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# PHYSICAL MODEL

FOR PROJECT  
**WBD-Armator**

MODEL  
**Armator**

Oracle 12c Release 2

Version 1.0

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**Politechnika Warszawska**  
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Created: 17.04.2020  
Last Modified: 19.04.2020

## Model Description

Celem projektu jest stworzenie bazy danych pomagającej przedsiębiorstwu "Armator" zajmującemu się organizowaniem rejsów i czarterem łódek. System powinien zawierać dane na temat placówek/portów, w/z których można wypożyczyć łódź bądź też "wystartować" rejs. Poszczególne placówki mają do dyspozycji danych pracowników oraz dane łódki. Każdy pracownik ma swoje stanowisko w firmie i otrzymuje odpowiednie wynagrodzenie. Niektórzy z nich prowadzą rejsy. Podczas rejsów odwiedzane są kolejne miejsca postojowe, a za dnia załoga ma możliwość odbycia kursu oraz doznania wielu wspaniałych atrakcji.

## Entity Report

| Full Name      | Primary Key                         | # Attributes |
|----------------|-------------------------------------|--------------|
| Adresy         | Nr_adresu                           | 6            |
| Atrakcje       | Nr_atrakcji                         | 4            |
| Biura          | Nr_biura                            | 4            |
| Czartery       | Nr_czarteru                         | 6            |
| Klienci        | Nr_klienta                          | 10           |
| Klient_Rejs    | Nr_klienta, Nr_rejsu                | 2            |
| Kursy          | Nr_kursu                            | 4            |
| Lodz_Czarter   | Nr_lodzi, Nr_czarteru               | 2            |
| Lodzie         | Nr_lodzi                            | 6            |
| Modele_lodzi   | Nr_modelu                           | 6            |
| Poczty         | Nr_poczty                           | 3            |
| Port_Pracownik | Nr_placowki, Nr_pracownika, Data_od | 4            |
| Porty          | Nr_placowki                         | 5            |
| Pracownicy     | Nr_pracownika                       | 14           |
| Rejs_Atrakcja  | Nr_rejsu, Nr_atrakcji               | 2            |
| Rejs_Kurs      | Nr_rejsu, Nr_kursu                  | 2            |
| Rejs_Lodz      | Nr_rejsu, Nr_lodzi                  | 2            |
| Rejs_Port      | Nr_rejsu, Nr_placowki, Kolejnosć    | 3            |
| Rejsy          | Nr_rejsu                            | 7            |
| Wlasciciele    | Nr_wlasciciela                      | 6            |

## Entity 'Adresy'

|                |        |
|----------------|--------|
| <b>Caption</b> | Adresy |
|----------------|--------|

## Primary Key 'PK &lt;%OwnerName%&gt;'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_adresu | PK   | -----         |

## Attributes

| Key | Full Name | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-----------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_adresu |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Kraj      |        | Varchar2(30) | YES             | NO              | NO              | NO              |          |
|     | Miasto    |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Ulica     |        | Varchar2(30) | YES             | NO              | NO              | NO              |          |
|     | Nr_lokalu |        | Varchar2(10) | YES             | NO              | NO              | NO              |          |
| FK  | Nr_poczty |        | Integer      | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name          | Type            | Parent Entity | Child Entity | Card. |
|--------------------|-----------------|---------------|--------------|-------|
| Biuro_ma_adres     | Non-identifying | Adresy        | Biura        | 1:1   |
| Adres_ma_poczte    | Non-identifying | Poczty        | Adresy       | 1:N   |
| Pracownik_ma_adres | Non-identifying | Adresy        | Pracownicy   | 1:1   |
| Adrakcja_ma_adres  | Non-identifying | Adresy        | Atrakcje     | 1:N   |
| Klient_ma_adres    | Non-identifying | Adresy        | Klienci      | 1:N   |
| Port_ma_adres      | Non-identifying | Adresy        | Porty        | 1:N   |

## Indexes

| Full Name        | Attributes | Unique |
|------------------|------------|--------|
| IX_Relationship3 | Nr_poczty  | NO     |

## Notes

Encja adres.

## Attribute 'Nr\_adresu'

|                    |           |
|--------------------|-----------|
| <b>Caption</b>     | Nr_adresu |
| <b>Entity</b>      | Adresy    |
| <b>Primary Key</b> | YES       |
| <b>Foreign Key</b> | NO        |

|                  |         |
|------------------|---------|
| <b>Data Type</b> | Integer |
| <b>Not Null</b>  | YES     |
| <b>Unique</b>    | NO      |

### Attribute Properties

|                      |           |
|----------------------|-----------|
| <b>Used Sequence</b> | AdresySeq |
|----------------------|-----------|

### Notes

Numer adresu - unikatowy identyfikator (klucz).

### Attribute 'Kraj'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Kraj          |
| <b>Entity</b>      | Adresy        |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(30 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Kraj adresu.

### Attribute 'Miasto'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Miasto        |
| <b>Entity</b>      | Adresy        |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Miasto adresu.

### Attribute 'Ulica'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Ulica         |
| <b>Entity</b>      | Adresy        |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(30 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Ulica adresu.

### Attribute 'Nr\_lokalu'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nr_lokalu     |
| <b>Entity</b>      | Adresy        |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(10 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Numer lokalni adresu.

### Attribute 'Nr\_poczty'

|                    |           |                      |        |
|--------------------|-----------|----------------------|--------|
| <b>Caption</b>     | Nr_poczty |                      |        |
| <b>Entity</b>      | Adresy    |                      |        |
| <b>Primary Key</b> | NO        |                      |        |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Poczty |
| <b>Data Type</b>   | Integer   |                      |        |
| <b>Not Null</b>    | YES       |                      |        |
| <b>Unique</b>      | NO        |                      |        |

## Entity 'Atrakcje'

|                |          |
|----------------|----------|
| <b>Caption</b> | Atrakcje |
|----------------|----------|

## Primary Key 'AtrakcjaPK'

| Attribute   | Type | Parent Entity |
|-------------|------|---------------|
| Nr_atrakcji | PK   | -----         |

## Attributes

| Key | Full Name   | Domain | Data Type     | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-------------|--------|---------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_atrakcji |        | Integer       | YES             | NO              | NO              | NO              |          |
|     | Nazwa       |        | Varchar2(20)  | YES             | NO              | NO              | NO              |          |
|     | Opis        |        | Varchar2(200) | YES             | NO              | NO              | NO              |          |
| FK  | Nr_adresu   |        | Integer       | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                 | Type            | Parent Entity | Child Entity  | Card. |
|---------------------------|-----------------|---------------|---------------|-------|
| Rejs_ma_atrakcje_Atrakcja | Identifying     | Atrakcje      | Rejs_Atrakcja | 1:N   |
| Adrakcja_ma_adres         | Non-identifying | Adresy        | Atrakcje      | 1:N   |

## Indexes

| Full Name        | Attributes | Unique |
|------------------|------------|--------|
| IX_Relationship5 | Nr_adresu  | NO     |

## Notes

Encja atrakcja.

## Attribute 'Nr\_atrakcji'

|                    |             |
|--------------------|-------------|
| <b>Caption</b>     | Nr_atrakcji |
| <b>Entity</b>      | Atrakcje    |
| <b>Primary Key</b> | YES         |
| <b>Foreign Key</b> | NO          |
| <b>Data Type</b>   | Integer     |
| <b>Not Null</b>    | YES         |
| <b>Unique</b>      | NO          |

## Attribute Properties

|                      |             |
|----------------------|-------------|
| <b>Used Sequence</b> | AtrakcjeSeq |
|----------------------|-------------|

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**Notes**


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Numer atrakcji - unikatowy identyfikator (klucz).

**Attribute 'Nazwa'**

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa         |
| <b>Entity</b>      | Atrakcje      |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Nazwa atrakcji.

**Attribute 'Opis'**

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Opis           |
| <b>Entity</b>      | Atrakcje       |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Varchar2(200 ) |
| <b>Not Null</b>    | YES            |
| <b>Unique</b>      | NO             |

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**Notes**


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Opis atrakcji (bardziej szczegółowy).

**Attribute 'Nr\_adresu'**

|                    |           |                      |        |
|--------------------|-----------|----------------------|--------|
| <b>Caption</b>     | Nr_adresu |                      |        |
| <b>Entity</b>      | Atrakcje  |                      |        |
| <b>Primary Key</b> | NO        |                      |        |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Adresy |
| <b>Data Type</b>   | Integer   |                      |        |
| <b>Not Null</b>    | YES       |                      |        |
| <b>Unique</b>      | NO        |                      |        |



## Entity 'Biura'

|                |       |
|----------------|-------|
| <b>Caption</b> | Biura |
|----------------|-------|

## Primary Key 'BiuroPK'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_biura  | PK   | -----         |

## Attributes

| Key | Full Name      | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|----------------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_biura       |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Nazwa          |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Data_zalozenia |        | Date         | YES             | NO              | NO              | NO              |          |
| FK  | Nr_adresu      |        | Integer      | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                       | Type            | Parent Entity | Child Entity | Card. |
|---------------------------------|-----------------|---------------|--------------|-------|
| Biuro_zatrudnia_pracownik       | Non-identifying | Biura         | Pracownicy   | 1:N   |
| Biuro_posiada_placowke_w_porcie | Non-identifying | Biura         | Porty        | 1:N   |
| Biuro_posiada_lodki             | Non-identifying | Biura         | Lodzie       | 1:N   |
| Biuro_oferuje_czarter           | Non-identifying | Biura         | Czartery     | 1:N   |
| Biuro_oferuje_kurs              | Non-identifying | Biura         | Kursy        | 1:N   |
| Biuro_posiada_klienta           | Non-identifying | Biura         | Klienci      | 1:N   |
| Biuro_oferuje_rejs              | Non-identifying | Biura         | Rejsy        | 1:N   |
| Biuro_ma_wlasciciela            | Non-identifying | Biura         | Wlasciciele  | 1:N   |
| Biuro_ma_adres                  | Non-identifying | Adresy        | Biura        | 1:1   |

## Indexes

| Full Name        | Attributes | Unique |
|------------------|------------|--------|
| IX_Relationship2 | Nr_adresu  | NO     |

## Notes

Encja biuro.

## Attribute 'Nr\_biura'

|                    |          |
|--------------------|----------|
| <b>Caption</b>     | Nr_biura |
| <b>Entity</b>      | Biura    |
| <b>Primary Key</b> | YES      |
| <b>Foreign Key</b> | NO       |

|                  |         |
|------------------|---------|
| <b>Data Type</b> | Integer |
| <b>Not Null</b>  | YES     |
| <b>Unique</b>    | NO      |

### Attribute Properties

|                      |          |
|----------------------|----------|
| <b>Used Sequence</b> | BiuroSeq |
|----------------------|----------|

### Notes

Numer biura - unikatowy identyfikator (klucz).

### Attribute 'Nazwa'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa         |
| <b>Entity</b>      | Biura         |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Nazwa biura.

### Attribute 'Data\_zalozenia'

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Data_zalozenia |
| <b>Entity</b>      | Biura          |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Date           |
| <b>Not Null</b>    | YES            |
| <b>Unique</b>      | NO             |

### Notes

Data założenia biura.

