this data into.

**Source Data Columns**

- Location
- Date\_Time
- Temperature\_C
- Humidity\_pct
- Precipitation\_mm
- Wind\_Speed\_kmh

**Target Table Columns**

Name:

Data Type:

Size/Precision:

☒ Nullable? Default:

Comment:

**Data**

- San Diego
- San Diego
- San Diego
- Philadelphia
- San Antonio
- San Diego
- San Jose
- New York
- New York
- San Jose
- New York
- Houston

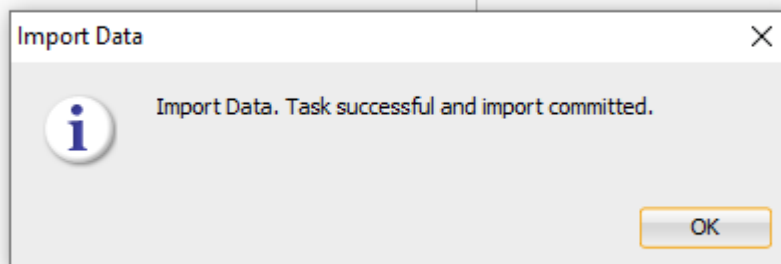
Help < Back Next > Finish Cancel

Import Data

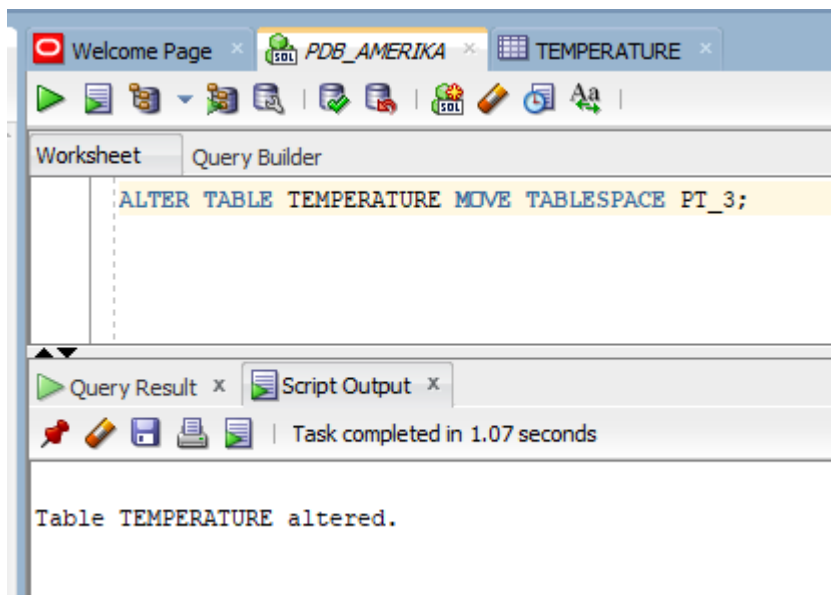
Import Data (Running)

[00:45] Executing insert for rows 981001 through 982000

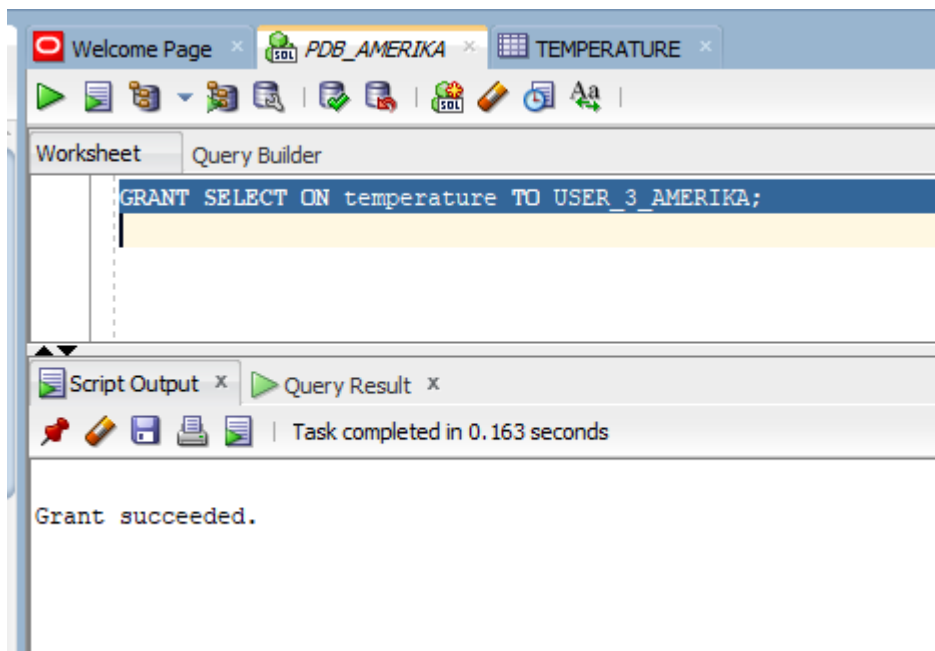




Query Result						
SQL   Fetched 8,900 rows in 0.375 seconds						
	LOCATION	DATE_TIME	TEMPERATURE_C	HUMIDITY_PCT	PRECIPITATION_MM	WIND_SPEED_KMH
8872	Philadelphia	06-APR-24	15.199125317832156	42.97766679322631	5.959984821614414	5.686362195967481
8873	San Diego	07-JAN-24	7.81947918533529	74.34092270439525	6.0949173162991155	4.8939281977813
8874	Philadelphia	14-JAN-24	18.169537520898736	87.71195204666571	0.16971701567751407	27.35394075492526
8875	Phoenix	22-MAR-24	23.583821404687427	51.45290004231893	4.520682150469517	15.208187351174349
8876	New York	02-JAN-24	32.17740056044724	46.8493419361495	0.6466570144081396	26.42079506894886
8877	San Jose	10-JAN-24	-7.723903457303801	70.1014172596233	6.059084131672806	21.372357426789062
8878	Dallas	20-FEB-24	22.47676076870222	80.25291845260067	0.18067792274742756	21.960671447273366
8879	Los Angeles	21-FEB-24	0.6600670042274022	52.32630011839548	9.897940722795424	15.635535493652103
8880	Houston	21-FEB-24	7.908821342718252	42.47909350108441	4.234734621642058	4.620688258677188
8881	Houston	09-MAY-24	-3.871193059376817	41.136805133949714	2.466041426440296	4.418977260704956
8882	San Jose	09-JAN-24	-3.805071273175688	44.10502790084091	9.52250959094495	2.890933277612573
8883	San Diego	26-FEB-24	-0.9059410017191318	31.78622898595939	4.5775386896524815	4.318312267317294
8884	San Diego	28-MAR-24	-0.7936634736982828	52.46313891746458	0.4007509195047998	9.141405804405572
8885	Philadelphia	21-FEB-24	7.468236934324217	39.44496439145172	0.19680338789094032	15.956746550077682
8886	Chicago	06-MAR-24	12.408822886274521	50.48894183313429	5.712700104742509	5.332307661725585
8887	Los Angeles	17-MAY-24	-0.6483785683009753	74.63452773341047	7.821117338945025	18.74672761247114
8888	San Jose	27-FEB-24	17.156711350155966	78.90883119641886	6.97650262397045	26.31497488997136
8889	Los Angeles	28-APR-24	27.26346546109017	44.89088927591689	6.43796797799593	10.698042288186834
8890	Philadelphia	16-FEB-24	33.31935709467646	40.590070870648155	1.25627535380193	2.0286216622051
8891	New York	17-MAR-24	39.291961114818136	30.559937149858627	3.7959758882628716	23.979055274688637
8892	Houston	24-MAR-24	9.878550034717811	71.26838520357046	4.6479661738334075	8.985101236291532
8893	Phoenix	22-JAN-24	7.414838848771561	55.61981217656104	14.340579466440651	13.873349138105613
8894	San Jose	07-FEB-24	1.9562694740239568	48.839884120302344	5.97290258360195	4.755843150872706
8895	San Diego	09-FEB-24	30.06405733231962	34.21576117315872	7.627967954453187	6.13165032789814
8896	Los Angeles	01-APR-24	-9.80001357165132	69.60868999475518	3.588854799666125	21.042998975758834
8897	Dallas	03-FEB-24	15.904989353190949	66.18940315282892	6.9190202831030625	22.116321306720607
8898	Philadelphia	12-MAR-24	10.435486601954455	65.9873370102317	3.4927345460908334	1.2464695914737522
8899	Dallas	19-APR-24	18.66261886839449	77.78964418885299	2.6824154930311006	16.895479155476146
8900	San Antonio	09-FEB-24	39.278635614189106	63.677538674302156	7.637289560871596	23.703967674261648