### Attribute 'Nr\_adresu'

|             |           |               |        |
|-------------|-----------|---------------|--------|
| Caption     | Nr_adresu |               |        |
| Entity      | Biura     |               |        |
| Primary Key | NO        |               |        |
| Foreign Key | YES       | Parent Entity | Adresy |
| Data Type   | Integer   |               |        |
| Not Null    | YES       |               |        |
| Unique      | NO        |               |        |

## Entity 'Czartery'

|                |          |
|----------------|----------|
| <b>Caption</b> | Czartery |
|----------------|----------|

## Primary Key 'CzarterPK'

| Attribute   | Type | Parent Entity |
|-------------|------|---------------|
| Nr_czarteru | PK   | -----         |

## Attributes

| Key | Full Name   | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-------------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_czarteru |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Data_od     |        | Date         | YES             | NO              | NO              | NO              |          |
|     | Data_do     |        | Date         | YES             | NO              | NO              | NO              |          |
|     | Cena        |        | Number(10,2) | YES             | NO              | NO              | NO              |          |
| FK  | Nr_klienta  |        | Integer      | YES             | NO              | NO              | NO              |          |
| FK  | Nr_biura    |        | Integer      | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                     | Type            | Parent Entity | Child Entity | Card. |
|-------------------------------|-----------------|---------------|--------------|-------|
| Lodz_jest_czarterowna_Czarter | Identifying     | Czartery      | Lodz_Czarter | 1:N   |
| Klient_czarteruje             | Non-identifying | Klienci       | Czartery     | 1:N   |
| Biuro_oferuje_czarter         | Non-identifying | Biura         | Czartery     | 1:N   |

## Indexes

| Full Name                | Attributes | Unique |
|--------------------------|------------|--------|
| IX_Klient_czarteruje     | Nr_klienta | NO     |
| IX_Biuro_oferuje_czarter | Nr_biura   | NO     |

## Notes

Encja czarter.

## Attribute 'Nr\_czarteru'

|                    |             |
|--------------------|-------------|
| <b>Caption</b>     | Nr_czarteru |
| <b>Entity</b>      | Czartery    |
| <b>Primary Key</b> | YES         |
| <b>Foreign Key</b> | NO          |
| <b>Data Type</b>   | Integer     |
| <b>Not Null</b>    | YES         |
| <b>Unique</b>      | NO          |

### Attribute Properties

|               |             |
|---------------|-------------|
| Used Sequence | CzarterySeq |
|---------------|-------------|

### Notes

Numer czarteru - unikatowy identyfikator (klucz).

### Attribute 'Data\_od'

|             |          |
|-------------|----------|
| Caption     | Data_od  |
| Entity      | Czartery |
| Primary Key | NO       |
| Foreign Key | NO       |
| Data Type   | Date     |
| Not Null    | YES      |
| Unique      | NO       |

### Notes

Data rozpoczęcia wypożyczenia.

### Attribute 'Data\_do'

|             |          |
|-------------|----------|
| Caption     | Data_do  |
| Entity      | Czartery |
| Primary Key | NO       |
| Foreign Key | NO       |
| Data Type   | Date     |
| Not Null    | YES      |
| Unique      | NO       |

### Notes

Data zakończenia wypożyczenia.

### Attribute 'Cena'

|             |              |
|-------------|--------------|
| Caption     | Cena         |
| Entity      | Czartery     |
| Primary Key | NO           |
| Foreign Key | NO           |
| Data Type   | Number(10,2) |
| Not Null    | YES          |
| Unique      | NO           |

### Notes

Cena czarteru.

### Attribute 'Nr\_klienta'

|                    |            |                      |         |
|--------------------|------------|----------------------|---------|
| <b>Caption</b>     | Nr_klienta |                      |         |
| <b>Entity</b>      | Czartery   |                      |         |
| <b>Primary Key</b> | NO         |                      |         |
| <b>Foreign Key</b> | YES        | <b>Parent Entity</b> | Klienci |
| <b>Data Type</b>   | Integer    |                      |         |
| <b>Not Null</b>    | YES        |                      |         |
| <b>Unique</b>      | NO         |                      |         |

### Attribute 'Nr\_biura'

|                    |          |                      |       |
|--------------------|----------|----------------------|-------|
| <b>Caption</b>     | Nr_biura |                      |       |
| <b>Entity</b>      | Czartery |                      |       |
| <b>Primary Key</b> | NO       |                      |       |
| <b>Foreign Key</b> | YES      | <b>Parent Entity</b> | Biura |
| <b>Data Type</b>   | Integer  |                      |       |
| <b>Not Null</b>    | YES      |                      |       |
| <b>Unique</b>      | NO       |                      |       |

## Entity 'Klienci'

|                |         |
|----------------|---------|
| <b>Caption</b> | Klienci |
|----------------|---------|

## Primary Key 'KlientPK'

| Attribute  | Type | Parent Entity |
|------------|------|---------------|
| Nr_klienta | PK   | -----         |

## Attributes

| Key | Full Name      | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|----------------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_klienta     |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Imie           |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Nazwisko       |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | PESEL          |        | Varchar2(12) | NO              | NO              | NO              | NO              |          |
|     | Data_urodzenia |        | Date         | YES             | NO              | NO              | NO              |          |
|     | Nr_dowodu      |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Nr_telefonu    |        | Varchar2(20) | NO              | NO              | NO              | NO              |          |
|     | Email          |        | Varchar2(20) | NO              | NO              | NO              | NO              |          |
| FK  | Nr_biura       |        | Integer      | YES             | NO              | NO              | NO              |          |
| FK  | Nr_adresu      |        | Integer      | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                          | Type            | Parent Entity | Child Entity | Card. |
|------------------------------------|-----------------|---------------|--------------|-------|
| Klient_czarteruje                  | Non-identifying | Klienci       | Czartery     | 1:N   |
| Biuro_posiada_klienta              | Non-identifying | Biura         | Klienci      | 1:N   |
| Klient_zapisuje_sie_na_rejs_Klient | Identifying     | Klienci       | Klient_Rejs  | 1:N   |
| Klient_ma_adres                    | Non-identifying | Adresy        | Klienci      | 1:N   |

## Indexes

| Full Name                | Attributes | Unique |
|--------------------------|------------|--------|
| IX_Biuro_posiada_klienta | Nr_biura   | NO     |
| IX_Relationship6         | Nr_adresu  | NO     |

## Notes

Encja klient.

**Attribute 'Nr\_klienta'**

|                    |            |
|--------------------|------------|
| <b>Caption</b>     | Nr_klienta |
| <b>Entity</b>      | Klienci    |
| <b>Primary Key</b> | YES        |
| <b>Foreign Key</b> | NO         |
| <b>Data Type</b>   | Integer    |
| <b>Not Null</b>    | YES        |
| <b>Unique</b>      | NO         |

**Attribute Properties**

|                      |            |
|----------------------|------------|
| <b>Used Sequence</b> | KlienciSeq |
|----------------------|------------|

**Notes**

Numer klienta - unikatowy identyfikator (klucz).

**Attribute 'Imie'**

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Imie          |
| <b>Entity</b>      | Klienci       |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

**Notes**

Imię klienta.

**Attribute 'Nazwisko'**

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwisko      |
| <b>Entity</b>      | Klienci       |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

**Notes**

Nazwisko klienta.

**Attribute 'PESEL'**

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | PESEL         |
| <b>Entity</b>      | Klienci       |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(12 ) |
| <b>Not Null</b>    | NO            |
| <b>Unique</b>      | NO            |

### Notes

Numer pesel klienta.

### Attribute 'Data\_urodzenia'

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Data_urodzenia |
| <b>Entity</b>      | Klienci        |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Date           |
| <b>Not Null</b>    | YES            |
| <b>Unique</b>      | NO             |

### Notes

Data urodzenia klienta.

### Attribute 'Nr\_dowodu'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nr_dowodu     |
| <b>Entity</b>      | Klienci       |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Numer dowodu osobistego klienta.

### Attribute 'Nr\_telefonu'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nr_telefonu   |
| <b>Entity</b>      | Klienci       |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | NO            |
| <b>Unique</b>      | NO            |



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**Notes**


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Numer telefonu klienta.

**Attribute 'Email'**

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Email         |
| <b>Entity</b>      | Klienci       |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | NO            |
| <b>Unique</b>      | NO            |

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**Notes**


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Email klienta.

**Attribute 'Nr\_biura'**

|             |          |               |       |
|-------------|----------|---------------|-------|
| Caption     | Nr_biura |               |       |
| Entity      | Klienci  |               |       |
| Primary Key | NO       |               |       |
| Foreign Key | YES      | Parent Entity | Biura |
| Data Type   | Integer  |               |       |
| Not Null    | YES      |               |       |
| Unique      | NO       |               |       |

**Attribute 'Nr\_adresu'**

|             |           |               |        |
|-------------|-----------|---------------|--------|
| Caption     | Nr_adresu |               |        |
| Entity      | Klienci   |               |        |
| Primary Key | NO        |               |        |
| Foreign Key | YES       | Parent Entity | Adresy |
| Data Type   | Integer   |               |        |
| Not Null    | YES       |               |        |
| Unique      | NO        |               |        |

## Entity 'Klient\_Rejs'

|                |             |
|----------------|-------------|
| <b>Caption</b> | Klient_Rejs |
|----------------|-------------|

## Primary Key 'Key11'

| Attribute  | Type | Parent Entity |
|------------|------|---------------|
| Nr_klienta | PFK  | Klienci       |
| Nr_rejsu   | PFK  | Rejsy         |

## Attributes

| Key | Full Name  | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|------------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_klienta |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_rejsu   |        | Integer   | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                          | Type        | Parent Entity | Child Entity | Card. |
|------------------------------------|-------------|---------------|--------------|-------|
| Klient_zapisuje_sie_na_rejs_Klient | Identifying | Klienci       | Klient_Rejs  | 1:N   |
| Klient_zapisuje_sie_na_rejs_Rejs   | Identifying | Rejsy         | Klient_Rejs  | 1:N   |

## Attribute 'Nr\_klienta'

|                    |             |                      |         |
|--------------------|-------------|----------------------|---------|
| <b>Caption</b>     | Nr_klienta  |                      |         |
| <b>Entity</b>      | Klient_Rejs |                      |         |
| <b>Primary Key</b> | YES         |                      |         |
| <b>Foreign Key</b> | YES         | <b>Parent Entity</b> | Klienci |
| <b>Data Type</b>   | Integer     |                      |         |
| <b>Not Null</b>    | YES         |                      |         |
| <b>Unique</b>      | NO          |                      |         |

## Attribute 'Nr\_rejsu'

|                    |             |                      |       |
|--------------------|-------------|----------------------|-------|
| <b>Caption</b>     | Nr_rejsu    |                      |       |
| <b>Entity</b>      | Klient_Rejs |                      |       |
| <b>Primary Key</b> | YES         |                      |       |
| <b>Foreign Key</b> | YES         | <b>Parent Entity</b> | Rejsy |
| <b>Data Type</b>   | Integer     |                      |       |
| <b>Not Null</b>    | YES         |                      |       |
| <b>Unique</b>      | NO          |                      |       |

## Entity 'Kursy'

|                |       |
|----------------|-------|
| <b>Caption</b> | Kursy |
|----------------|-------|

## Primary Key 'KursPK'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_kursu  | PK   | -----         |

## Attributes

| Key | Full Name | Domain | Data Type     | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-----------|--------|---------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_kursu  |        | Integer       | YES             | NO              | NO              | NO              |          |
|     | Nazwa     |        | Varchar2(20)  | YES             | NO              | NO              | NO              |          |
|     | Opis      |        | Varchar2(200) | YES             | NO              | NO              | NO              |          |
| FK  | Nr_biura  |        | Integer       | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name              | Type            | Parent Entity | Child Entity | Card. |
|------------------------|-----------------|---------------|--------------|-------|
| Biuro_oferuje_kurs     | Non-identifying | Biura         | Kursy        | 1:N   |
| Rejs_zawiera_kurs_Kurs | Identifying     | Kursy         | Rejs_Kurs    | 1:N   |

## Indexes

| Full Name             | Attributes | Unique |
|-----------------------|------------|--------|
| IX_Biuro_oferuje_kurs | Nr_biura   | NO     |

## Notes

Encja kurs.

## Attribute 'Nr\_kursu'

|                    |          |
|--------------------|----------|
| <b>Caption</b>     | Nr_kursu |
| <b>Entity</b>      | Kursy    |
| <b>Primary Key</b> | YES      |
| <b>Foreign Key</b> | NO       |
| <b>Data Type</b>   | Integer  |
| <b>Not Null</b>    | YES      |
| <b>Unique</b>      | NO       |

## Attribute Properties

|                      |          |
|----------------------|----------|
| <b>Used Sequence</b> | KursySeq |
|----------------------|----------|

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**Notes**


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Numer kursu - unikatowy identyfikator (klucz).

### Attribute 'Nazwa'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa         |
| <b>Entity</b>      | Kursy         |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Nazwa danego kursu.

### Attribute 'Opis'

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Opis           |
| <b>Entity</b>      | Kursy          |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Varchar2(200 ) |
| <b>Not Null</b>    | YES            |
| <b>Unique</b>      | NO             |

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**Notes**


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Opis danego kursu (bardziej szczegółowy).

### Attribute 'Nr\_biura'

|                    |          |                      |       |
|--------------------|----------|----------------------|-------|
| <b>Caption</b>     | Nr_biura |                      |       |
| <b>Entity</b>      | Kursy    |                      |       |
| <b>Primary Key</b> | NO       |                      |       |
| <b>Foreign Key</b> | YES      | <b>Parent Entity</b> | Biura |
| <b>Data Type</b>   | Integer  |                      |       |
| <b>Not Null</b>    | YES      |                      |       |
| <b>Unique</b>      | NO       |                      |       |

## Entity 'Lodz\_Czarter'

|                |              |
|----------------|--------------|
| <b>Caption</b> | Lodz_Czarter |
|----------------|--------------|

## Primary Key 'Key3'

| Attribute   | Type | Parent Entity |
|-------------|------|---------------|
| Nr_lodzi    | PFK  | Lodzie        |
| Nr_czarteru | PFK  | Czartery      |

## Attributes

| Key | Full Name   | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-------------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_lodzi    |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_czarteru |        | Integer   | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                     | Type        | Parent Entity | Child Entity | Card. |
|-------------------------------|-------------|---------------|--------------|-------|
| Lodz_jest_czarterowna_Lodz    | Identifying | Lodzie        | Lodz_Czarter | 1:N   |
| Lodz_jest_czarterowna_Czarter | Identifying | Czartery      | Lodz_Czarter | 1:N   |

## Attribute 'Nr\_lodzi'

|                    |              |                      |        |
|--------------------|--------------|----------------------|--------|
| <b>Caption</b>     | Nr_lodzi     |                      |        |
| <b>Entity</b>      | Lodz_Czarter |                      |        |
| <b>Primary Key</b> | YES          |                      |        |
| <b>Foreign Key</b> | YES          | <b>Parent Entity</b> | Lodzie |
| <b>Data Type</b>   | Integer      |                      |        |
| <b>Not Null</b>    | YES          |                      |        |
| <b>Unique</b>      | NO           |                      |        |

## Attribute 'Nr\_czarteru'

|                    |              |                      |          |
|--------------------|--------------|----------------------|----------|
| <b>Caption</b>     | Nr_czarteru  |                      |          |
| <b>Entity</b>      | Lodz_Czarter |                      |          |
| <b>Primary Key</b> | YES          |                      |          |
| <b>Foreign Key</b> | YES          | <b>Parent Entity</b> | Czartery |
| <b>Data Type</b>   | Integer      |                      |          |
| <b>Not Null</b>    | YES          |                      |          |
| <b>Unique</b>      | NO           |                      |          |

## Entity 'Lodzie'

|                |        |
|----------------|--------|
| <b>Caption</b> | Lodzie |
|----------------|--------|

## Primary Key 'LodzPK'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_lodzi  | PK   | -----         |

## Attributes

| Key | Full Name        | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|------------------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_lodzi         |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Nazwa            |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Nr_rejestracyjny |        | Varchar2(30) | YES             | NO              | NO              | NO              |          |
| FK  | Nr_biura         |        | Integer      | YES             | NO              | NO              | NO              |          |
| FK  | Nr_modelu        |        | Integer      | YES             | NO              | NO              | NO              |          |
| FK  | Nr_placowki      |        | Integer      | NO              | NO              | NO              | NO              |          |

## Relationships

| Full Name                          | Type            | Parent Entity | Child Entity | Card. |
|------------------------------------|-----------------|---------------|--------------|-------|
| Biuro_posiada_lodki                | Non-identifying | Biura         | Lodzie       | 1:N   |
| Lodz_jest_modelu                   | Non-identifying | Modele_lodzi  | Lodzie       | 1:N   |
| Lodz_jest_czarterowana_Lodz        | Identifying     | Lodzie        | Lodz_Czarter | 1:N   |
| Lodz_nalezy_do_portu               | Non-identifying | Porty         | Lodzie       | 1:N   |
| Rejs_jest_przypisany_do_lodzi_Lodz | Identifying     | Lodzie        | Rejs_Lodz    | 1:N   |

## Indexes

| Full Name               | Attributes  | Unique |
|-------------------------|-------------|--------|
| IX_Biuro_posiada_lodki  | Nr_biura    | NO     |
| IX_Lodz_jest_modelu     | Nr_modelu   | NO     |
| IX_Lodz_nalezy_do_portu | Nr_placowki | NO     |

## Notes

Encja łódź.

## Attribute 'Nr\_lodzi'

|                |          |
|----------------|----------|
| <b>Caption</b> | Nr_lodzi |
| <b>Entity</b>  | Lodzie   |

|                    |         |
|--------------------|---------|
| <b>Primary Key</b> | YES     |
| <b>Foreign Key</b> | NO      |
| <b>Data Type</b>   | Integer |
| <b>Not Null</b>    | YES     |
| <b>Unique</b>      | NO      |

### Attribute Properties

|                      |           |
|----------------------|-----------|
| <b>Used Sequence</b> | LodzieSeq |
|----------------------|-----------|

### Notes

Numer łodzi - unikatowy identyfikator (klucz).

### Attribute 'Nazwa'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa         |
| <b>Entity</b>      | Lodzie        |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Nazwa łodzi.

### Attribute 'Nr\_rejestracyjny'

|                    |                  |
|--------------------|------------------|
| <b>Caption</b>     | Nr_rejestracyjny |
| <b>Entity</b>      | Lodzie           |
| <b>Primary Key</b> | NO               |
| <b>Foreign Key</b> | NO               |
| <b>Data Type</b>   | Varchar2(30 )    |
| <b>Not Null</b>    | YES              |
| <b>Unique</b>      | NO               |

### Notes

Numer rejestracyjny łódki.

### Attribute 'Nr\_biura'

|             |          |               |       |
|-------------|----------|---------------|-------|
| Caption     | Nr_biura |               |       |
| Entity      | Lodzie   |               |       |
| Primary Key | NO       |               |       |
| Foreign Key | YES      | Parent Entity | Biura |
| Data Type   | Integer  |               |       |

|                 |     |
|-----------------|-----|
| <b>Not Null</b> | YES |
| <b>Unique</b>   | NO  |

### Attribute 'Nr\_modelu'

|                    |           |                      |              |
|--------------------|-----------|----------------------|--------------|
| <b>Caption</b>     | Nr_modelu |                      |              |
| <b>Entity</b>      | Lodzie    |                      |              |
| <b>Primary Key</b> | NO        |                      |              |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Modele_lodzi |
| <b>Data Type</b>   | Integer   |                      |              |
| <b>Not Null</b>    | YES       |                      |              |
| <b>Unique</b>      | NO        |                      |              |

### Attribute 'Nr\_placowki'

|                    |             |                      |       |
|--------------------|-------------|----------------------|-------|
| <b>Caption</b>     | Nr_placowki |                      |       |
| <b>Entity</b>      | Lodzie      |                      |       |
| <b>Primary Key</b> | NO          |                      |       |
| <b>Foreign Key</b> | YES         | <b>Parent Entity</b> | Porty |
| <b>Data Type</b>   | Integer     |                      |       |
| <b>Not Null</b>    | NO          |                      |       |
| <b>Unique</b>      | NO          |                      |       |



## Entity 'Modele\_lodzi'

|                |              |
|----------------|--------------|
| <b>Caption</b> | Modele_lodzi |
|----------------|--------------|

## Primary Key 'Model\_lodziPK'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_modelu | PK   | -----         |

## Attributes

| Key | Full Name       | Domain    | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-----------------|-----------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_modelu       |           | Integer      | YES             | NO              | NO              | NO              |          |
|     | Nazwa           |           | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Dlugosc_kadluba |           | Number(4,2)  | YES             | NO              | NO              | NO              |          |
|     | Liczba_osob     |           | Integer      | YES             | NO              | NO              | NO              |          |
|     | Typ             |           | Varchar2(32) | YES             | NO              | NO              | NO              |          |
|     | Typ_paliwa      | TypPaliwa | Varchar2(12) | YES             | NO              | YES             | NO              |          |

## Relationships

| Full Name        | Type            | Parent Entity | Child Entity | Card. |
|------------------|-----------------|---------------|--------------|-------|
| Lodz_jest_modelu | Non-identifying | Modele_lodzi  | Lodzie       | 1:N   |

## Notes

Encja model łodzi.

## Attribute 'Nr\_modelu'

|                    |              |
|--------------------|--------------|
| <b>Caption</b>     | Nr_modelu    |
| <b>Entity</b>      | Modele_lodzi |
| <b>Primary Key</b> | YES          |
| <b>Foreign Key</b> | NO           |
| <b>Data Type</b>   | Integer      |
| <b>Not Null</b>    | YES          |
| <b>Unique</b>      | NO           |

## Attribute Properties

|                      |                |
|----------------------|----------------|
| <b>Used Sequence</b> | ModeleLodziSeq |
|----------------------|----------------|

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**Notes**


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Numer modelu łodzi - unikatowy identyfikator (klucz).

### Attribute 'Nazwa'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa         |
| <b>Entity</b>      | Modele_lodzi  |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Nazwa modelu łodzi.

### Attribute 'Dlugosc\_kadluba'

|                    |                 |
|--------------------|-----------------|
| <b>Caption</b>     | Dlugosc_kadluba |
| <b>Entity</b>      | Modele_lodzi    |
| <b>Primary Key</b> | NO              |
| <b>Foreign Key</b> | NO              |
| <b>Data Type</b>   | Number(4,2)     |
| <b>Not Null</b>    | YES             |
| <b>Unique</b>      | NO              |

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**Notes**


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Długość kadłuba w metrach (z dokładnością do cm).

### Attribute 'Liczba\_osob'

|                    |              |
|--------------------|--------------|
| <b>Caption</b>     | Liczba_osob  |
| <b>Entity</b>      | Modele_lodzi |
| <b>Primary Key</b> | NO           |
| <b>Foreign Key</b> | NO           |
| <b>Data Type</b>   | Integer      |
| <b>Not Null</b>    | YES          |
| <b>Unique</b>      | NO           |

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**Notes**


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Maksymalna ilość osób (załogi wraz z kapitanem).

### Attribute 'Typ'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Typ           |
| <b>Entity</b>      | Modele_lodzi  |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(32 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

#### Notes

Określenie typu łodzi (ket, slup, sluter itp.).

### Attribute 'Typ\_paliwa'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Typ_paliwa    |
| <b>Entity</b>      | Modele_lodzi  |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Domain</b>      | TypPaliwa     |
| <b>Data Type</b>   | Varchar2(12 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

#### Check Constraints

|                              |  |
|------------------------------|--|
| <b>Full Name</b>             | CheckConstraintA1  |
| <b>Check Constraint Rule</b> | TypPaliwaR   |
| <b>Check</b>                 | TYP_PALIWA IN ('BENZYNA', 'DIESEL', 'LPG', 'HYBRYDOWY', 'ELEKTRYCZNY', 'INNY') |

#### Check Constraints from Domain

|                              |  |
|------------------------------|--|
| <b>Check Constraint Name</b> | CheckConstraintD1  |
| <b>Check Constraint Rule</b> | TypPaliwaR   |
| <b>Check</b>                 | TYP_PALIWA IN ('BENZYNA', 'DIESEL', 'LPG', 'HYBRYDOWY', 'ELEKTRYCZNY', 'INNY') |

#### Notes

Typ paliwa wykorzystywany przez dany model (benzyna, diesel, lpg, hybrydowy, elektryczny, bądź inny).