## Nadanie uprawnień użytkownikowi USER\_3\_AMERIKA



## Testowanie uprawnień dla user\_3\_amerika

Worksheet Query Builder

```
select * from sys.temperature;
```

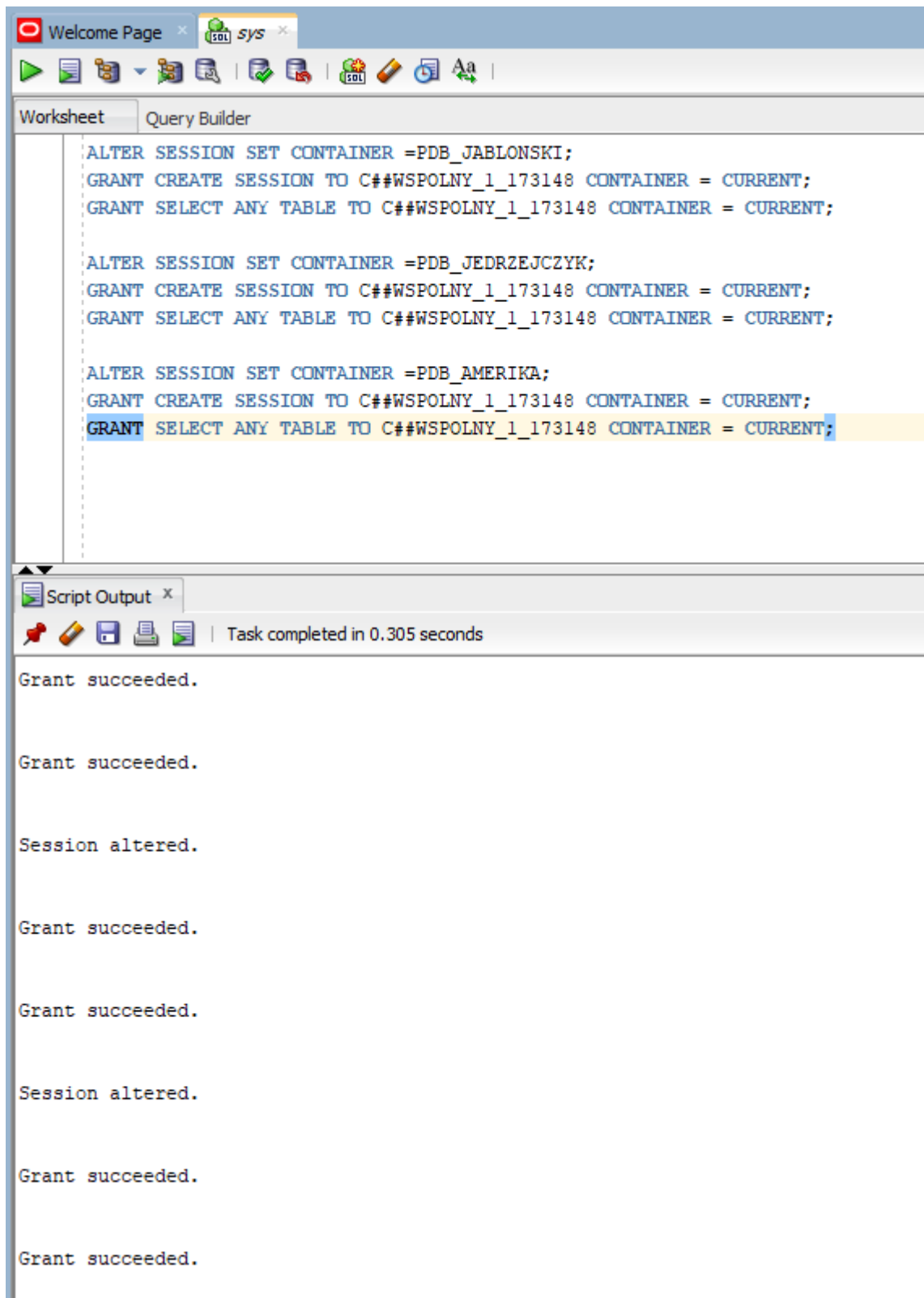
Query Result x

SQL | Fetched 50 rows in 0.001 seconds

	LOCATION	DATE_TIME	TEMPERATURE_C	HUMIDITY_PCT	PRECIPITATION_MM	WIND_SPEED_KMH
1	San Diego	14-JAN-24	10.683001094715387	41.195753566944475	4.02011871570867	8.233540246873023
2	San Diego	17-MAY-24	8.734139782353598	58.31910739552024	9.111623448229377	27.71516125689249
3	San Diego	11-MAY-24	11.632436312930885	38.82017526915946	4.607511377146035	28.732951288236187
4	Philadelphia	26-FEB-24	-8.62897589569391	54.07447397596174	3.183719747807655	26.367302672536635
5	San Antonio	29-APR-24	39.808212974631594	72.89990795294305	9.598282136749663	29.898621669296094
6	San Diego	21-JAN-24	27.341054869123994	49.02323606834762	9.166543302732745	27.47389608451584
7	San Jose	13-JAN-24	1.881883367968177	65.74232453691016	0.2217090431972102	1.0731117811228597
8	New York	25-JAN-24	-6.894765540954558	30.80489400823282	8.027623514181629	16.84833686516356
9	New York	29-MAR-24	0.9635448943544382	38.81915764095648	3.6401291687401525	7.989023971699378
10	San Jose	18-MAY-24	-1.6070880384255215	82.19870131323366	4.101492971518511	25.647282070436546
11	New York	04-MAR-24	35.14555906501712	54.7528656584597	8.349194966148637	25.430310019530673
12	Houston	07-MAR-24	15.816763568100587	80.11990203459081	3.7600041861580316	16.75213220623646

## 12.Nadanie uprawnień użytkownikom wspólnym

### Użytkownik wspolny\_1\_173148



The screenshot displays the SQL Developer interface. The top toolbar includes icons for running, saving, and editing. The main window is divided into two panes: 'Worksheet' and 'Query Builder'. The 'Query Builder' pane contains a SQL script with the following statements:

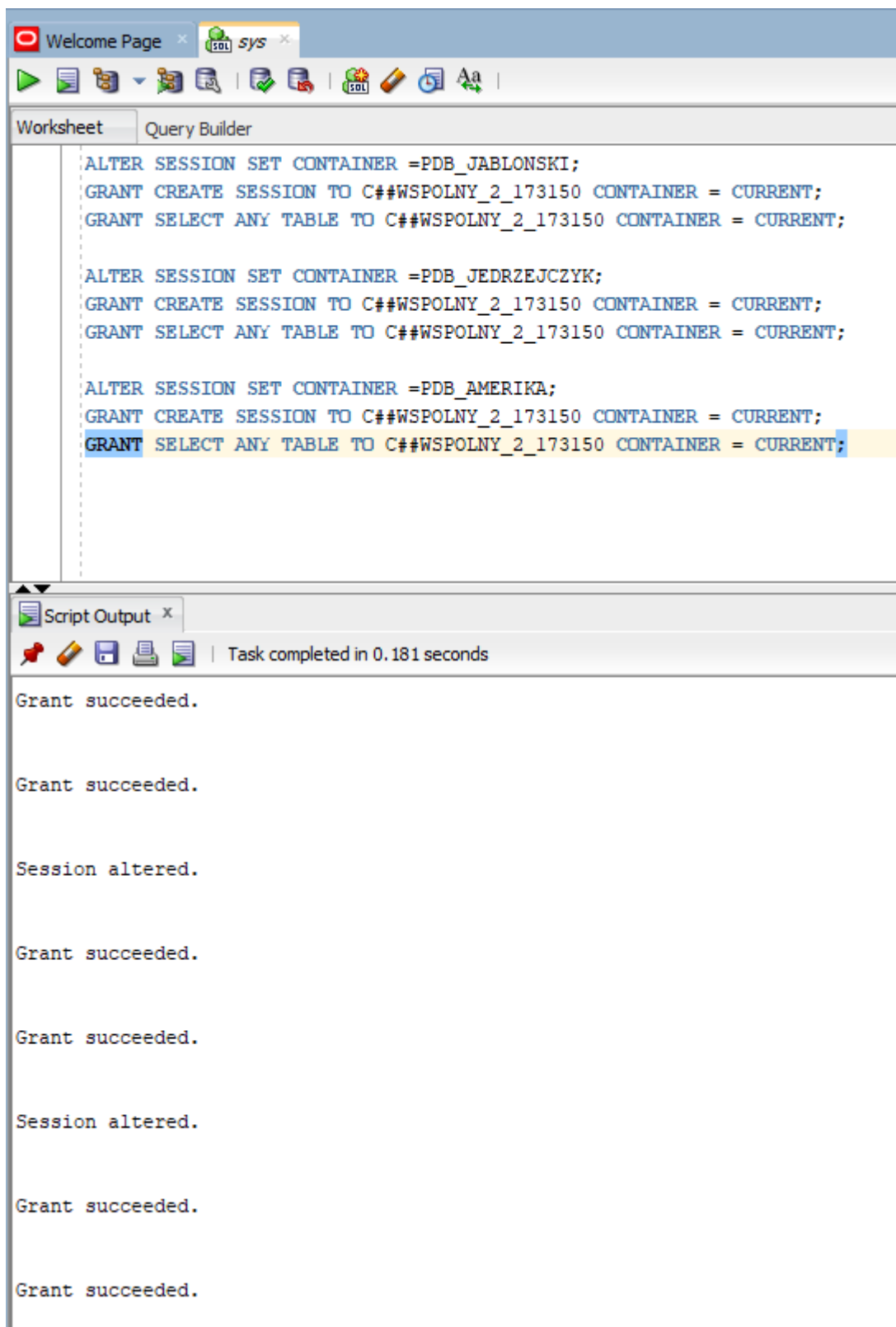
```
ALTER SESSION SET CONTAINER =PDB_JABLONSKI;  
GRANT CREATE SESSION TO C##WSPOLNY_1_173148 CONTAINER = CURRENT;  
GRANT SELECT ANY TABLE TO C##WSPOLNY_1_173148 CONTAINER = CURRENT;  
  
ALTER SESSION SET CONTAINER =PDB_JEDRZEJCZYK;  
GRANT CREATE SESSION TO C##WSPOLNY_1_173148 CONTAINER = CURRENT;  
GRANT SELECT ANY TABLE TO C##WSPOLNY_1_173148 CONTAINER = CURRENT;  
  
ALTER SESSION SET CONTAINER =PDB_AMERIKA;  
GRANT CREATE SESSION TO C##WSPOLNY_1_173148 CONTAINER = CURRENT;  
GRANT SELECT ANY TABLE TO C##WSPOLNY_1_173148 CONTAINER = CURRENT;
```

The 'Script Output' window at the bottom shows the execution results, indicating that all grants and session alterations were successful:

```
Grant succeeded.  
  
Grant succeeded.  
  
Session altered.  
  
Grant succeeded.  
  
Grant succeeded.  
  
Session altered.  
  
Grant succeeded.  
  
Grant succeeded.
```

The status bar at the bottom of the Script Output window indicates that the task was completed in 0.305 seconds.

## Użytkownik wspolny\_2\_173150



The screenshot displays the SQL Developer interface. The top toolbar includes icons for running, saving, and other database operations. The main window is divided into a 'Worksheet' and a 'Query Builder' tab. The 'Worksheet' tab contains a SQL script with three blocks of commands, each for a different pluggable database (PDB): PDB\_JABLONSKI, PDB\_JEDRZEJCZYK, and PDB\_AMERIKA. Each block consists of an 'ALTER SESSION SET CONTAINER' statement followed by 'GRANT CREATE SESSION' and 'GRANT SELECT ANY TABLE' statements for the user 'C##WSPOLNY\_2\_173150'. The 'Script Output' window at the bottom shows the execution results for each block of commands.

```
ALTER SESSION SET CONTAINER =PDB_JABLONSKI;
GRANT CREATE SESSION TO C##WSPOLNY_2_173150 CONTAINER = CURRENT;
GRANT SELECT ANY TABLE TO C##WSPOLNY_2_173150 CONTAINER = CURRENT;

ALTER SESSION SET CONTAINER =PDB_JEDRZEJCZYK;
GRANT CREATE SESSION TO C##WSPOLNY_2_173150 CONTAINER = CURRENT;
GRANT SELECT ANY TABLE TO C##WSPOLNY_2_173150 CONTAINER = CURRENT;

ALTER SESSION SET CONTAINER =PDB_AMERIKA;
GRANT CREATE SESSION TO C##WSPOLNY_2_173150 CONTAINER = CURRENT;
GRANT SELECT ANY TABLE TO C##WSPOLNY_2_173150 CONTAINER = CURRENT;
```

Script Output x

Task completed in 0.181 seconds

Grant succeeded.

Grant succeeded.

Session altered.

Grant succeeded.

Grant succeeded.

Session altered.

Grant succeeded.

Grant succeeded.