## Entity 'Poczty'

|                |        |
|----------------|--------|
| <b>Caption</b> | Poczty |
|----------------|--------|

## Primary Key 'PK\_&lt;%OwnerName%&gt;'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_poczty | PK   | -----         |

## Attributes

| Key | Full Name  | Domain | Data Type     | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|------------|--------|---------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_poczty  |        | Integer       | YES             | NO              | NO              | NO              |          |
|     | Kod_poczty |        | Char(6 )      | YES             | YES             | NO              | NO              |          |
|     | Poczta     |        | Varchar2(20 ) | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name       | Type            | Parent Entity | Child Entity | Card. |
|-----------------|-----------------|---------------|--------------|-------|
| Adres_ma_poczte | Non-identifying | Poczty        | Adresy       | 1:N   |

## Keys

| Type | Full Name        | Attributes |
|------|------------------|------------|
| PK   | PK_<%OwnerName%> | Nr_poczty  |
| AK   | Kod_poczty       | Kod_poczty |

## Notes

Encja port.

## Attribute 'Nr\_poczty'

|                    |           |
|--------------------|-----------|
| <b>Caption</b>     | Nr_poczty |
| <b>Entity</b>      | Poczty    |
| <b>Primary Key</b> | YES       |
| <b>Foreign Key</b> | NO        |
| <b>Data Type</b>   | Integer   |
| <b>Not Null</b>    | YES       |
| <b>Unique</b>      | NO        |

## Attribute Properties

|                      |           |
|----------------------|-----------|
| <b>Used Sequence</b> | PocztySeq |
|----------------------|-----------|

## Notes

Numer poczty - unikatowy identyfikator (klucz).

### Attribute 'Kod\_poczty'

|                    |            |
|--------------------|------------|
| <b>Caption</b>     | Kod_poczty |
| <b>Entity</b>      | Poczty     |
| <b>Primary Key</b> | NO         |
| <b>Foreign Key</b> | NO         |
| <b>Data Type</b>   | Char(6 )   |
| <b>Not Null</b>    | YES        |
| <b>Unique</b>      | YES        |

### Notes

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Kod poczty.

### Attribute 'Poczta'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Poczta        |
| <b>Entity</b>      | Poczty        |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

---

Lokalizacja poczty.

## Entity 'Port\_Pracownik'

|                |                |
|----------------|----------------|
| <b>Caption</b> | Port_Pracownik |
|----------------|----------------|

## Primary Key 'Key1'

| Attribute     | Type | Parent Entity |
|---------------|------|---------------|
| Nr_placowki   | PFK  | Porty         |
| Nr_pracownika | PFK  | Pracownicy    |
| Data_od       | PK   | -----         |

## Attributes

| Key | Full Name     | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|---------------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_placowki   |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_pracownika |        | Integer   | YES             | NO              | NO              | NO              |          |
| PK  | Data_od       |        | Date      | YES             | NO              | NO              | NO              |          |
|     | Data_do       |        | Date      | NO              | NO              | NO              | NO              |          |

## Relationships

| Full Name                               | Type        | Parent Entity | Child Entity   | Card. |
|---|-------------|---------------|----------------|-------|
| Placowka_zatrudnia_pracownika_Port      | Identifying | Porty         | Port_Pracownik | 1:N   |
| Placowka_zatrudnia_pracownika_Pracownik | Identifying | Pracownicy    | Port_Pracownik | 1:N   |

## Attribute 'Nr\_placowki'

|                    |                |                      |       |
|--------------------|----------------|----------------------|-------|
| <b>Caption</b>     | Nr_placowki    |                      |       |
| <b>Entity</b>      | Port_Pracownik |                      |       |
| <b>Primary Key</b> | YES            |                      |       |
| <b>Foreign Key</b> | YES            | <b>Parent Entity</b> | Porty |
| <b>Data Type</b>   | Integer        |                      |       |
| <b>Not Null</b>    | YES            |                      |       |
| <b>Unique</b>      | NO             |                      |       |

## Attribute 'Nr\_pracownika'

|                    |                |                      |            |
|--------------------|----------------|----------------------|------------|
| <b>Caption</b>     | Nr_pracownika  |                      |            |
| <b>Entity</b>      | Port_Pracownik |                      |            |
| <b>Primary Key</b> | YES            |                      |            |
| <b>Foreign Key</b> | YES            | <b>Parent Entity</b> | Pracownicy |
| <b>Data Type</b>   | Integer        |                      |            |
| <b>Not Null</b>    | YES            |                      |            |
| <b>Unique</b>      | NO             |                      |            |

**Attribute 'Data\_od'**

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Data_od        |
| <b>Entity</b>      | Port_Pracownik |
| <b>Primary Key</b> | YES            |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Date           |
| <b>Not Null</b>    | YES            |
| <b>Unique</b>      | NO             |

**Notes**

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Data od kiedy pracownik pracuje w danym porcie/placówce.

**Attribute 'Data\_do'**

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Data_do        |
| <b>Entity</b>      | Port_Pracownik |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Date           |
| <b>Not Null</b>    | NO             |
| <b>Unique</b>      | NO             |

**Notes**

---

Data do kiedy pracownik pracuje w danym porcie/placówce.

## Entity 'Porty'

|                |       |
|----------------|-------|
| <b>Caption</b> | Porty |
|----------------|-------|

### Primary Key 'PortPK'

| Attribute   | Type | Parent Entity |
|-------------|------|---------------|
| Nr_placowki | PK   | -----         |

### Attributes

| Key | Full Name      | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|----------------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_placowki    |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Nazwa_portu    |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Data_zalozenia |        | Date         | NO              | NO              | NO              | NO              |          |
| FK  | Nr_biura       |        | Integer      | YES             | NO              | NO              | NO              |          |
| FK  | Nr_adresu      |        | Integer      | YES             | NO              | NO              | NO              |          |

### Relationships

| Full Name                          | Type            | Parent Entity | Child Entity   | Card. |
|------------------------------------|-----------------|---------------|----------------|-------|
| Placowka_zatrudnia_pracownika_Port | Identifying     | Porty         | Port_Pracownik | 1:N   |
| Biuro_posiada_placowke_w_porcie    | Non-identifying | Biura         | Porty          | 1:N   |
| Lodz_nalezy_do_portu               | Non-identifying | Porty         | Lodzie         | 1:N   |
| Rejs_odwiedza_port_Port            | Identifying     | Porty         | Rejs_Port      | 1:N   |
| Port_ma_adres                      | Non-identifying | Adresy        | Porty          | 1:N   |

### Indexes

| Full Name                          | Attributes | Unique |
|------------------------------------|------------|--------|
| IX_Biuro_posiada_placowke_w_porcie | Nr_biura   | NO     |
| IX_Relationship7                   | Nr_adresu  | NO     |

### Notes

Encja port. Placówka/port w którym biuro posiada siedzibę, skąd odbywa rejsy i szkolenia. Również port odwiedzany podczas rejsu, niekoniecznie placówka.

## Attribute 'Nr\_placowki'

|                |             |
|----------------|-------------|
| <b>Caption</b> | Nr_placowki |
| <b>Entity</b>  | Porty       |



|                    |         |
|--------------------|---------|
| <b>Primary Key</b> | YES     |
| <b>Foreign Key</b> | NO      |
| <b>Data Type</b>   | Integer |
| <b>Not Null</b>    | YES     |
| <b>Unique</b>      | NO      |

### Attribute Properties

|                      |          |
|----------------------|----------|
| <b>Used Sequence</b> | PortySeq |
|----------------------|----------|

### Notes

klucz główny

### Attribute 'Nazwa\_portu'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa_portu   |
| <b>Entity</b>      | Porty         |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Nazwa konkretnego portu

### Attribute 'Data\_zalozenia'

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Data_zalozenia |
| <b>Entity</b>      | Porty          |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Date           |
| <b>Not Null</b>    | NO             |
| <b>Unique</b>      | NO             |

### Notes

Data założenia placówki w porcie.

### Attribute 'Nr\_biura'

|             |          |               |       |
|-------------|----------|---------------|-------|
| Caption     | Nr_biura |               |       |
| Entity      | Porty    |               |       |
| Primary Key | NO       |               |       |
| Foreign Key | YES      | Parent Entity | Biura |
| Data Type   | Integer  |               |       |

|                 |     |
|-----------------|-----|
| <b>Not Null</b> | YES |
| <b>Unique</b>   | NO  |

**Attribute 'Nr\_adresu'**

|                    |           |                      |        |
|--------------------|-----------|----------------------|--------|
| <b>Caption</b>     | Nr_adresu |                      |        |
| <b>Entity</b>      | Porty     |                      |        |
| <b>Primary Key</b> | NO        |                      |        |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Adresy |
| <b>Data Type</b>   | Integer   |                      |        |
| <b>Not Null</b>    | YES       |                      |        |
| <b>Unique</b>      | NO        |                      |        |

## Entity 'Pracownicy'

|                |            |
|----------------|------------|
| <b>Caption</b> | Pracownicy |
|----------------|------------|

## Primary Key 'PracownikPK'

| Attribute     | Type | Parent Entity |
|---------------|------|---------------|
| Nr_pracownika | PK   | -----         |

## Attributes

| Key | Full Name         | Domain     | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-------------------|------------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_pracownika     |            | Integer      | YES             | NO              | NO              | NO              |          |
|     | Imie              |            | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Nazwisko          |            | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | PESEL             |            | Varchar2(12) | NO              | NO              | NO              | NO              |          |
|     | Data_urodzenia    |            | Date         | YES             | NO              | NO              | NO              |          |
|     | Plec              | Plec       | Char(1)      | YES             | NO              | NO              | NO              |          |
|     | Data_zatrudnienia |            | Date         | YES             | NO              | NO              | NO              |          |
|     | Stanowisko        | Stanowisko | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Wynagrodzenie     |            | Number(10,2) | NO              | NO              | NO              | NO              |          |
|     | Nr_konta          |            | Char(26)     | NO              | NO              | NO              | NO              |          |
|     | Nr_telefonu       |            | Varchar2(20) | NO              | NO              | NO              | NO              |          |
|     | Email             |            | Varchar2(30) | NO              | NO              | NO              | NO              |          |
| FK  | Nr_biura          |            | Integer      | YES             | NO              | NO              | NO              |          |
| FK  | Nr_adresu         |            | Integer      | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                               | Type            | Parent Entity | Child Entity   | Card. |
|---|-----------------|---------------|----------------|-------|
| Biuro_zatrudnia_pracownika              | Non-identifying | Biura         | Pracownicy     | 1:N   |
| Placowka_zatrudnia_pracownika_Pracownik | Identifying     | Pracownicy    | Port_Pracownik | 1:N   |
| Pracownik_ma_adres                      | Non-identifying | Adresy        | Pracownicy     | 1:1   |

## Indexes

| Full Name                     | Attributes | Unique |
|-------------------------------|------------|--------|
| IX_Biuro_zatrudnia_pracownika | Nr_biura   | NO     |
| IX_Relationship4              | Nr_adresu  | NO     |

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**Notes**


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Encja pracownik.

### Attribute 'Nr\_pracownika'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nr_pracownika |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | YES           |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Integer       |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Attribute Properties

---

|                      |               |
|----------------------|---------------|
| <b>Used Sequence</b> | PracownicySeq |
|----------------------|---------------|

**Notes**


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Numer pracownika - unikatowy identyfikator (klucz).

### Attribute 'Imie'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Imie          |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

**Notes**


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Imię pracownika.

### Attribute 'Nazwisko'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwisko      |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

**Notes**


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Nazwisko pracownika.

### Attribute 'PESEL'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | PESEL         |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(12 ) |
| <b>Not Null</b>    | NO            |
| <b>Unique</b>      | NO            |

### Notes

Numer pesel pracownika.

### Attribute 'Data\_urodzenia'

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Data_urodzenia |
| <b>Entity</b>      | Pracownicy     |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Date           |
| <b>Not Null</b>    | YES            |
| <b>Unique</b>      | NO             |

### Notes

Data urodzenia pracownika.

### Attribute 'Plec'

|                    |            |
|--------------------|------------|
| <b>Caption</b>     | Plec       |
| <b>Entity</b>      | Pracownicy |
| <b>Primary Key</b> | NO         |
| <b>Foreign Key</b> | NO         |
| <b>Domain</b>      | Plec       |
| <b>Data Type</b>   | Char(1 )   |
| <b>Not Null</b>    | YES        |
| <b>Unique</b>      | NO         |

### Check Constraints from Domain

|                              |                    |
|------------------------------|--------------------|
| <b>Check Constraint Name</b> | CheckConstraintD1  |
| <b>Check Constraint Rule</b> | PlecR              |
| <b>Check</b>                 | PLEC IN ('K', 'M') |

---

**Notes**


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Płeć pracownika (M - mężczyzna, K - kobieta).

### Attribute 'Data\_zatrudnienia'

|                    |                   |
|--------------------|-------------------|
| <b>Caption</b>     | Data_zatrudnienia |
| <b>Entity</b>      | Pracownicy        |
| <b>Primary Key</b> | NO                |
| <b>Foreign Key</b> | NO                |
| <b>Data Type</b>   | Date              |
| <b>Not Null</b>    | YES               |
| <b>Unique</b>      | NO                |

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**Notes**


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Data zatrudnienia pracownika.

### Attribute 'Stanowisko'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Stanowisko    |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Domain</b>      | Stanowisko    |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Check Constraints from Domain**


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|                              |   |
|------------------------------|---|
| <b>Check Constraint Name</b> | CheckConstraintD1   |
| <b>Check Constraint Rule</b> | StanowiskoR   |
| <b>Check</b>                 | STANOWISKO IN ('MENADZER', 'KAPITAN', 'TECHNIK', 'SPRZATACZ', 'INNE') |

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**Notes**


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Stanowisko pracownika (menadżer, kapitan, technik, sprzątacze, bądź inne).

### Attribute 'Wynagrodzenie'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Wynagrodzenie |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |

|                  |              |
|------------------|--------------|
| <b>Data Type</b> | Number(10,2) |
| <b>Not Null</b>  | NO           |
| <b>Unique</b>    | NO           |

---

**Notes**

Wynagrodzenie pracownika.

### Attribute 'Nr\_konta'

|                    |            |
|--------------------|------------|
| <b>Caption</b>     | Nr_konta   |
| <b>Entity</b>      | Pracownicy |
| <b>Primary Key</b> | NO         |
| <b>Foreign Key</b> | NO         |
| <b>Data Type</b>   | Char(26 )  |
| <b>Not Null</b>    | NO         |
| <b>Unique</b>      | NO         |

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**Notes**

Numer konta bankowego pracownika.

### Attribute 'Nr\_telefonu'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nr_telefonu   |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | NO            |
| <b>Unique</b>      | NO            |

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**Notes**

Numer telefonu pracownika.

### Attribute 'Email'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Email         |
| <b>Entity</b>      | Pracownicy    |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(30 ) |
| <b>Not Null</b>    | NO            |
| <b>Unique</b>      | NO            |

---

**Notes**

Email pracownika.

**Attribute 'Nr\_biura'**

|                    |            |                      |       |
|--------------------|------------|----------------------|-------|
| <b>Caption</b>     | Nr_biura   |                      |       |
| <b>Entity</b>      | Pracownicy |                      |       |
| <b>Primary Key</b> | NO         |                      |       |
| <b>Foreign Key</b> | YES        | <b>Parent Entity</b> | Biura |
| <b>Data Type</b>   | Integer    |                      |       |
| <b>Not Null</b>    | YES        |                      |       |
| <b>Unique</b>      | NO         |                      |       |

**Attribute 'Nr\_adresu'**

|                    |            |                      |        |
|--------------------|------------|----------------------|--------|
| <b>Caption</b>     | Nr_adresu  |                      |        |
| <b>Entity</b>      | Pracownicy |                      |        |
| <b>Primary Key</b> | NO         |                      |        |
| <b>Foreign Key</b> | YES        | <b>Parent Entity</b> | Adresy |
| <b>Data Type</b>   | Integer    |                      |        |
| <b>Not Null</b>    | YES        |                      |        |
| <b>Unique</b>      | NO         |                      |        |



## Entity 'Rejs\_Atrakcja'

|                |               |
|----------------|---------------|
| <b>Caption</b> | Rejs_Atrakcja |
|----------------|---------------|

## Primary Key 'Key5'

| Attribute   | Type | Parent Entity |
|-------------|------|---------------|
| Nr_rejsu    | PFK  | Rejsy         |
| Nr_atrakcji | PFK  | Atrakcje      |

## Attributes

| Key | Full Name   | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-------------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_rejsu    |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_atrakcji |        | Integer   | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                 | Type        | Parent Entity | Child Entity  | Card. |
|---------------------------|-------------|---------------|---------------|-------|
| Rejs_ma_atrakcje_Rejs     | Identifying | Rejsy         | Rejs_Atrakcja | 1:N   |
| Rejs_ma_atrakcje_Atrakcja | Identifying | Atrakcje      | Rejs_Atrakcja | 1:N   |

## Attribute 'Nr\_rejsu'

|                    |               |                      |       |
|--------------------|---------------|----------------------|-------|
| <b>Caption</b>     | Nr_rejsu      |                      |       |
| <b>Entity</b>      | Rejs_Atrakcja |                      |       |
| <b>Primary Key</b> | YES           |                      |       |
| <b>Foreign Key</b> | YES           | <b>Parent Entity</b> | Rejsy |
| <b>Data Type</b>   | Integer       |                      |       |
| <b>Not Null</b>    | YES           |                      |       |
| <b>Unique</b>      | NO            |                      |       |

## Attribute 'Nr\_atrakcji'

|                    |               |                      |          |
|--------------------|---------------|----------------------|----------|
| <b>Caption</b>     | Nr_atrakcji   |                      |          |
| <b>Entity</b>      | Rejs_Atrakcja |                      |          |
| <b>Primary Key</b> | YES           |                      |          |
| <b>Foreign Key</b> | YES           | <b>Parent Entity</b> | Atrakcje |
| <b>Data Type</b>   | Integer       |                      |          |
| <b>Not Null</b>    | YES           |                      |          |
| <b>Unique</b>      | NO            |                      |          |

## Entity 'Rejs\_Kurs'

|                |           |
|----------------|-----------|
| <b>Caption</b> | Rejs_Kurs |
|----------------|-----------|

## Primary Key 'Key7'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_rejsu  | PFK  | Rejsy         |
| Nr_kursu  | PFK  | Kursy         |

## Attributes

| Key | Full Name | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-----------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_rejsu  |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_kursu  |        | Integer   | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name              | Type        | Parent Entity | Child Entity | Card. |
|------------------------|-------------|---------------|--------------|-------|
| Rejs_zawiera_kurs_Rejs | Identifying | Rejsy         | Rejs_Kurs    | 1:N   |
| Rejs_zawiera_kurs_Kurs | Identifying | Kursy         | Rejs_Kurs    | 1:N   |

## Attribute 'Nr\_rejsu'

|                    |           |                      |       |
|--------------------|-----------|----------------------|-------|
| <b>Caption</b>     | Nr_rejsu  |                      |       |
| <b>Entity</b>      | Rejs_Kurs |                      |       |
| <b>Primary Key</b> | YES       |                      |       |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Rejsy |
| <b>Data Type</b>   | Integer   |                      |       |
| <b>Not Null</b>    | YES       |                      |       |
| <b>Unique</b>      | NO        |                      |       |

## Attribute 'Nr\_kursu'

|                    |           |                      |       |
|--------------------|-----------|----------------------|-------|
| <b>Caption</b>     | Nr_kursu  |                      |       |
| <b>Entity</b>      | Rejs_Kurs |                      |       |
| <b>Primary Key</b> | YES       |                      |       |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Kursy |
| <b>Data Type</b>   | Integer   |                      |       |
| <b>Not Null</b>    | YES       |                      |       |
| <b>Unique</b>      | NO        |                      |       |

## Entity 'Rejs\_Lodz'

|                |           |
|----------------|-----------|
| <b>Caption</b> | Rejs_Lodz |
|----------------|-----------|

## Primary Key 'Key13'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_rejsu  | PFK  | Rejsy         |
| Nr_lodzi  | PFK  | Lodzie        |

## Attributes

| Key | Full Name | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-----------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_rejsu  |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_lodzi  |        | Integer   | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                          | Type        | Parent Entity | Child Entity | Card. |
|------------------------------------|-------------|---------------|--------------|-------|
| Rejs_jest_przypisany_do_lodzi_Rejs | Identifying | Rejsy         | Rejs_Lodz    | 1:N   |
| Rejs_jest_przypisany_do_lodzi_Lodz | Identifying | Lodzie        | Rejs_Lodz    | 1:N   |

## Attribute 'Nr\_rejsu'

|                    |           |                      |       |
|--------------------|-----------|----------------------|-------|
| <b>Caption</b>     | Nr_rejsu  |                      |       |
| <b>Entity</b>      | Rejs_Lodz |                      |       |
| <b>Primary Key</b> | YES       |                      |       |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Rejsy |
| <b>Data Type</b>   | Integer   |                      |       |
| <b>Not Null</b>    | YES       |                      |       |
| <b>Unique</b>      | NO        |                      |       |

## Attribute 'Nr\_lodzi'

|                    |           |                      |        |
|--------------------|-----------|----------------------|--------|
| <b>Caption</b>     | Nr_lodzi  |                      |        |
| <b>Entity</b>      | Rejs_Lodz |                      |        |
| <b>Primary Key</b> | YES       |                      |        |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Lodzie |
| <b>Data Type</b>   | Integer   |                      |        |
| <b>Not Null</b>    | YES       |                      |        |
| <b>Unique</b>      | NO        |                      |        |

**Entity 'Rejs\_Port'**

|                |           |
|----------------|-----------|
| <b>Caption</b> | Rejs_Port |
|----------------|-----------|

**Primary Key 'Key9'**

| Attribute   | Type | Parent Entity |
|-------------|------|---------------|
| Nr_rejsu    | PFK  | Rejsy         |
| Nr_placowki | PFK  | Porty         |
| Kolejnosc   | PK   | -----         |

**Attributes**

| Key | Full Name   | Domain | Data Type | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-------------|--------|-----------|-----------------|-----------------|-----------------|-----------------|----------|
| PFK | Nr_rejsu    |        | Integer   | YES             | NO              | NO              | NO              |          |
| PFK | Nr_placowki |        | Integer   | YES             | NO              | NO              | NO              |          |
| PK  | Kolejnosc   |        | Integer   | YES             | NO              | NO              | NO              |          |

**Relationships**

| Full Name               | Type        | Parent Entity | Child Entity | Card. |
|-------------------------|-------------|---------------|--------------|-------|
| Rejs_odwiedza_port_Rejs | Identifying | Rejsy         | Rejs_Port    | 1:N   |
| Rejs_odwiedza_port_Port | Identifying | Porty         | Rejs_Port    | 1:N   |

**Attribute 'Nr\_rejsu'**

|                    |           |                      |       |
|--------------------|-----------|----------------------|-------|
| <b>Caption</b>     | Nr_rejsu  |                      |       |
| <b>Entity</b>      | Rejs_Port |                      |       |
| <b>Primary Key</b> | YES       |                      |       |
| <b>Foreign Key</b> | YES       | <b>Parent Entity</b> | Rejsy |
| <b>Data Type</b>   | Integer   |                      |       |
| <b>Not Null</b>    | YES       |                      |       |
| <b>Unique</b>      | NO        |                      |       |

**Attribute 'Nr\_placowki'**

|                    |             |                      |       |
|--------------------|-------------|----------------------|-------|
| <b>Caption</b>     | Nr_placowki |                      |       |
| <b>Entity</b>      | Rejs_Port   |                      |       |
| <b>Primary Key</b> | YES         |                      |       |
| <b>Foreign Key</b> | YES         | <b>Parent Entity</b> | Porty |
| <b>Data Type</b>   | Integer     |                      |       |
| <b>Not Null</b>    | YES         |                      |       |
| <b>Unique</b>      | NO          |                      |       |

**Attribute 'Kolejnosc'**

|                    |           |
|--------------------|-----------|
| <b>Caption</b>     | Kolejnosc |
| <b>Entity</b>      | Rejs_Port |
| <b>Primary Key</b> | YES       |
| <b>Foreign Key</b> | NO        |
| <b>Data Type</b>   | Integer   |
| <b>Not Null</b>    | YES       |
| <b>Unique</b>      | NO        |

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**Notes**

Kolejność w jakiej odwiedzamy porty (pierwszy i ostatni port musi być taki sam ze względu na założenia projektowe).