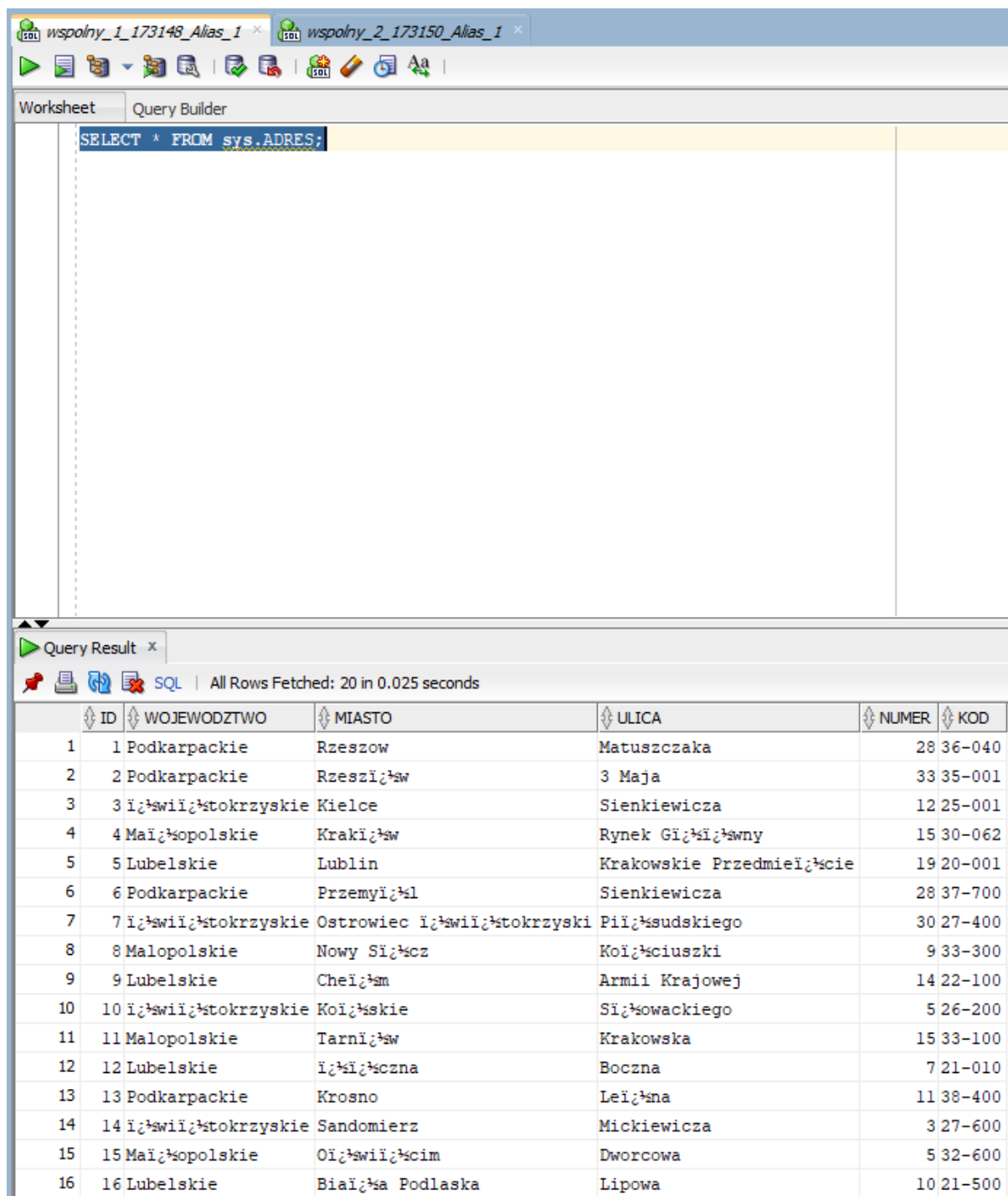
## Dodanie połączeń w Oracle sql developer dla użytkowników wspólnych

Connection Name	Connection Details
PDB_AMERIKA	sys@//localhost:1588/PDB_AMERIKA
PDB_JABLONSKI	sys@//localhost:1522/PDB_JABLONSKI
PDB_JEDRZEJCZYK	sys@//localhost:1544/PDB_JEDRZEJCZYK
sys	sys@//localhost:1521/xe
USER_1_173148	USER_1_173148@//localhost:1522/PDB_JABLO...
USER_2_173150	USER_2_173150@//localhost:1544/PDB_JEDRZ...
USER_3_AMERIKA	USER_3_AMERIKA@//localhost:1588/PDB_AME...
wspolny_1_173148_Alias_1	C##WSPOLNY_1_173148@Alias_1_173148
wspolny_1_173148_Alias_2	C##WSPOLNY_1_173148@Alias_2_173150
wspolny_1_173148_Alias_3	C##WSPOLNY_1_173148@Alias_3
wspolny_2_173150_Alias_1	C##WSPOLNY_2_173150@Alias_1_173148
wspolny_2_173150_Alias_2	C##WSPOLNY_2_173150@Alias_2_173150
wspolny_2_173150_Alias_3	C##WSPOLNY_2_173150@Alias_3

## Testowanie uprawnień

### Użytkownik wspolny\_1\_173148

#### Dla tabeli z PDB\_JABLONSKI



The screenshot shows a SQL query editor with two tabs: 'wspolny\_1\_173148\_Alias\_1' and 'wspolny\_2\_173150\_Alias\_1'. The 'Query Builder' tab is active, displaying the query: `SELECT * FROM sys.ADRES;`. Below the query editor, the 'Query Result' tab shows the results of the query. The results are displayed in a table with 6 columns: ID, WOJEWODZTWO, MIASTO, ULICA, NUMER, and KOD. The table contains 16 rows of data.

ID	WOJEWODZTWO	MIASTO	ULICA	NUMER	KOD
1	Podkarpackie	Rzeszow	Matuszczaka	28 36-040	
2	Podkarpackie	Rzeszów	3 Maja	33 35-001	
3	Świętokrzyskie	Kielce	Sienkiewicza	12 25-001	
4	Małopolskie	Kraków	Rynek Główny	15 30-062	
5	Lubelskie	Lublin	Krakowskie Przedmieście	19 20-001	
6	Podkarpackie	Przemysław	Sienkiewicza	28 37-700	
7	Świętokrzyskie	Ostrowiec Świętokrzyski	Piłsudskiego	30 27-400	
8	Małopolskie	Nowy Sącz	Kościuszki	9 33-300	
9	Lubelskie	Chełm	Armii Krajowej	14 22-100	
10	Świętokrzyskie	Końskie	Słowackiego	5 26-200	
11	Małopolskie	Tarnów	Krakowska	15 33-100	
12	Lubelskie	Żółkiewska	Boczna	7 21-010	
13	Podkarpackie	Krosno	Leśna	11 38-400	
14	Świętokrzyskie	Sandomierz	Mickiewicza	3 27-600	
15	Małopolskie	Oświęcim	Dworcowa	5 32-600	
16	Lubelskie	Białka Podlaska	Lipowa	10 21-500	

## Dla tabeli z PDB\_JEDRZEJCZYK

The screenshot shows a SQL query execution interface. At the top, there are two tabs: 'wspolny\_1\_173148\_Alias\_2' and 'wspolny\_2\_173150\_Alias\_2'. Below the tabs is a toolbar with various icons. The main area is divided into two sections: 'Worksheet' and 'Query Builder'. The 'Worksheet' section contains the SQL query: `SELECT * FROM sh.channels;`. The 'Query Builder' section is empty. Below the query, there is a 'Query Result' section. It shows the results of the query in a table format. The table has 7 columns: CHANNEL\_ID, CHANNEL\_DESC, CHANNEL\_CLASS, CHANNEL\_CLASS\_ID, CHANNEL\_TOTAL, and CHANNEL\_TOTAL\_ID. The results are as follows:

	CHANNEL_ID	CHANNEL_DESC	CHANNEL_CLASS	CHANNEL_CLASS_ID	CHANNEL_TOTAL	CHANNEL_TOTAL_ID
1	3	Direct Sales	Direct	12	Channel total	1
2	9	Tele Sales	Direct	12	Channel total	1
3	5	Catalog	Indirect	13	Channel total	1
4	4	Internet	Indirect	13	Channel total	1
5	2	Partners	Others	14	Channel total	1