## Entity 'Rejsy'

|                |       |
|----------------|-------|
| <b>Caption</b> | Rejsy |
|----------------|-------|

## Primary Key 'RejsPK'

| Attribute | Type | Parent Entity |
|-----------|------|---------------|
| Nr_rejsu  | PK   | -----         |

## Attributes

| Key | Full Name | Domain | Data Type     | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|-----------|--------|---------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_rejsu  |        | Integer       | YES             | NO              | NO              | NO              |          |
|     | Nazwa     |        | Varchar2(20)  | YES             | NO              | NO              | NO              |          |
|     | Opis      |        | Varchar2(200) | NO              | NO              | NO              | NO              |          |
|     | Data_od   |        | Date          | YES             | NO              | NO              | NO              |          |
|     | Data_do   |        | Date          | YES             | NO              | NO              | NO              |          |
|     | Cena      |        | Number(10,2)  | YES             | NO              | NO              | NO              |          |
| FK  | Nr_biura  |        | Integer       | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name                          | Type            | Parent Entity | Child Entity  | Card. |
|------------------------------------|-----------------|---------------|---------------|-------|
| Rejs_ma_atrakcje_Rejs              | Identifying     | Rejsy         | Rejs_Atrakcja | 1:N   |
| Rejs_zawiera_kurs_Rejs             | Identifying     | Rejsy         | Rejs_Kurs     | 1:N   |
| Biuro_oferuje_rejs                 | Non-identifying | Biura         | Rejsy         | 1:N   |
| Rejs_odwiedza_port_Rejs            | Identifying     | Rejsy         | Rejs_Port     | 1:N   |
| Klient_zapisuje_sie_na_rejs_Rejs   | Identifying     | Rejsy         | Klient_Rejs   | 1:N   |
| Rejs_jest_przypisany_do_lodzi_Rejs | Identifying     | Rejsy         | Rejs_Lodz     | 1:N   |

## Indexes

| Full Name             | Attributes | Unique |
|-----------------------|------------|--------|
| IX_Biuro_oferuje_rejs | Nr_biura   | NO     |

## Notes

Encja rejs.

## Attribute 'Nr\_rejsu'

|                    |          |
|--------------------|----------|
| <b>Caption</b>     | Nr_rejsu |
| <b>Entity</b>      | Rejsy    |
| <b>Primary Key</b> | YES      |
| <b>Foreign Key</b> | NO       |
| <b>Data Type</b>   | Integer  |
| <b>Not Null</b>    | YES      |
| <b>Unique</b>      | NO       |

### Attribute Properties

|                      |          |
|----------------------|----------|
| <b>Used Sequence</b> | RejsySeq |
|----------------------|----------|

### Notes

Numer rejsu - unikatowy identyfikator (klucz).

### Attribute 'Nazwa'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwa         |
| <b>Entity</b>      | Rejsy         |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

### Notes

Nazwa rejsu.

### Attribute 'Opis'

|                    |                |
|--------------------|----------------|
| <b>Caption</b>     | Opis           |
| <b>Entity</b>      | Rejsy          |
| <b>Primary Key</b> | NO             |
| <b>Foreign Key</b> | NO             |
| <b>Data Type</b>   | Varchar2(200 ) |
| <b>Not Null</b>    | NO             |
| <b>Unique</b>      | NO             |

### Notes

Opis rejsu.

### Attribute 'Data\_od'

|                    |         |
|--------------------|---------|
| <b>Caption</b>     | Data_od |
| <b>Entity</b>      | Rejsy   |
| <b>Primary Key</b> | NO      |

|                    |      |
|--------------------|------|
| <b>Foreign Key</b> | NO   |
| <b>Data Type</b>   | Date |
| <b>Not Null</b>    | YES  |
| <b>Unique</b>      | NO   |

### Notes

Data rozpoczęcia rejsu.

### Attribute 'Data\_do'

|                    |         |
|--------------------|---------|
| <b>Caption</b>     | Data_do |
| <b>Entity</b>      | Rejsy   |
| <b>Primary Key</b> | NO      |
| <b>Foreign Key</b> | NO      |
| <b>Data Type</b>   | Date    |
| <b>Not Null</b>    | YES     |
| <b>Unique</b>      | NO      |

### Notes

Data zakończenia rejsu.

### Attribute 'Cena'

|                    |              |
|--------------------|--------------|
| <b>Caption</b>     | Cena         |
| <b>Entity</b>      | Rejsy        |
| <b>Primary Key</b> | NO           |
| <b>Foreign Key</b> | NO           |
| <b>Data Type</b>   | Number(10,2) |
| <b>Not Null</b>    | YES          |
| <b>Unique</b>      | NO           |

### Notes

Cena rejsu.

### Attribute 'Nr\_biura'

|             |          |               |       |
|-------------|----------|---------------|-------|
| Caption     | Nr_biura |               |       |
| Entity      | Rejsy    |               |       |
| Primary Key | NO       |               |       |
| Foreign Key | YES      | Parent Entity | Biura |
| Data Type   | Integer  |               |       |
| Not Null    | YES      |               |       |
| Unique      | NO       |               |       |



## Entity 'Wlasciele'

|                |           |
|----------------|-----------|
| <b>Caption</b> | Wlasciele |
|----------------|-----------|

## Primary Key 'PK\_&lt;%OwnerName%&gt;'

| Attribute    | Type | Parent Entity |
|--------------|------|---------------|
| Nr_wlasciela | PK   | -----         |

## Attributes

| Key | Full Name    | Domain | Data Type    | N <sup>1)</sup> | U <sup>2)</sup> | C <sup>3)</sup> | D <sup>4)</sup> | Comments |
|-----|--------------|--------|--------------|-----------------|-----------------|-----------------|-----------------|----------|
| PK  | Nr_wlasciela |        | Integer      | YES             | NO              | NO              | NO              |          |
|     | Imie         |        | Varchar2(20) | YES             | NO              | NO              | NO              |          |
|     | Nazwisko     |        | Varchar2(30) | YES             | NO              | NO              | NO              |          |
|     | Data_od      |        | Date         | YES             | NO              | NO              | NO              |          |
|     | Data_do      |        | Date         | NO              | NO              | NO              | NO              |          |
| FK  | Nr_biura     |        | Integer      | YES             | NO              | NO              | NO              |          |

## Relationships

| Full Name          | Type            | Parent Entity | Child Entity | Card. |
|--------------------|-----------------|---------------|--------------|-------|
| Biuro_ma_wlasciela | Non-identifying | Biura         | Wlasciele    | 1:N   |

## Indexes

| Full Name        | Attributes | Unique |
|------------------|------------|--------|
| IX_Relationship1 | Nr_biura   | NO     |

## Notes

Encja właściciel.

## Attribute 'Nr\_wlasciela'

|                    |              |
|--------------------|--------------|
| <b>Caption</b>     | Nr_wlasciela |
| <b>Entity</b>      | Wlasciele    |
| <b>Primary Key</b> | YES          |
| <b>Foreign Key</b> | NO           |
| <b>Data Type</b>   | Integer      |
| <b>Not Null</b>    | YES          |
| <b>Unique</b>      | NO           |

## Attribute Properties

|                      |              |
|----------------------|--------------|
| <b>Used Sequence</b> | WlascieleSeq |
|----------------------|--------------|

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**Notes**


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Numer właściciela - unikatowy identyfikator (klucz).

### Attribute 'Imie'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Imie          |
| <b>Entity</b>      | Wlascieciele  |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(20 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Imię właściciela.

### Attribute 'Nazwisko'

|                    |               |
|--------------------|---------------|
| <b>Caption</b>     | Nazwisko      |
| <b>Entity</b>      | Wlascieciele  |
| <b>Primary Key</b> | NO            |
| <b>Foreign Key</b> | NO            |
| <b>Data Type</b>   | Varchar2(30 ) |
| <b>Not Null</b>    | YES           |
| <b>Unique</b>      | NO            |

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**Notes**


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Nazwisko właściciela.

### Attribute 'Data\_od'

|                    |              |
|--------------------|--------------|
| <b>Caption</b>     | Data_od      |
| <b>Entity</b>      | Wlascieciele |
| <b>Primary Key</b> | NO           |
| <b>Foreign Key</b> | NO           |
| <b>Data Type</b>   | Date         |
| <b>Not Null</b>    | YES          |
| <b>Unique</b>      | NO           |

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**Notes**


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Data od kiedy właściciel.

**Attribute 'Data\_do'**

|                    |             |
|--------------------|-------------|
| <b>Caption</b>     | Data_do     |
| <b>Entity</b>      | Wlasciciele |
| <b>Primary Key</b> | NO          |
| <b>Foreign Key</b> | NO          |
| <b>Data Type</b>   | Date        |
| <b>Not Null</b>    | NO          |
| <b>Unique</b>      | NO          |

**Notes**

Data do kiedy właściciel.

**Attribute 'Nr\_biura'**

|                    |             |                      |       |
|--------------------|-------------|----------------------|-------|
| <b>Caption</b>     | Nr_biura    |                      |       |
| <b>Entity</b>      | Wlasciciele |                      |       |
| <b>Primary Key</b> | NO          |                      |       |
| <b>Foreign Key</b> | YES         | <b>Parent Entity</b> | Biura |
| <b>Data Type</b>   | Integer     |                      |       |
| <b>Not Null</b>    | YES         |                      |       |
| <b>Unique</b>      | NO          |                      |       |

<sup>1</sup>)Not Null

<sup>2</sup>)Unique

<sup>3</sup>)Check

<sup>4</sup>)Default

## Attribute Report

| Full Name      | Entity      | Domain | Data Type     | PK  | FK  |
|----------------|-------------|--------|---------------|-----|-----|
| Kraj           | Adresy      |        | Varchar2(30)  | NO  | NO  |
| Miasto         | Adresy      |        | Varchar2(20)  | NO  | NO  |
| Nr_adresu      | Adresy      |        | Integer       | YES | NO  |
| Nr_lokalu      | Adresy      |        | Varchar2(10)  | NO  | NO  |
| Nr_poczty      | Adresy      |        | Integer       | NO  | YES |
| Ulica          | Adresy      |        | Varchar2(30)  | NO  | NO  |
| Nazwa          | Atrakcje    |        | Varchar2(20)  | NO  | NO  |
| Nr_adresu      | Atrakcje    |        | Integer       | NO  | YES |
| Nr_atrakcji    | Atrakcje    |        | Integer       | YES | NO  |
| Opis           | Atrakcje    |        | Varchar2(200) | NO  | NO  |
| Data_zalozenia | Biura       |        | Date          | NO  | NO  |
| Nazwa          | Biura       |        | Varchar2(20)  | NO  | NO  |
| Nr_adresu      | Biura       |        | Integer       | NO  | YES |
| Nr_biura       | Biura       |        | Integer       | YES | NO  |
| Cena           | Czartery    |        | Number(10,2)  | NO  | NO  |
| Data_do        | Czartery    |        | Date          | NO  | NO  |
| Data_od        | Czartery    |        | Date          | NO  | NO  |
| Nr_biura       | Czartery    |        | Integer       | NO  | YES |
| Nr_czarteru    | Czartery    |        | Integer       | YES | NO  |
| Nr_klienta     | Czartery    |        | Integer       | NO  | YES |
| Data_urodzenia | Klienci     |        | Date          | NO  | NO  |
| Email          | Klienci     |        | Varchar2(20)  | NO  | NO  |
| Imie           | Klienci     |        | Varchar2(20)  | NO  | NO  |
| Nazwisko       | Klienci     |        | Varchar2(20)  | NO  | NO  |
| Nr_adresu      | Klienci     |        | Integer       | NO  | YES |
| Nr_biura       | Klienci     |        | Integer       | NO  | YES |
| Nr_dowodu      | Klienci     |        | Varchar2(20)  | NO  | NO  |
| Nr_klienta     | Klienci     |        | Integer       | YES | NO  |
| Nr_telefonu    | Klienci     |        | Varchar2(20)  | NO  | NO  |
| PESEL          | Klienci     |        | Varchar2(12)  | NO  | NO  |
| Nr_klienta     | Klient_Rejs |        | Integer       | YES | YES |
| Nr_rejsu       | Klient_Rejs |        | Integer       | YES | YES |
| Nazwa          | Kursy       |        | Varchar2(20)  | NO  | NO  |