## Dla tabeli z PDB\_JABLONSKI

50

## Dla tabeli z PDB\_JEDRZEJCZYK

Wspólny\_1\_173148\_Alias\_2 x Wspólny\_2\_173150\_Alias\_2 x

Worksheet Query Builder

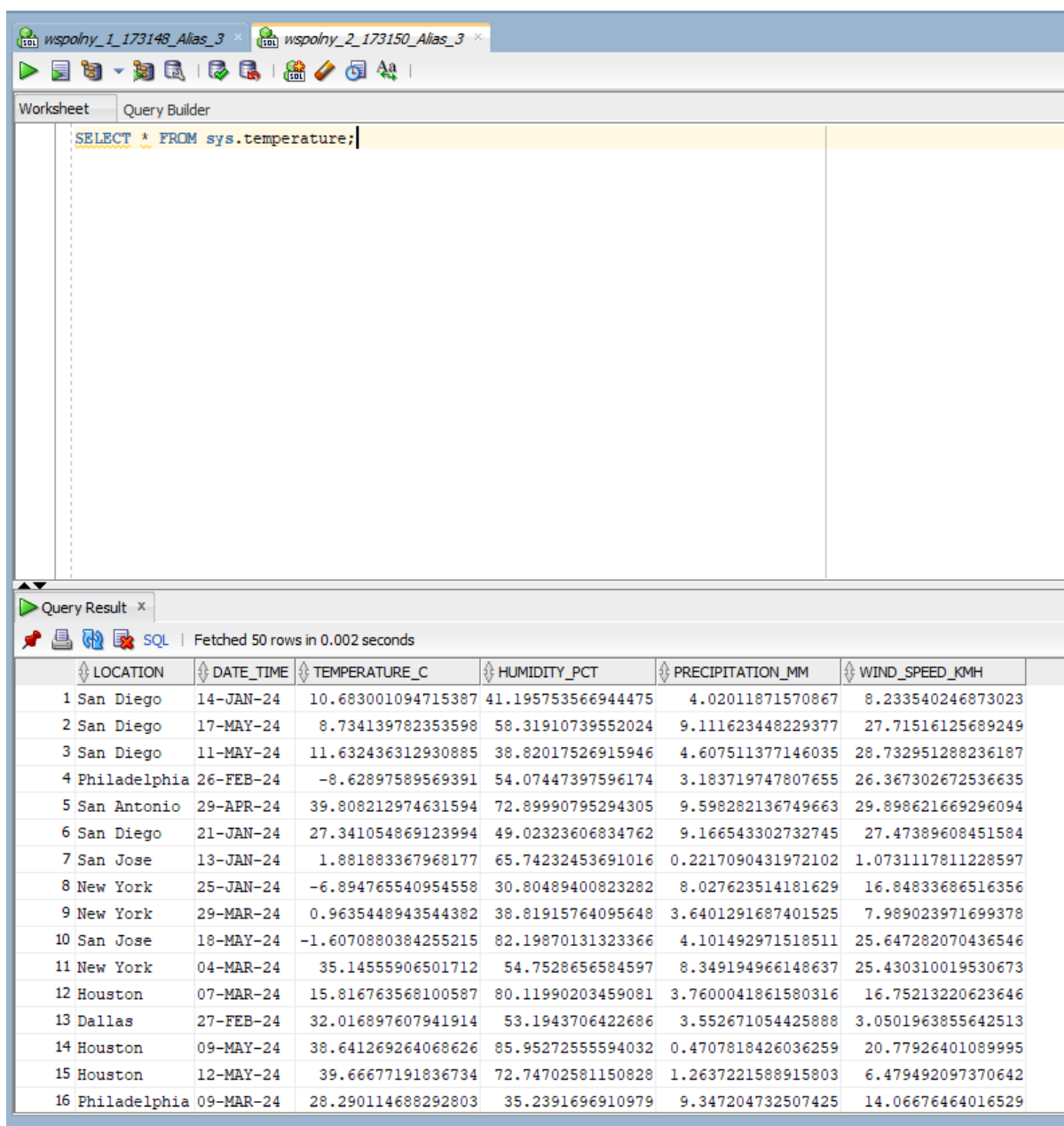
```
SELECT * FROM sh.channels;
```

Query Result x

SQL | All Rows Fetched: 5 in 0.004 seconds

	CHANNEL_ID	CHANNEL_DESC	CHANNEL_CLASS	CHANNEL_CLASS_ID	CHANNEL_TOTAL	CHANNEL_TOTAL_ID
1	3	Direct Sales	Direct	12	Channel total	1
2	9	Tele Sales	Direct	12	Channel total	1
3	5	Catalog	Indirect	13	Channel total	1
4	4	Internet	Indirect	13	Channel total	1
5	2	Partners	Others	14	Channel total	1

## Dla tabeli z PDB\_AMERIKA



The screenshot shows the Oracle SQL Developer interface. The top pane displays the query: `SELECT * FROM sys.temperature;`. The bottom pane shows the query result, which is a table with 6 columns: LOCATION, DATE\_TIME, TEMPERATURE\_C, HUMIDITY\_PCT, PRECIPITATION\_MM, and WIND\_SPEED\_KMH. The table contains 16 rows of data.

LOCATION	DATE_TIME	TEMPERATURE_C	HUMIDITY_PCT	PRECIPITATION_MM	WIND_SPEED_KMH
1 San Diego	14-JAN-24	10.683001094715387	41.195753566944475	4.02011871570867	8.233540246873023
2 San Diego	17-MAY-24	8.734139782353598	58.31910739552024	9.111623448229377	27.71516125689249
3 San Diego	11-MAY-24	11.632436312930885	38.82017526915946	4.607511377146035	28.732951288236187
4 Philadelphia	26-FEB-24	-8.62897589569391	54.07447397596174	3.183719747807655	26.367302672536635
5 San Antonio	29-APR-24	39.808212974631594	72.89990795294305	9.598282136749663	29.898621669296094
6 San Diego	21-JAN-24	27.341054869123994	49.02323606834762	9.166543302732745	27.47389608451584
7 San Jose	13-JAN-24	1.881883367968177	65.74232453691016	0.2217090431972102	1.0731117811228597
8 New York	25-JAN-24	-6.894765540954558	30.80489400823282	8.027623514181629	16.84833686516356
9 New York	29-MAR-24	0.9635448943544382	38.81915764095648	3.6401291687401525	7.989023971699378
10 San Jose	18-MAY-24	-1.6070880384255215	82.19870131323366	4.101492971518511	25.647282070436546
11 New York	04-MAR-24	35.14555906501712	54.7528656584597	8.349194966148637	25.430310019530673
12 Houston	07-MAR-24	15.816763568100587	80.11990203459081	3.7600041861580316	16.75213220623646
13 Dallas	27-FEB-24	32.016897607941914	53.1943706422686	3.552671054425888	3.0501963855642513
14 Houston	09-MAY-24	38.641269264068626	85.95272555594032	0.4707818426036259	20.77926401089995
15 Houston	12-MAY-24	39.66677191836734	72.74702581150828	1.2637221588915803	6.479492097370642
16 Philadelphia	09-MAR-24	28.290114688292803	35.2391696910979	9.347204732507425	14.06676464016529

## 13. Odłączenie konteneru i podłączenie go ponownie




### Wyłączenie

```
SQL> ALTER PLUGGABLE DATABASE PDB_AMERIKA CLOSE IMMEDIATE;  
Pluggable database altered.
```

### Odłączenie

```
SQL> ALTER PLUGGABLE DATABASE PDB_AMERIKA UNPLUG INTO 'C:\AMERIKA\PDB_AMERIKA.XML';  
Pluggable database altered.
```

## Skopiowanie potrzebnych plików do folderu

This PC > Local Disk (C:) > AMERIKA >				
Name	Date modified	Type	Size	
 PDB_AMERIKA	21/04/2024 21:23	File folder		
 PDB_AMERIKA	09/06/2024 17:09	Microsoft Edge H...	8 KB	
 PT_3	09/06/2024 17:09	DBF File	512,008 KB	





## Usunięcie konteneru

```
SQL> DROP PLUGGABLE DATABASE PDB_AMERIKA;  
Pluggable database dropped.
```

(potwierdzenie że został usunięty)

```
SQL> SELECT NAME FROM V$CONTAINERS;  
NAME  
-----  
CDB$ROOT  
PDB$SEED  
XEPDB1  
PDB_JABLONSKI  
PDB_JEDRZEJCZYK
```

## Przeniesienie danych w odpowiednie miejsca

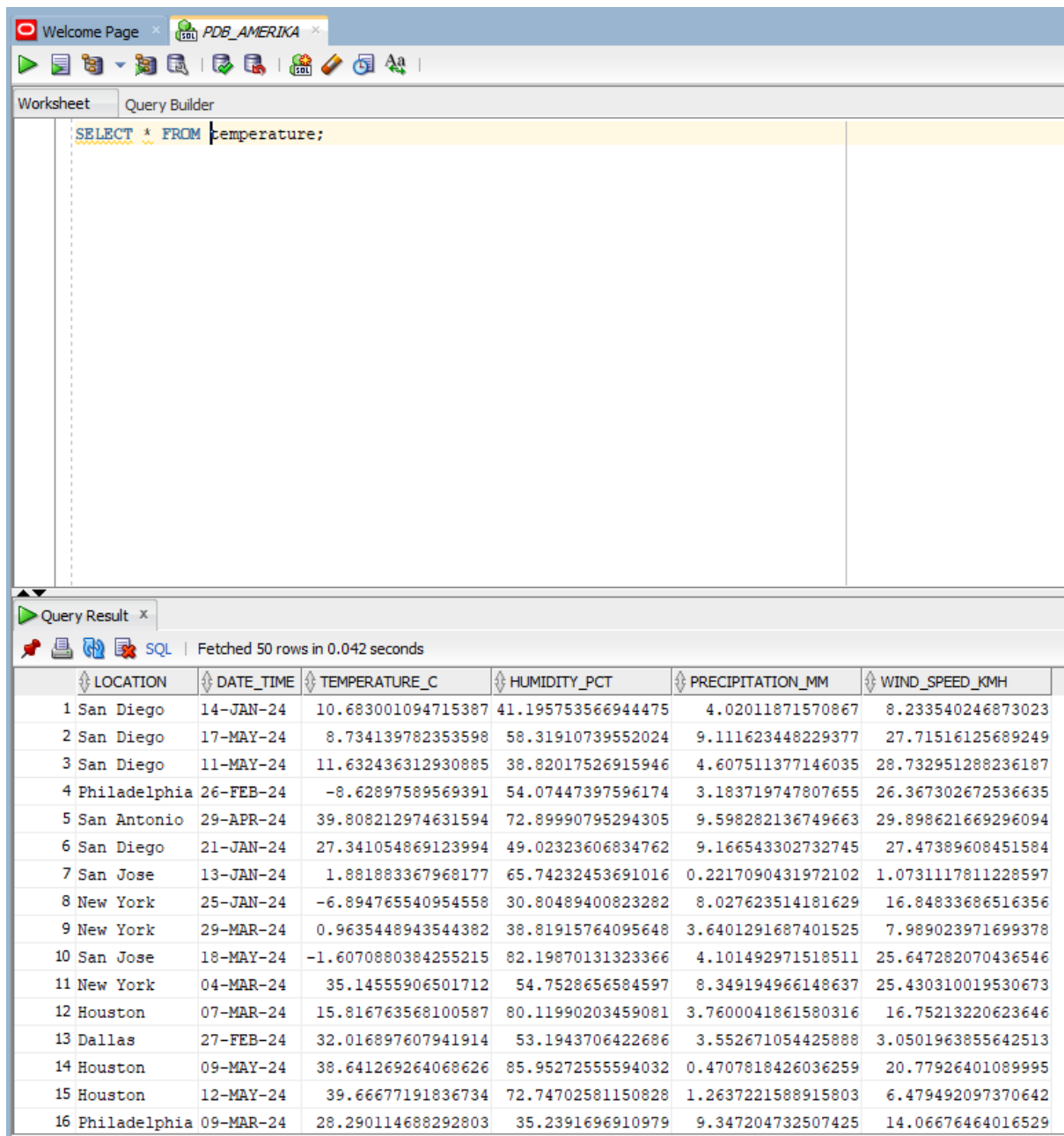
This PC > Local Disk (C:) > app > 173148_173150 > product > 21c > oradata > XE >				
Name	Date modified	Type	Size	
 PDB_AMERIKA	21/04/2024 21:23	File folder		
 PDB_JABLONSKI	21/04/2024 21:01	File folder		
 PDB_JEDRZEJCZYK	07/06/2024 18:04	File folder		
 pdbseed	21/04/2024 17:40	File folder		

Pozostałe pliki można umieścić dowolnie ponieważ przy ich użyciu należy podać ścieżkę do nich.