| Full Name         | Entity         | Domain    | Data Type     | PK  | FK  |
|-------------------|----------------|-----------|---------------|-----|-----|
|                   |                |           | )             |     |     |
| Nr_biura          | Kursy          |           | Integer       | NO  | YES |
| Nr_kursu          | Kursy          |           | Integer       | YES | NO  |
| Opis              | Kursy          |           | Varchar2(200) | NO  | NO  |
| Nr_czarteru       | Lodz_Czarter   |           | Integer       | YES | YES |
| Nr_lodzi          | Lodz_Czarter   |           | Integer       | YES | YES |
| Nazwa             | Lodzie         |           | Varchar2(20)  | NO  | NO  |
| Nr_biura          | Lodzie         |           | Integer       | NO  | YES |
| Nr_lodzi          | Lodzie         |           | Integer       | YES | NO  |
| Nr_modelu         | Lodzie         |           | Integer       | NO  | YES |
| Nr_placowki       | Lodzie         |           | Integer       | NO  | YES |
| Nr_rejestracyjny  | Lodzie         |           | Varchar2(30)  | NO  | NO  |
| Dlugosc_kadluba   | Modele_lodzi   |           | Number(4,2)   | NO  | NO  |
| Liczba_osob       | Modele_lodzi   |           | Integer       | NO  | NO  |
| Nazwa             | Modele_lodzi   |           | Varchar2(20)  | NO  | NO  |
| Nr_modelu         | Modele_lodzi   |           | Integer       | YES | NO  |
| Typ               | Modele_lodzi   |           | Varchar2(32)  | NO  | NO  |
| Typ_paliwa        | Modele_lodzi   | TypPaliwa | Varchar2(12)  | NO  | NO  |
| Kod_poczty        | Poczty         |           | Char(6)       | NO  | NO  |
| Nr_poczty         | Poczty         |           | Integer       | YES | NO  |
| Poczta            | Poczty         |           | Varchar2(20)  | NO  | NO  |
| Data_do           | Port_Pracownik |           | Date          | NO  | NO  |
| Data_od           | Port_Pracownik |           | Date          | YES | NO  |
| Nr_placowki       | Port_Pracownik |           | Integer       | YES | YES |
| Nr_pracownika     | Port_Pracownik |           | Integer       | YES | YES |
| Data_zalozenia    | Porty          |           | Date          | NO  | NO  |
| Nazwa_portu       | Porty          |           | Varchar2(20)  | NO  | NO  |
| Nr_adresu         | Porty          |           | Integer       | NO  | YES |
| Nr_biura          | Porty          |           | Integer       | NO  | YES |
| Nr_placowki       | Porty          |           | Integer       | YES | NO  |
| Data_urodzenia    | Pracownicy     |           | Date          | NO  | NO  |
| Data_zatrudnienia | Pracownicy     |           | Date          | NO  | NO  |
| Email             | Pracownicy     |           | Varchar2(30)  | NO  | NO  |
| Imie              | Pracownicy     |           | Varchar2(20)  | NO  | NO  |
| Nazwisko          | Pracownicy     |           | Varchar2(20)  | NO  | NO  |
| Nr_adresu         | Pracownicy     |           | Integer       | NO  | YES |
| Nr_biura          | Pracownicy     |           | Integer       | NO  | YES |
| Nr_konta          | Pracownicy     |           | Char(26)      | NO  | NO  |
| Nr_pracownika     | Pracownicy     |           | Integer       | YES | NO  |
| Nr_telefonu       | Pracownicy     |           | Varchar2(20)  | NO  | NO  |

| Full Name      | Entity        | Domain     | Data Type     | PK  | FK  |
|----------------|---------------|------------|---------------|-----|-----|
| PESEL          | Pracownicy    |            | Varchar2(12)  | NO  | NO  |
| Plec           | Pracownicy    | Plec       | Char(1)       | NO  | NO  |
| Stanowisko     | Pracownicy    | Stanowisko | Varchar2(20)  | NO  | NO  |
| Wynagrodzenie  | Pracownicy    |            | Number(10, 2) | NO  | NO  |
| Nr_atrakcji    | Rejs_Atrakcja |            | Integer       | YES | YES |
| Nr_rejsu       | Rejs_Atrakcja |            | Integer       | YES | YES |
| Nr_kursu       | Rejs_Kurs     |            | Integer       | YES | YES |
| Nr_rejsu       | Rejs_Kurs     |            | Integer       | YES | YES |
| Nr_lodzi       | Rejs_Lodz     |            | Integer       | YES | YES |
| Nr_rejsu       | Rejs_Lodz     |            | Integer       | YES | YES |
| Kolejnosc      | Rejs_Port     |            | Integer       | YES | NO  |
| Nr_placowki    | Rejs_Port     |            | Integer       | YES | YES |
| Nr_rejsu       | Rejs_Port     |            | Integer       | YES | YES |
| Cena           | Rejsy         |            | Number(10, 2) | NO  | NO  |
| Data_do        | Rejsy         |            | Date          | NO  | NO  |
| Data_od        | Rejsy         |            | Date          | NO  | NO  |
| Nazwa          | Rejsy         |            | Varchar2(20)  | NO  | NO  |
| Nr_biura       | Rejsy         |            | Integer       | NO  | YES |
| Nr_rejsu       | Rejsy         |            | Integer       | YES | NO  |
| Opis           | Rejsy         |            | Varchar2(200) | NO  | NO  |
| Data_do        | Wlasciciele   |            | Date          | NO  | NO  |
| Data_od        | Wlasciciele   |            | Date          | NO  | NO  |
| Imie           | Wlasciciele   |            | Varchar2(20)  | NO  | NO  |
| Nazwisko       | Wlasciciele   |            | Varchar2(30)  | NO  | NO  |
| Nr_biura       | Wlasciciele   |            | Integer       | NO  | YES |
| Nr_wlasciciela | Wlasciciele   |            | Integer       | YES | NO  |

## Key Report

| Type | Full Name        | Entity         |
|------|------------------|----------------|
| PK   | PK_<%OwnerName%> | Adresy         |
| PK   | AtrakcjaPK       | Atrakcje       |
| PK   | BiuroPK          | Biura          |
| PK   | CzarterPK        | Czartery       |
| PK   | KlientPK         | Klienci        |
| PK   | Key11            | Klient_Rejs    |
| PK   | KursPK           | Kursy          |
| PK   | Key3             | Lodz_Czarter   |
| PK   | LodzPK           | Lodzie         |
| PK   | Model_lodziPK    | Modele_lodzi   |
| AK   | Kod_poczty       | Poczty         |
| PK   | PK_<%OwnerName%> | Poczty         |
| PK   | Key1             | Port_Pracownik |
| PK   | PortPK           | Porty          |
| PK   | PracownikPK      | Pracownicy     |
| PK   | Key5             | Rejs_Atrakcja  |
| PK   | Key7             | Rejs_Kurs      |
| PK   | Key13            | Rejs_Lodz      |
| PK   | Key9             | Rejs_Port      |
| PK   | RejsPK           | Rejsy          |
| PK   | PK_<%OwnerName%> | Wlasciciele    |

**Key 'PK\_<%OwnerName%>'**

|                  |                     |                    |  |
|------------------|---------------------|--------------------|--|
| <b>Caption</b>   | PK <%OwnerCaption%> |                    |  |
| <b>Type</b>      | Primary Key         |                    |  |
| <b>Entity</b>    | Adresy              |                    |  |
| <b>Attribute</b> | <b>Order</b>        | <b>Foreign Key</b> |  |
| Nr_adresu        | ASC                 | NO                 |  |

**Key 'AtrakcjaPK'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | AtrakcjaPK   |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Atrakcje     |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_atrakcji      | ASC          | NO                 |  |

**Key 'BiuroPK'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | BiuroPK      |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Biura        |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC          | NO                 |  |

**Key 'CzarterPK'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | CzarterPK    |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Czartery     |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_czarteru      | ASC          | NO                 |  |

**Key 'KlientPK'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | KlientPK     |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Klienci      |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_klienta       | ASC          | NO                 |  |

**Key 'Key11'**



|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | Key12        |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Klient_Rejs  |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_klienta       | ASC          | YES                |  |
| Nr_rejsu         | ASC          | YES                |  |

### Key 'KursPK'

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | KursPK       |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Kursy        |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_kursu         | ASC          | NO                 |  |

### Key 'Key3'

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | Key4         |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Lodz_Czarter |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_lodzi         | ASC          | YES                |  |
| Nr_czarteru      | ASC          | YES                |  |

### Key 'LodzPK'

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | LodzPK       |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Lodzie       |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_lodzi         | ASC          | NO                 |  |

### Key 'Model\_lodziPK'

|                  |               |                    |  |
|------------------|---------------|--------------------|--|
| <b>Caption</b>   | Model_lodziPK |                    |  |
| <b>Type</b>      | Primary Key   |                    |  |
| <b>Entity</b>    | Modele_lodzi  |                    |  |
| <b>Attribute</b> | <b>Order</b>  | <b>Foreign Key</b> |  |
| Nr_modelu        | ASC           | NO                 |  |

### Key 'Kod\_poczty'

|                  |               |                    |  |
|------------------|---------------|--------------------|--|
| <b>Caption</b>   | Kod_poczty    |                    |  |
| <b>Type</b>      | Alternate Key |                    |  |
| <b>Entity</b>    | Poczty        |                    |  |
| <b>Attribute</b> | <b>Order</b>  | <b>Foreign Key</b> |  |
| Kod_poczty       | ASC           | NO                 |  |

### Key 'PK\_<%OwnerName%>'

|                  |                     |                    |  |
|------------------|---------------------|--------------------|--|
| <b>Caption</b>   | PK <%OwnerCaption%> |                    |  |
| <b>Type</b>      | Primary Key         |                    |  |
| <b>Entity</b>    | Poczty              |                    |  |
| <b>Attribute</b> | <b>Order</b>        | <b>Foreign Key</b> |  |
| Nr_poczty        | ASC                 | NO                 |  |

### Key 'Key1'

|                  |                |                    |  |
|------------------|----------------|--------------------|--|
| <b>Caption</b>   | Key2           |                    |  |
| <b>Type</b>      | Primary Key    |                    |  |
| <b>Entity</b>    | Port_Pracownik |                    |  |
| <b>Attribute</b> | <b>Order</b>   | <b>Foreign Key</b> |  |
| Nr_placowki      | ASC            | YES                |  |
| Nr_pracownika    | ASC            | YES                |  |
| Data_od          | ASC            | NO                 |  |

### Key 'PortPK'

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | PortPK       |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Porty        |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_placowki      | ASC          | NO                 |  |

### Key 'PracownikPK'

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | PracownikPK  |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Pracownicy   |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_pracownika    | ASC          | NO                 |  |

### Key 'Key5'

|                  |               |                    |  |
|------------------|---------------|--------------------|--|
| <b>Caption</b>   | Key6          |                    |  |
| <b>Type</b>      | Primary Key   |                    |  |
| <b>Entity</b>    | Rejs_Atrakcja |                    |  |
| <b>Attribute</b> | <b>Order</b>  | <b>Foreign Key</b> |  |
| Nr_rejsu         | ASC           | YES                |  |
| Nr_atrakcji      | ASC           | YES                |  |

**Key 'Key7'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | Key8         |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Rejs_Kurs    |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_rejsu         | ASC          | YES                |  |
| Nr_kursu         | ASC          | YES                |  |

**Key 'Key13'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | Key14        |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Rejs_Lodz    |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_rejsu         | ASC          | YES                |  |
| Nr_lodzi         | ASC          | YES                |  |

**Key 'Key9'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | Key10        |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Rejs_Port    |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_rejsu         | ASC          | YES                |  |
| Nr_placowki      | ASC          | YES                |  |
| Kolejnosc        | ASC          | NO                 |  |