## Odtworzenie konteneru

```
SQL> CREATE PLUGGABLE DATABASE PDB_AMERIKA_CLONE USING 'C:\AMERIKA\PDB_AMERIKA.XML' NOCOPY;  
Pluggable database created.
```

## Test czy działa dany kontener



Worksheet Query Builder

```
SELECT * FROM temperature;
```

Query Result x

SQL | Fetched 50 rows in 0.042 seconds

	LOCATION	DATE_TIME	TEMPERATURE_C	HUMIDITY_PCT	PRECIPITATION_MM	WIND_SPEED_KMH
1	San Diego	14-JAN-24	10.683001094715387	41.195753566944475	4.02011871570867	8.233540246873023
2	San Diego	17-MAY-24	8.734139782353598	58.31910739552024	9.111623448229377	27.71516125689249
3	San Diego	11-MAY-24	11.632436312930885	38.82017526915946	4.607511377146035	28.732951288236187
4	Philadelphia	26-FEB-24	-8.62897589569391	54.07447397596174	3.183719747807655	26.367302672536635
5	San Antonio	29-APR-24	39.808212974631594	72.89990795294305	9.598282136749663	29.898621669296094
6	San Diego	21-JAN-24	27.341054869123994	49.02323606834762	9.166543302732745	27.47389608451584
7	San Jose	13-JAN-24	1.881883367968177	65.74232453691016	0.2217090431972102	1.0731117811228597
8	New York	25-JAN-24	-6.894765540954558	30.80489400823282	8.027623514181629	16.84833686516356
9	New York	29-MAR-24	0.9635448943544382	38.81915764095648	3.6401291687401525	7.989023971699378
10	San Jose	18-MAY-24	-1.6070880384255215	82.19870131323366	4.101492971518511	25.647282070436546
11	New York	04-MAR-24	35.14555906501712	54.7528656584597	8.349194966148637	25.430310019530673
12	Houston	07-MAR-24	15.816763568100587	80.11990203459081	3.7600041861580316	16.75213220623646
13	Dallas	27-FEB-24	32.016897607941914	53.1943706422686	3.552671054425888	3.0501963855642513
14	Houston	09-MAY-24	38.641269264068626	85.95272555594032	0.4707818426036259	20.77926401089995
15	Houston	12-MAY-24	39.66677191836734	72.74702581150828	1.2637221588915803	6.479492097370642
16	Philadelphia	09-MAR-24	28.290114688292803	35.2391696910979	9.347204732507425	14.06676464016529

## 14. Symulacja usunięcia danych oraz ich przywrócenie

### Ustawienie miejsca w którym będzie znajdował się backup

```
SQL> ALTER SYSTEM SET LOG_ARCHIVE_DEST_1='location=C:\app\projekt\backup' scope=both;
System altered.
```

### Zamknięcie konteneru

```
SQL> SHUTDOWN IMMEDIATE;
Database closed.
Database dismounted.
ORACLE instance shut down.
```

### Ustawienie w tryb MOUNT

```
SQL> STARTUP MOUNT;
ORACLE instance started.

Total System Global Area 1610608792 bytes
Fixed Size                  9855128 bytes
Variable Size              587202560 bytes
Database Buffers          1006632960 bytes
Redo Buffers                6918144 bytes
Database mounted.
```

### Uruchomienie trybu archivelog

```
SQL> ALTER DATABASE ARCHIVELOG;
Database altered.
```

### Otwarcie bazy danych

```
SQL> ALTER DATABASE OPEN;
Database altered.
```

### Uruchomienie narzędzia rman do stworzenia backupu

```
C:\Windows\system32>rman target sys@alias_1_173148

Recovery Manager: Release 21.0.0.0.0 - Production on Sun Jun 9 18:06:17 2024
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle and/or its affiliates. All rights reserved.

target database Password:
connected to target database: XE:PDB_JABLONSKI (DBID=3274270539)
```

## Utworzenie backupu

```
RMAN> BACKUP TABLESPACE PT_1;
```

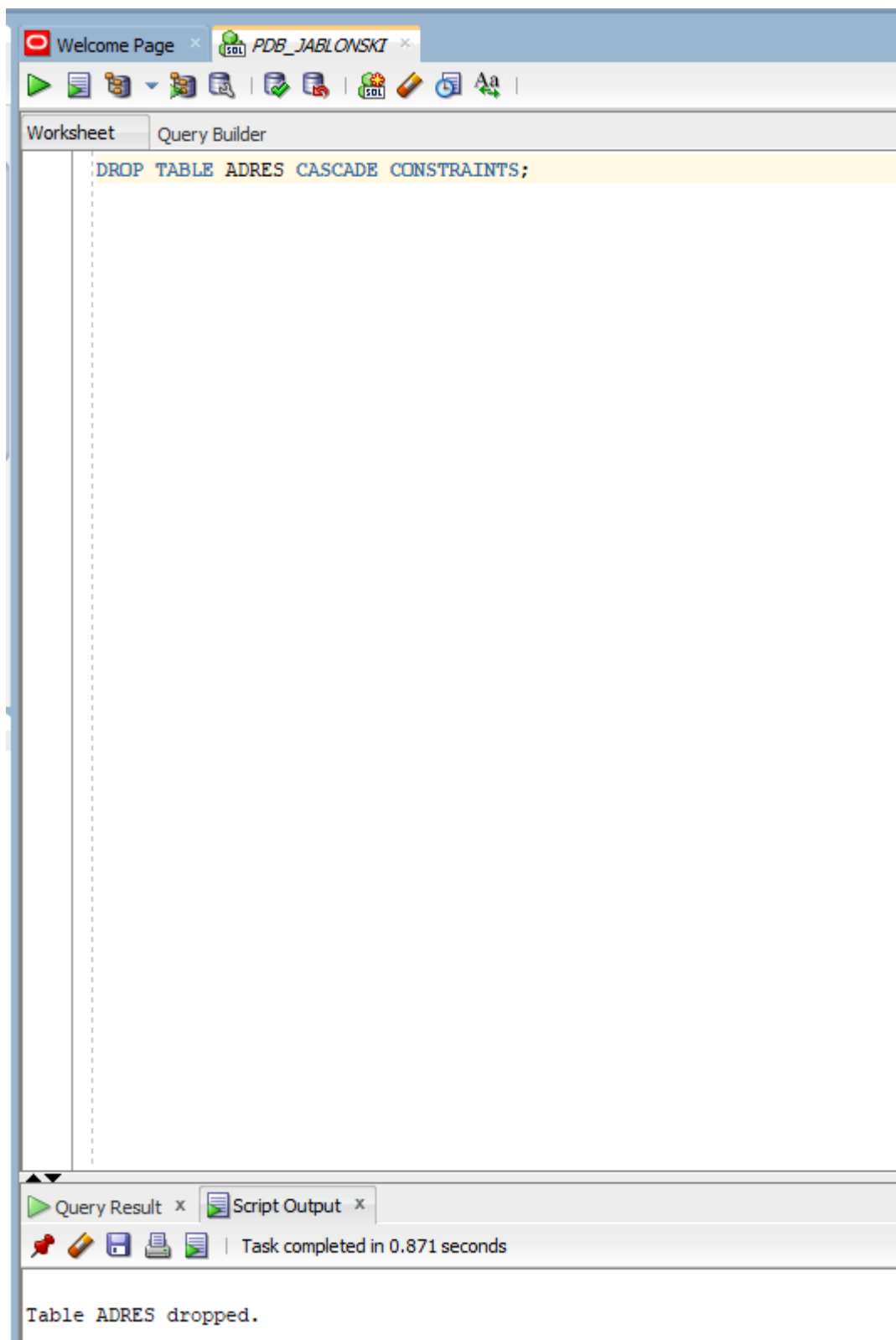
```
Starting backup at 09-JUN-24
using target database control file instead of recovery catalog
allocated channel: ORA_DISK_1
channel ORA_DISK_1: SID=19 device type=DISK
channel ORA_DISK_1: starting full datafile backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00033 name=C:\APP\PROJEKT\PT_1.DBF
channel ORA_DISK_1: starting piece 1 at 09-JUN-24
channel ORA_DISK_1: finished piece 1 at 09-JUN-24
piece handle=C:\APP\173148_173150\PRODUCT\21C\DBHOMEXE\DATABASE\032SUN9A_3_1_1 tag=TAG20240609T181506 comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:00
Finished backup at 09-JUN-24
```

```
RMAN> BACKUP PLUGGABLE DATABASE PDB_JABLONSKI
2> ;
```

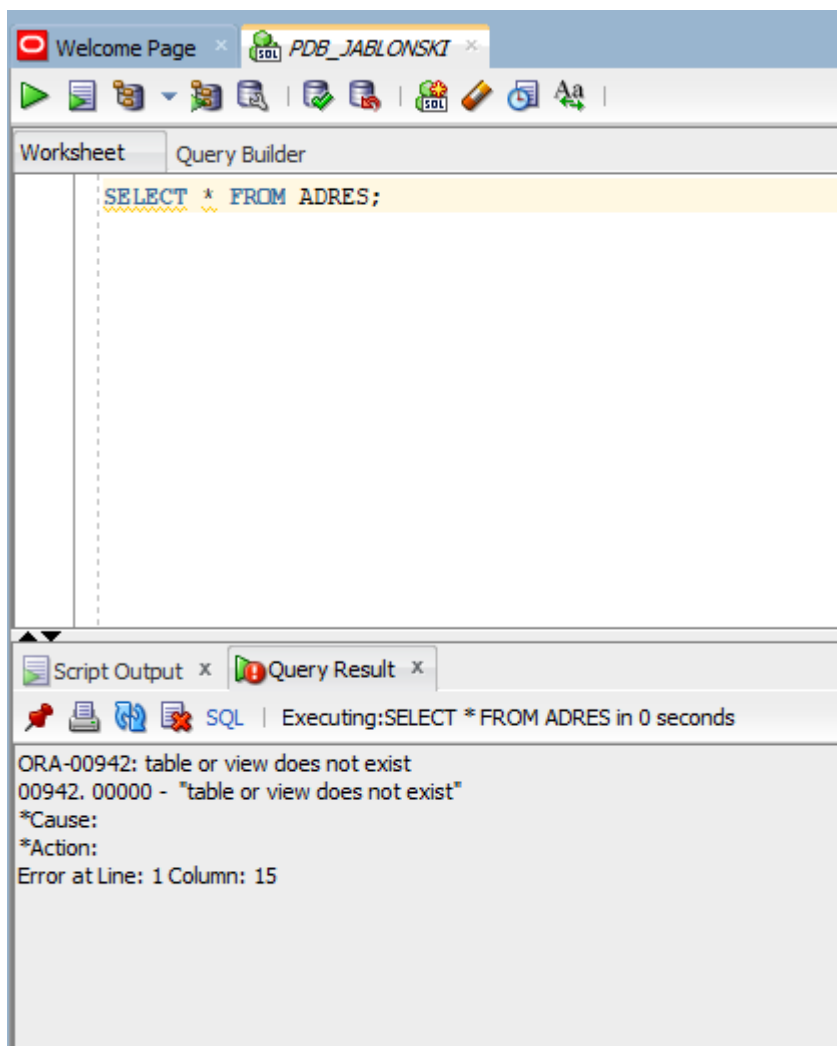
```
Starting backup at 09-JUN-24
using channel ORA_DISK_1
channel ORA_DISK_1: starting full datafile backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00031 name=C:\APP\PROJEKT\PT_2.DBF
input datafile file number=00033 name=C:\APP\PROJEKT\PT_1.DBF
input datafile file number=00017 name=C:\APP\173148_173150\PRODUCT\21C\ORADATA\XE\PDB_JABLONSKI\SYSAUX01.DBF
input datafile file number=00016 name=C:\APP\173148_173150\PRODUCT\21C\ORADATA\XE\PDB_JABLONSKI\SYSTEM01.DBF
input datafile file number=00018 name=C:\APP\173148_173150\PRODUCT\21C\ORADATA\XE\PDB_JABLONSKI\UNDOTBS01.DBF
channel ORA_DISK_1: starting piece 1 at 09-JUN-24
channel ORA_DISK_1: finished piece 1 at 09-JUN-24
piece handle=C:\APP\173148_173150\PRODUCT\21C\DBHOMEXE\DATABASE\032SUS5U_3_1_1 tag=TAG20240609T193838 comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:09
Finished backup at 09-JUN-24
```



## Usunięcie tabeli



## Sprawdzenie czy tabela istnieje



## Sprawdzenie backupu

```
RMAN> LIST BACKUP OF DATABASE;
```

List of Backup Sets

```
=====
```

BS Key	Type	LV	Size	Device	Type	Elapsed Time	Completion Time
1	Full		1.59M	DISK		00:00:00	09-JUN-24
BP Key: 1 Status: AVAILABLE Compressed: NO Tag: TAG20240609T181506							
Piece Name: C:\APP\173148_173150\PRODUCT\21C\DBHOMEXE\DATABASE\032SUN9A_3_1_1							
List of Datafiles in backup set 1							
File	LV	Type	Ckp	SCN	Ckp Time	Abs Fuz	SCN Sparse Name
33	Full		26345091		09-JUN-24		NO C:\APP\PROJEKT\PT_1.DBF

## Wyłączenie bazy danych

```
SQL> shutdown immediate;  
Database closed.  
Database dismounted.  
ORACLE instance shut down.
```

## Uruchomienie bazy w trybie MOUNT

```
SQL> startup mount;  
ORACLE instance started.  
  
Total System Global Area 1610608792 bytes  
Fixed Size                  9855128 bytes  
Variable Size              587202560 bytes  
Database Buffers          1006632960 bytes  
Redo Buffers               6918144 bytes  
Database mounted.
```

## Uruchomienie odzyskiwania

```
RMAN> RUN {  
2> RESTORE DATAFILE 33;  
3> RECOVER DATAFILE 33;  
4> ALTER DATABASE OPEN;  
5> }  
  
Starting restore at 09-JUN-24  
allocated channel: ORA_DISK_1  
channel ORA_DISK_1: SID=146 device type=DISK  
  
channel ORA_DISK_1: starting datafile backup set restore  
channel ORA_DISK_1: specifying datafile(s) to restore from backup set  
channel ORA_DISK_1: restoring datafile 00033 to C:\APP\PROJEKT\PT_1.DBF  
channel ORA_DISK_1: reading from backup piece C:\APP\173148_173150\PRODUCT\21C\DBHOMEXE\DATABASE\032SUN9A_3_1_1  
channel ORA_DISK_1: piece handle=C:\APP\173148_173150\PRODUCT\21C\DBHOMEXE\DATABASE\032SUN9A_3_1_1 tag=TAG20240609T181506  
channel ORA_DISK_1: restored backup piece 1  
channel ORA_DISK_1: restore complete, elapsed time: 00:00:04  
Finished restore at 09-JUN-24  
  
Starting recover at 09-JUN-24  
using channel ORA_DISK_1  
applied offline range to datafile 00033  
offline range RECID=87 STAMP=1171218621  
  
starting media recovery  
media recovery complete, elapsed time: 00:00:00  
  
Finished recover at 09-JUN-24  
  
Statement processed
```

## Sprawdzenie czy tabela jest dostępna

Worksheet Query Builder

```
SELECT * FROM ADRES;
```

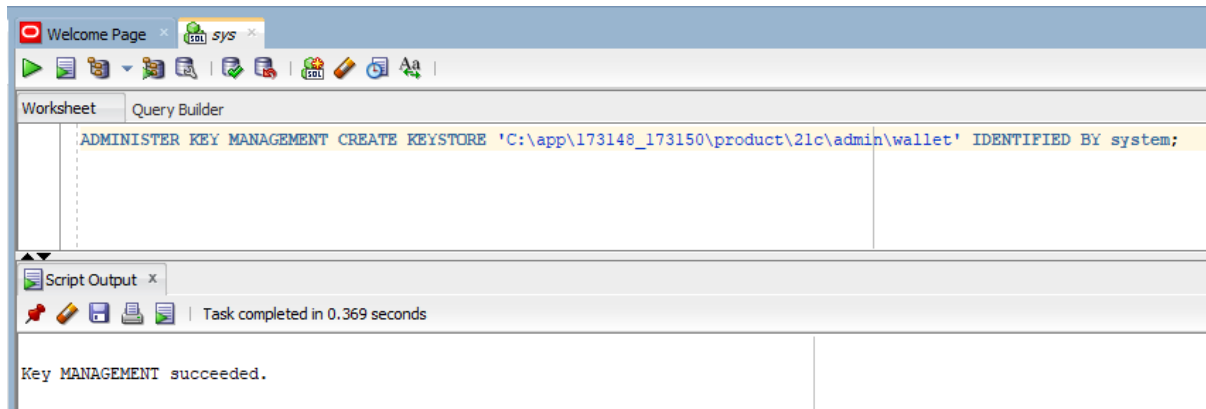
Query Result x

SQL | All Rows Fetched: 20 in 0.122 seconds

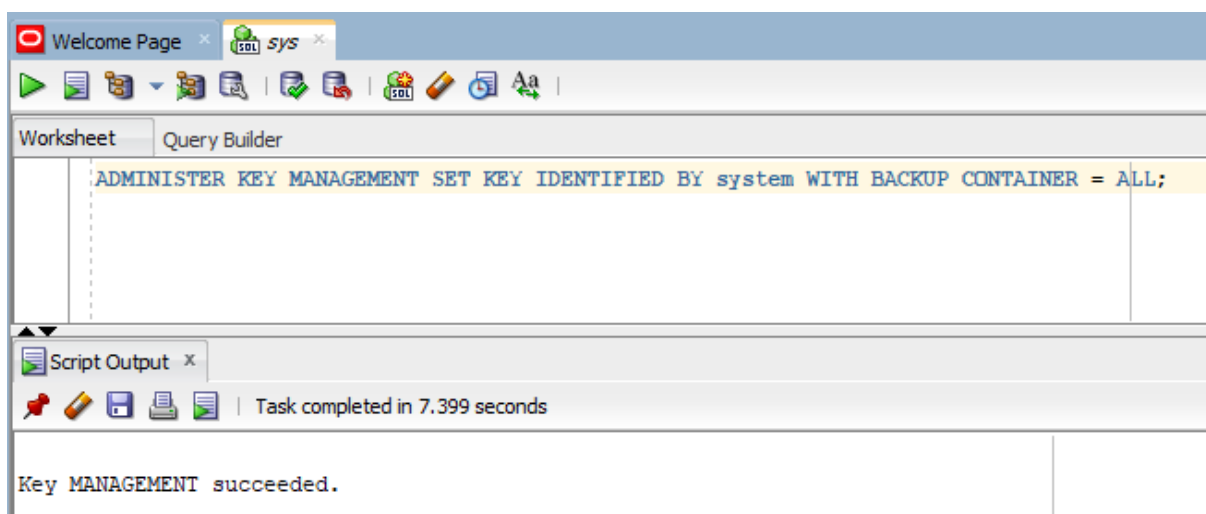
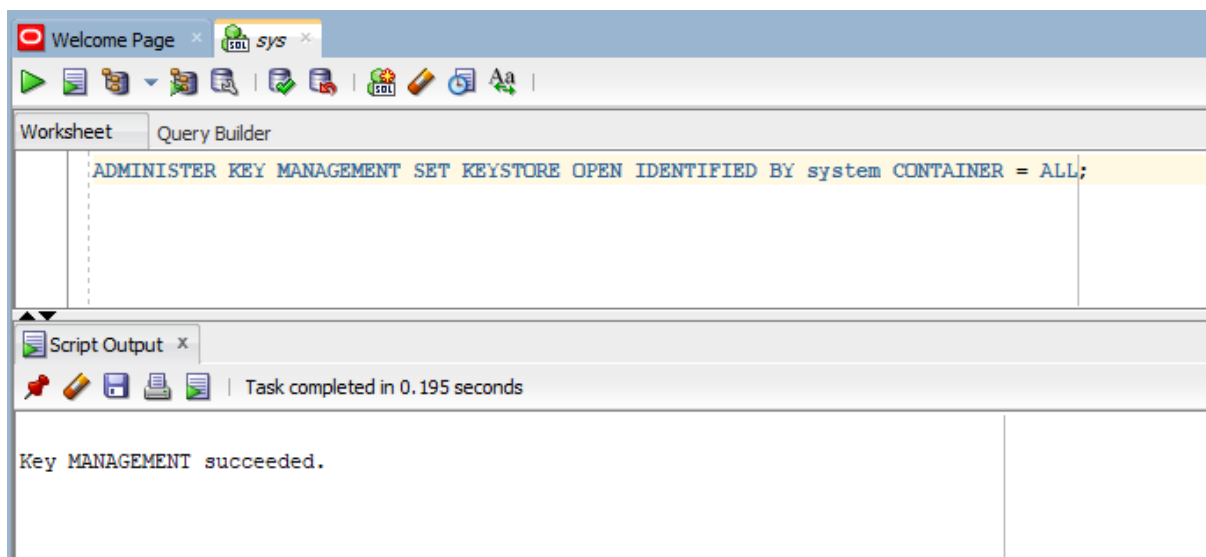
ID	WOJEWODZTWO	MIASTO	ULICA	NUMER	KOD
1	Podkarpackie	Rzeszow	Matuszczaka	28 36-040	
2	Podkarpackie	Rzeszów	3 Maja	33 35-001	
3	Świętokrzyskie	Kielce	Sienkiewicza	12 25-001	
4	Małopolskie	Kraków	Rynek Główny	15 30-062	
5	Lubelskie	Lublin	Krakowskie Przedmieście	19 20-001	
6	Podkarpackie	Przemysław	Sienkiewicza	28 37-700	
7	Świętokrzyskie	Ostrowiec Świętokrzyski	Piłsudskiego	30 27-400	
8	Małopolskie	Nowy Sącz	Kościuszki	9 33-300	
9	Lubelskie	Chełm	Armii Krajowej	14 22-100	
10	Świętokrzyskie	Końskie	Siemowackiego	5 26-200	
11	Małopolskie	Tarnów	Krakowska	15 33-100	
12	Lubelskie	Łęczyzna	Boczna	7 21-010	
13	Podkarpackie	Krosno	Leżna	11 38-400	
14	Świętokrzyskie	Sandomierz	Mickiewicza	3 27-600	
15	Małopolskie	Oświęcim	Dworcowa	5 32-600	
16	Lubelskie	Białka Podlaska	Lipowa	10 21-500	

## 15. Zasyfrowanie przestrzeni tabel

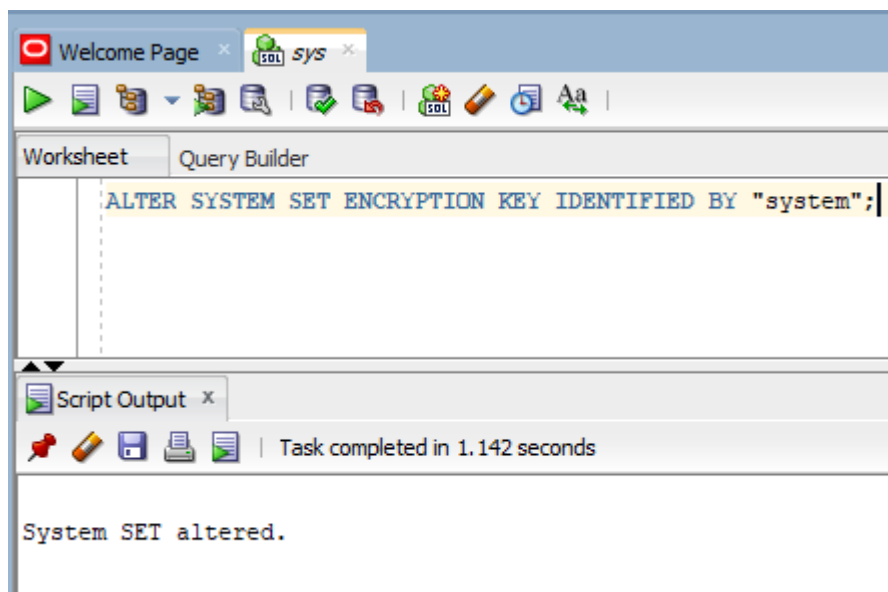
### Utworzenie portfela Oracle



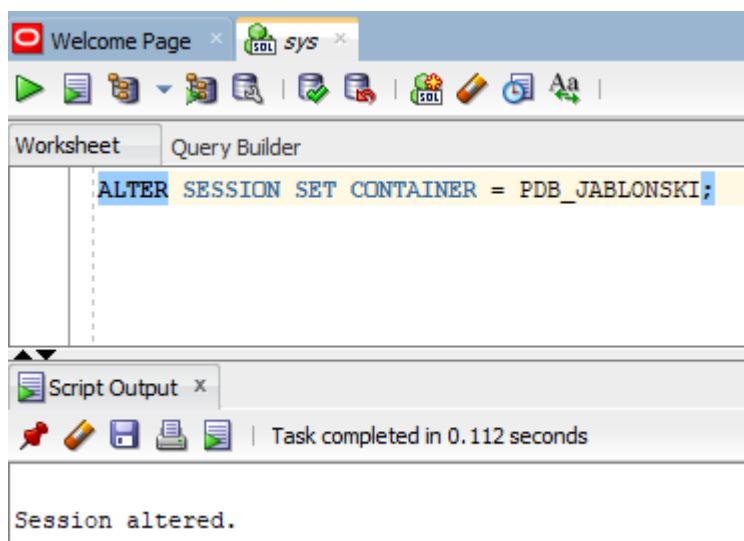
### Otwarcie portfela



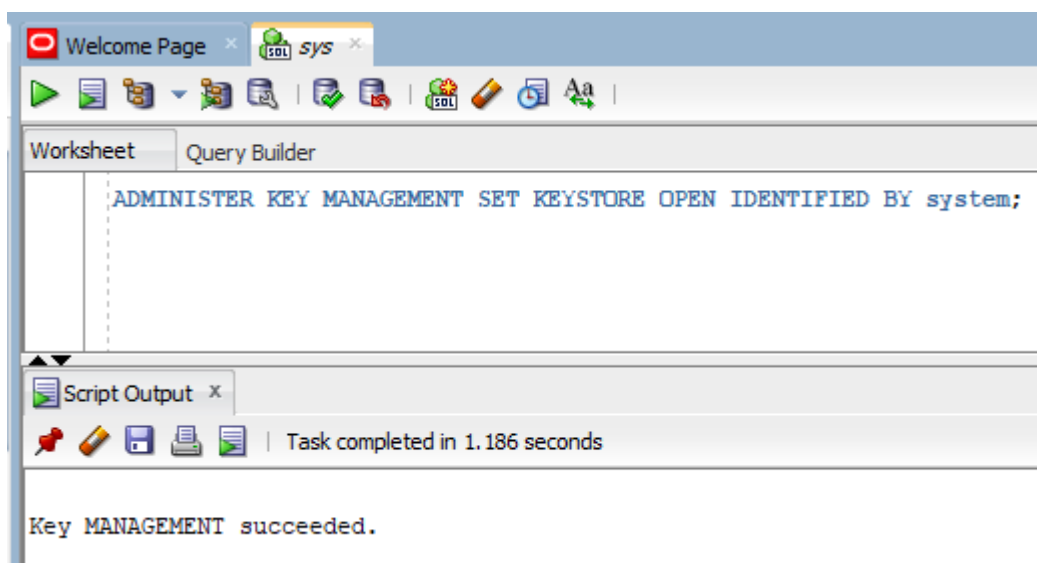
## Konfiguracja klucza



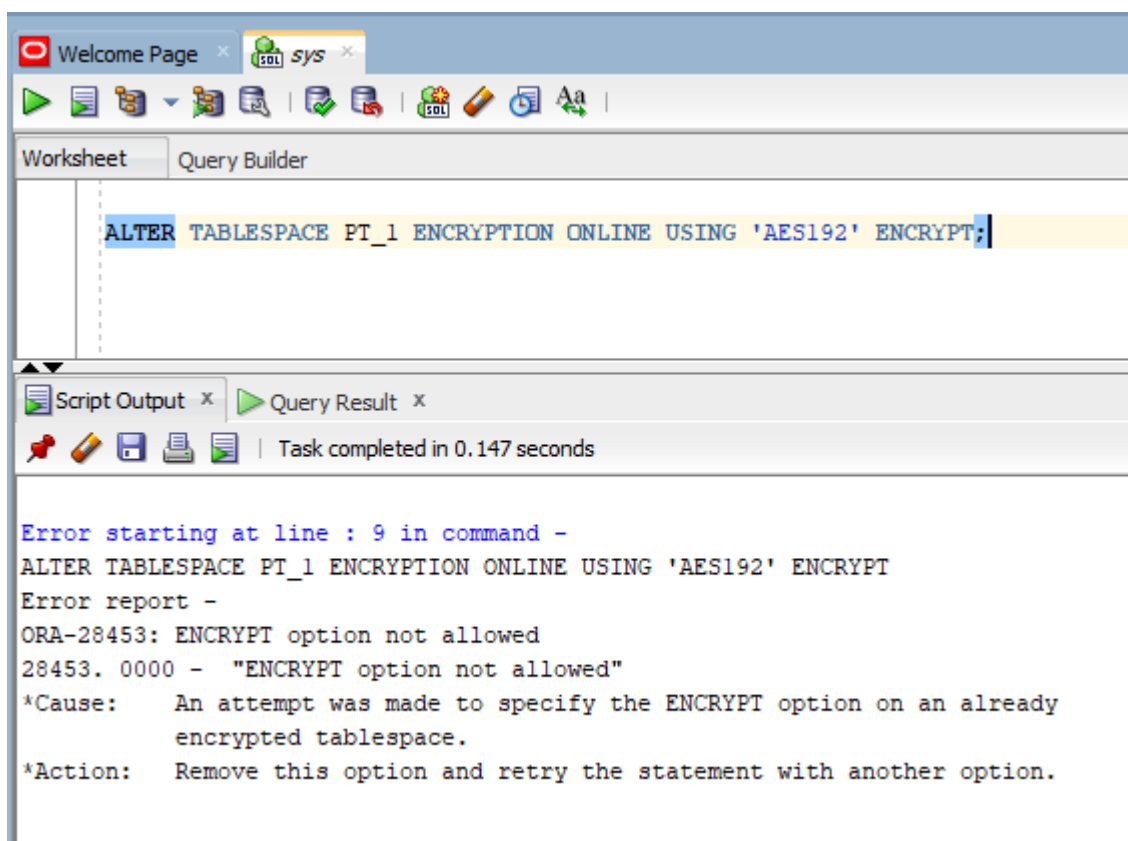
## Zmiana sesji



## Ustawienie klucza

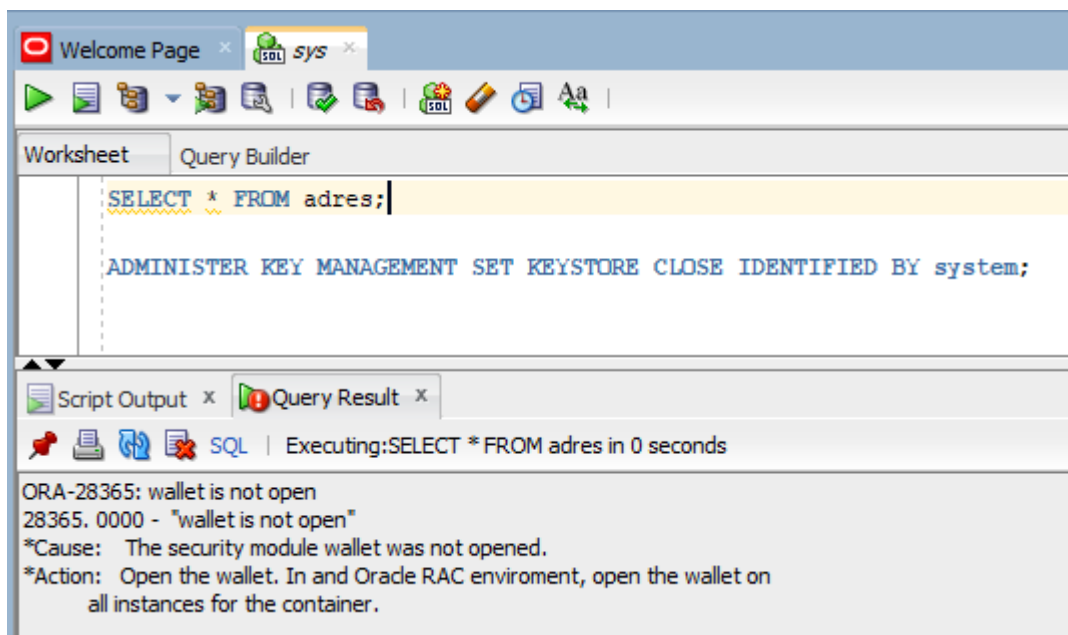


## Ustawienie klucza dla przestrzeni tabel PT\_1



Przypadkowo kwerenda została uruchomiona dwa razy i błąd pokazuje że zaszyfrowanie zostało już wcześniej wykonane.

## Testowanie zabezpieczeń



Jak widać na zrzucie ekranowym powyżej zabezpieczenie działa



# Wygląda tabeli przed i po szyfrowaniu w edytorze heksadecymalny

Przed

	Cofnij	Powtórz	Narzędzia	Tłumaczenie	Ustawienia	Pomoc
-Bez nazwy- x	PT_1.DBF x					
00117B40	00 00 00 00 00 00 00 00	00 00 00 00 00 2C 00 05	.....,...			
00117B50	02 C1 15 10 5A 61 6B 6C	61 64 4D 6C 65 63 7A 61	.+.ZakladMlecz			
00117B60	72 73 6B 69 06 C5 04 46	56 16 30 17 7A 61 6B 6C	rski.+.FV.0.zakl			
00117B70	61 64 5F 6D 6C 65 63 7A	61 72 73 6B 69 40 77 70	ad_mleczarski@wp			
00117B80	2E 70 6C 02 C1 15 2C 00	05 02 C1 14 0C 46 61 62	.pl.+.+.+.Fab			
00117B90	72 79 6B 61 4F 6C 65 6A	75 06 C5 08 2A 1A 5A 40	rykaOleju.+.*.Z@			
00117BA0	17 66 61 62 72 79 6B 61	5F 6F 6C 65 6A 75 40 67	.fabryka_oleju@g			
00117BB0	6D 61 69 6C 2E 63 6F 6D	02 C1 14 2C 00 05 02 C1	mail.com.+.+.+.+			
00117BC0	13 15 48 75 72 74 6F 77	6E 69 61 4D 69 65 73 6E	..HurtowniaMiesn			
00117BD0	61 45 6B 73 74 72 61 06	C5 09 35 61 26 2A 1F 65	aEkstra.+.5a&*.e			
00117BE0	6B 73 74 72 61 5F 68 75	72 74 6F 77 6E 69 61 5F	kstra_hurtownia_			
00117BF0	6D 69 65 73 6E 61 40 6F	6E 65 74 2E 70 6C 02 C1	miesna@onet.pl.+			
00117C00	13 2C 00 05 02 C1 12 12	44 65 6C 69 6B 61 74 65	.,...+.Delikate			
00117C10	73 79 57 69 65 6A 73 6B	69 65 06 C5 0A 40 56 1C	syWiejskie.+.@V.			
00117C20	2A 1D 77 69 65 6A 73 6B	69 65 5F 64 65 6C 69 6B	*.wiejskie_delik			
00117C30	61 74 65 73 79 40 67 6D	61 69 6C 2E 63 6F 6D 02	atesy@gmail.com.			
00117C40	C1 12 2C 00 05 02 C1 11	14 4D 6C 65 63 7A 61 72	+.+,...+.Mleczar			
00117C50	6E 69 61 50 72 6F 73 74	6F 5A 4C 61 6B 06 C5 04	niaProstoZLak.+.+			
00117C60	46 0F 49 3B 12 70 72 6F	73 74 6F 5F 7A 5F 6C 61	F.I;prosto_z_la			
00117C70	6B 40 77 70 2E 70 6C 02	C1 11 2C 00 05 02 C1 10	k@wp.pl.+.+,...+.+			
00117C80	14 53 65 72 6F 77 61 72	6E 69 61 54 72 61 64 79	.SerowarniaTrady			
00117C90	63 79 6A 6E 61 06 C5 03	3B 25 5C 30 1F 74 72 61	cyjna.+.;%\0.tra			
00117CA0	64 79 63 79 6A 6E 61 5F	73 65 72 6F 77 61 72 6E	dycyjna_serowarn			
00117CB0	69 61 40 67 6D 61 69 6C	2E 63 6F 6D 02 C1 10 2C	ia@gmail.com.+.+,			
00117CC0	00 05 02 C1 0F 12 52 7A	65 7A 6E 69 61 45 6B 6F	...+.RzezniaEko			
00117CD0	6C 6F 67 69 63 7A 6E 61	06 C5 02 30 1A 54 46 1B	logiczna.+.0.TF.			
00117CE0	72 7A 65 7A 6E 69 61 5F	65 6B 6F 6C 6F 67 69 63	rzeznia_ekologic			
00117CF0	7A 6E 61 40 6F 6E 65 74	2E 70 6C 02 C1 0F 2C 00	zna@onet.pl.+.+,			
00117D00	05 02 C1 0E 13 50 72 7A	65 74 77 6F 72 73 74 77	..+.Przetworstw			
00117D10	6F 4F 77 6F 63 6F 77 65	06 C5 07 37 4F 5E 16 1E	oOwocowe.+.70^..			
00117D20	70 72 7A 65 74 77 6F 72	73 74 77 6F 5F 6F 77 6F	przetworstwo_owo			
00117D30	63 6F 77 65 40 67 6D 61	69 6C 2E 63 6F 6D 02 C1	cowe@gmail.com.+			
00117D40	0E 2C 00 05 02 C1 0D 15	4D 6C 65 63 7A 61 72 6E	.,...+.Mleczarn			
00117D50	69 61 53 77 69 65 7A 65	4D 6C 65 6B 6F 06 C5 09	iaSwiezeMleko.+.+			
00117D60	35 0F 50 40 12 73 77 69	65 7A 65 5F 6D 6C 65 6B	5.P@.swieze_mlek			
00117D70	6F 40 77 70 2E 70 6C 02	C1 0D 2C 00 05 02 C1 0C	o@wp.pl.+.+,...+.+			
00117D80	10 4D 61 73 61 72 6E 69	61 52 6F 64 7A 69 6E 6E	.MasarniaRodzinn			
00117D90	61 06 C5 08 36 60 13 41	1B 6D 61 73 61 72 6E 69	a.+.6'.A.masarni			
00117DA0	61 5F 72 6F 64 7A 69 6E	6E 61 40 67 6D 61 69 6C	a_rodzinna@gmail			
00117DB0	2E 63 6F 6D 02 C1 0C 2C	00 05 02 C1 0B 12 46 69	.com.+.+,...+.Fi			

Jak widać można przeczytać zawartość tabeli.

## Po

Cofnij		Powtórz		Narzędzia		Tłumaczenie		Ustawienia		Pomoc	
-Bez nazwy- x		PT_1-zaszyfrowane.D... x									
12D383F0	05 0D 25 8E 3C 62 D2 47	ED 67 D6 34 58 D0 84 C1	..%Ä<bTgpg4xLäL								Aktualny
12D38400	05 5B 3D 08 64 D8 CD 18	3B 10 6D 1D CE E4 47 68	. [= .d+.; .m.†Gh								Ostatni e
12D38410	4D 44 32 78 4D 9F 09 96	54 1A 6C 24 50 91 2D 0D	MD2xMf.ûT.ł\$Pæ-								Idź do
12D38420	31 04 CF 92 B3 27 45 2C	FB 6E C4 81 F2 32 D0 7A	1. ‡Æ  'E, √n-ü≥2Lz								
12D38430	B4 49 B5 FC AE 7C E4 8C	88 0B 30 06 95 AF B9 A1	†I† n«   ‡iê. 0. 0»†i								
12D38440	21 5E 8F 68 C8 B7 69 78	E9 A2 B8 90 DA 99 5B 72	! ^ÄhLixøóq Ê rÖ[r								
12D38450	98 44 26 B4 56 87 03 AE	23 8A 2B 94 D7 93 DC 09	ÿD&†Vç. «#è+ö†ô■.								Szukaj
12D38460	72 E3 25 FE 8E B2 6C 6E	35 52 E7 8F C3 97 61 7F	rπ%·ÄLln5RtÄ†ua△								Typ dany
12D38470	15 0A E0 69 D0 F9 6F 57	3D 19 9F 3A 3D 8D 9D 1D	. .αiL·oW=. f:=i¥.								
12D38480	98 DD A6 F5 56 6A B6 74	61 4F B5 5C 8F E8 9F 85	ÿL a Vj†taO†\Äφfà								
12D38490	69 20 FE AC 3D 51 35 DB	8D 80 0F E3 E4 DE B0 B3	i ·¼=Q5L†iÇ. πΣ N\								
12D384A0	C5 B5 EE C3 68 90 9C 4F	12 08 AB 98 54 BB 27 29	††e†hÉÉ0. .½ÿTq' )								
12D384B0	9D 4F 0C A2 70 A9 D1 2C	D6 C0 34 DB E5 D4 C8 65	¥0. óp-††, L4Lle								
12D384C0	5C C6 69 56 B9 71 74 D0	B6 19 EE 6B 53 2F 2B 07	\†iV†qtL. εkS/+.								
12D384D0	42 3F 42 91 A7 B5 D2 CE	1A 88 1F 34 51 8A 23 89	B?Bæ°†††. é. 4Qè#ë								
12D384E0	2C 66 CC 1B 1D CC 01 78	55 E3 26 72 99 66 97 C4	, f††. †. xUp&rÖfû-								
12D384F0	0D F1 FA E8 AA 51 95 66	F6 48 13 64 B3 10 2A E3	. ‡·φ- Qôf÷H. d   . *π								
12D38500	B8 27 34 19 CE 61 01 DB	8B 99 AB C4 6D 07 27 02	q '4. ‡a. †iö½-m. '.								
12D38510	0D 21 C1 1E 5C F1 23 22	70 9E F8 0A A2 57 91 E3	. !L. \‡# "pP°. óWæπ								
12D38520	F0 A7 11 A9 B2 6F 59 DC	A7 E1 C1 67 88 52 0B 0C	≡°. r■oV■°βLgêR. .								
12D38530	37 63 61 E1 48 CB C5 55	91 94 41 FB 2E D3 E3 D5	7caßH††UæöA√. Lπ†								
12D38540	D6 DF F2 CF 13 0A B9 F6	EE 01 66 3C 5E 5E C6 C1	†≥L. ††÷ε. f<^A††								
12D38550	36 45 A2 EF FD D5 42 5D	D7 00 61 E0 15 D4 61 12	6Eóη²†B]††. αα. Lα.								
12D38560	10 52 89 AE B7 08 C7 B8	2A E7 F0 BB 0B D1 89 17	. Rë«††. ††*†≡†. †ë.								Kodowa
12D38570	21 8E 74 AE 8B 1C CF 8B	F4 09 E7 6D BD B6 1C B9	!Ät«†i. ‡i†. †mL†. ††								
12D38580	DA B7 3D 06 9A 38 F8 35	3D 88 A0 66 57 92 33 03	††=. Ü8°5=êáfWÆ3.								
12D38590	69 6E 61 0B 5D 51 4C F6	04 BF 97 D2 75 EE 41 56	†na. ]QL÷. †ù†ueAV								Uwzględ
12D385A0	4A 96 6A AC 99 67 2D 36	E3 33 7F 45 CA F8 94 B2	Jûj¼Ög-6π3△E†°ö■								wielkośc
12D385B0	65 C7 59 43 40 1D C4 10	35 38 B8 CF 1A 90 61 42	e††YC@.-. 58††. ÊaB								Kolejnoś
12D385C0	9F 88 03 F8 FF 66 93 81	E4 69 3C 6B C6 35 37 4A	fê. ° fôüSi<k†57J								
12D385D0	B4 84 DB 9E ED AA 60 84	39 46 94 07 1C 74 66 A4	†ä†Pφ-† ä9Fö. . †fñ								Typ wys:

Nie jesteśmy teraz w stanie przeczytać zawartości tabeli.