**Key 'RejsPK'**

|                  |              |                    |  |
|------------------|--------------|--------------------|--|
| <b>Caption</b>   | RejsPK       |                    |  |
| <b>Type</b>      | Primary Key  |                    |  |
| <b>Entity</b>    | Rejsy        |                    |  |
| <b>Attribute</b> | <b>Order</b> | <b>Foreign Key</b> |  |
| Nr_rejsu         | ASC          | NO                 |  |

**Key 'PK\_<%%OwnerName%>'**

|                  |                     |                    |  |
|------------------|---------------------|--------------------|--|
| <b>Caption</b>   | PK <%OwnerCaption%> |                    |  |
| <b>Type</b>      | Primary Key         |                    |  |
| <b>Entity</b>    | Wlasciacle          |                    |  |
| <b>Attribute</b> | <b>Order</b>        | <b>Foreign Key</b> |  |
| Nr_wlasciciela   | ASC                 | NO                 |  |

## Index Report

| Full Name                          | Unique | Entity      |
|------------------------------------|--------|-------------|
| IX_Relationship3                   | NO     | Adresy      |
| IX_Relationship5                   | NO     | Atrakcje    |
| IX_Relationship2                   | NO     | Biura       |
| IX_Biuro_oferuje_czarter           | NO     | Czartery    |
| IX_Klient_czarteruje               | NO     | Czartery    |
| IX_Biuro_posiada_klienta           | NO     | Klienci     |
| IX_Relationship6                   | NO     | Klienci     |
| IX_Biuro_oferuje_kurs              | NO     | Kursy       |
| IX_Biuro_posiada_lodki             | NO     | Lodzie      |
| IX_Lodz_jest_modelu                | NO     | Lodzie      |
| IX_Lodz_nalezy_do_portu            | NO     | Lodzie      |
| IX_Biuro_posiada_placowke_w_porcie | NO     | Porty       |
| IX_Relationship7                   | NO     | Porty       |
| IX_Biuro_zatrudnia_pracownika      | NO     | Pracownicy  |
| IX_Relationship4                   | NO     | Pracownicy  |
| IX_Biuro_oferuje_rejs              | NO     | Rejsy       |
| IX_Relationship1                   | NO     | Wlasciciele |

**Index 'IX\_Relationship3'**

|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship3 |                    |                    |  |
| <b>Entity</b>    | Adresy           |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_poczty        | ASC              | NO                 | YES                |  |

**Index 'IX\_Relationship5'**

|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship5 |                    |                    |  |
| <b>Entity</b>    | Atrakcje         |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_adresu        | ASC              | NO                 | YES                |  |

**Index 'IX\_Relationship2'**

|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship2 |                    |                    |  |
| <b>Entity</b>    | Biura            |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_adresu        | ASC              | NO                 | YES                |  |

**Index 'IX\_Biuro\_oferuje\_czarter'**

|                  |                          |                    |                    |  |
|------------------|--------------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_oferuje_czarter |                    |                    |  |
| <b>Entity</b>    | Czartery                 |                    |                    |  |
| <b>Unique</b>    | NO                       |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>             | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                      | NO                 | YES                |  |

**Index 'IX\_Klient\_czarteruje'**

|                  |                      |                    |                    |  |
|------------------|----------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Klient_czarteruje |                    |                    |  |
| <b>Entity</b>    | Czartery             |                    |                    |  |
| <b>Unique</b>    | NO                   |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>         | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_klienta       | ASC                  | NO                 | YES                |  |

**Index 'IX\_Biuro\_posiada\_klienta'**

|                  |                          |                    |                    |  |
|------------------|--------------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_posiada_klienta |                    |                    |  |
| <b>Entity</b>    | Klienci                  |                    |                    |  |
| <b>Unique</b>    | NO                       |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>             | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                      | NO                 | YES                |  |

### Index 'IX\_Relationship6'

|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship6 |                    |                    |  |
| <b>Entity</b>    | Klienci          |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_adresu        | ASC              | NO                 | YES                |  |

### Index 'IX\_Biuro\_oferuje\_kurs'

|                  |                       |                    |                    |  |
|------------------|-----------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_oferuje_kurs |                    |                    |  |
| <b>Entity</b>    | Kursy                 |                    |                    |  |
| <b>Unique</b>    | NO                    |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>          | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                   | NO                 | YES                |  |

### Index 'IX\_Biuro\_posiada\_lodki'

|                  |                        |                    |                    |  |
|------------------|------------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_posiada_lodki |                    |                    |  |
| <b>Entity</b>    | Lodzie                 |                    |                    |  |
| <b>Unique</b>    | NO                     |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>           | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                    | NO                 | YES                |  |

### Index 'IX\_Lodz\_jest\_modelu'

|                  |                     |                    |                    |  |
|------------------|---------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Lodz_jest_modelu |                    |                    |  |
| <b>Entity</b>    | Lodzie              |                    |                    |  |
| <b>Unique</b>    | NO                  |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>        | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_modelu        | ASC                 | NO                 | YES                |  |

### Index 'IX\_Lodz\_nalezy\_do\_portu'

|                  |                         |                    |                    |  |
|------------------|-------------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Lodz_nalezy_do_portu |                    |                    |  |
| <b>Entity</b>    | Lodzie                  |                    |                    |  |
| <b>Unique</b>    | NO                      |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>            | <b>Primary Key</b> | <b>Foreign Key</b> |  |

|             |     |    |     |
|-------------|-----|----|-----|
| Nr_placowki | ASC | NO | YES |
|-------------|-----|----|-----|

### Index 'IX\_Biuro\_posiada\_placowke\_w\_porcie'

|                  |                                    |                    |                    |  |
|------------------|------------------------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_posiada_placowke_w_porcie |                    |                    |  |
| <b>Entity</b>    | Porty                              |                    |                    |  |
| <b>Unique</b>    | NO                                 |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>                       | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                                | NO                 | YES                |  |

### Index 'IX\_Relationship7'

|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship7 |                    |                    |  |
| <b>Entity</b>    | Porty            |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_adresu        | ASC              | NO                 | YES                |  |

### Index 'IX\_Biuro\_zatrudnia\_pracownika'

|                  |                               |                    |                    |  |
|------------------|-------------------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_zatrudnia_pracownika |                    |                    |  |
| <b>Entity</b>    | Pracownicy                    |                    |                    |  |
| <b>Unique</b>    | NO                            |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>                  | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                           | NO                 | YES                |  |

### Index 'IX\_Relationship4'

|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship4 |                    |                    |  |
| <b>Entity</b>    | Pracownicy       |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_adresu        | ASC              | NO                 | YES                |  |

### Index 'IX\_Biuro\_oferuje\_rejs'

|                  |                       |                    |                    |  |
|------------------|-----------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Biuro_oferuje_rejs |                    |                    |  |
| <b>Entity</b>    | Rejsy                 |                    |                    |  |
| <b>Unique</b>    | NO                    |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>          | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC                   | NO                 | YES                |  |

### Index 'IX\_Relationship1'



|                  |                  |                    |                    |  |
|------------------|------------------|--------------------|--------------------|--|
| <b>Caption</b>   | IX_Relationship1 |                    |                    |  |
| <b>Entity</b>    | Wlasciciele      |                    |                    |  |
| <b>Unique</b>    | NO               |                    |                    |  |
| <b>Attribute</b> | <b>Order</b>     | <b>Primary Key</b> | <b>Foreign Key</b> |  |
| Nr_biura         | ASC              | NO                 | YES                |  |

## Relationship Report

| Full Name                               | Type            | Parent Entity | Child Entity   | Card. |
|---|-----------------|---------------|----------------|-------|
| Adrakcja_ma_adres                       | Non-identifying | Adresy        | Atrakcje       | 1:N   |
| Adres_ma_poczte                         | Non-identifying | Poczty        | Adresy         | 1:N   |
| Biuro_ma_adres                          | Non-identifying | Adresy        | Biura          | 1:1   |
| Biuro_ma_wlasciciela                    | Non-identifying | Biura         | Wlasciciele    | 1:N   |
| Biuro_oferuje_czarter                   | Non-identifying | Biura         | Czartery       | 1:N   |
| Biuro_oferuje_kurs                      | Non-identifying | Biura         | Kursy          | 1:N   |
| Biuro_oferuje_rejs                      | Non-identifying | Biura         | Rejsy          | 1:N   |
| Biuro_posiada_klienta                   | Non-identifying | Biura         | Klienci        | 1:N   |
| Biuro_posiada_lodki                     | Non-identifying | Biura         | Lodzie         | 1:N   |
| Biuro_posiada_placowke_w_porcie         | Non-identifying | Biura         | Porty          | 1:N   |
| Biuro_zatrudnia_pracownika              | Non-identifying | Biura         | Pracownicy     | 1:N   |
| Klient_czarteruje                       | Non-identifying | Klienci       | Czartery       | 1:N   |
| Klient_ma_adres                         | Non-identifying | Adresy        | Klienci        | 1:N   |
| Klient_zapisuje_sie_na_rejs_Klient      | Identifying     | Klienci       | Klient_Rejs    | 1:N   |
| Klient_zapisuje_sie_na_rejs_Rejs        | Identifying     | Rejsy         | Klient_Rejs    | 1:N   |
| Lodz_jest_czarterowana_Czarter          | Identifying     | Czartery      | Lodz_Czarter   | 1:N   |
| Lodz_jest_czarterowana_Lodz             | Identifying     | Lodzie        | Lodz_Czarter   | 1:N   |
| Lodz_jest_modelu                        | Non-identifying | Modele_lodzi  | Lodzie         | 1:N   |
| Lodz_nalezy_do_portu                    | Non-identifying | Porty         | Lodzie         | 1:N   |
| Placowka_zatrudnia_pracownika_Port      | Identifying     | Porty         | Port_Pracownik | 1:N   |
| Placowka_zatrudnia_pracownika_Pracownik | Identifying     | Pracownicy    | Port_Pracownik | 1:N   |
| Port_ma_adres                           | Non-identifying | Adresy        | Porty          | 1:N   |
| Pracownik_ma_adres                      | Non-identifying | Adresy        | Pracownicy     | 1:1   |
| Rejs_jest_przypisany_do_lodzi_Lodz      | Identifying     | Lodzie        | Rejs_Lodz      | 1:N   |
| Rejs_jest_przypisany_do_lodzi_Rejs      | Identifying     | Rejsy         | Rejs_Lodz      | 1:N   |
| Rejs_ma_atrakcje_Atrakcja               | Identifying     | Atrakcje      | Rejs_Atrakcja  | 1:N   |
| Rejs_ma_atrakcje_Rejs                   | Identifying     | Rejsy         | Rejs_Atrakcja  | 1:N   |
| Rejs_odwiedza_port_Port                 | Identifying     | Porty         | Rejs_Port      | 1:N   |
| Rejs_odwiedza_port_Rejs                 | Identifying     | Rejsy         | Rejs_Port      | 1:N   |
| Rejs_zawiera_kurs_Kurs                  | Identifying     | Kursy         | Rejs_Kurs      | 1:N   |
| Rejs_zawiera_kurs_Rejs                  | Identifying     | Rejsy         | Rejs_Kurs      | 1:N   |

## Relationship 'Adrakcja\_ma\_adres'

|                         |                   |                    |     |
|-------------------------|-------------------|--------------------|-----|
| <b>Caption</b>          | Adrakcja_ma_adres |                    |     |
| <b>Type</b>             | Non-identifying   | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES               |                    |     |
| <b>Mandatory Child</b>  | NO                |                    |     |
| <b>Parent Entity</b>    | Adresy            |                    |     |
| <b>Child Entity</b>     | Atrakcje          |                    |     |

## Referential Integrity

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

## Keys

|                                |                   |                  |
|--------------------------------|-------------------|------------------|
| <b>Key Type</b>                | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'PK_<%OwnerName%>' | Nr_adresu         | PK_<%OwnerName%> |

## Notes

Atrakcja ma adres.

## Relationship 'Adres\_ma\_poczte'

|                         |                 |                    |     |
|-------------------------|-----------------|--------------------|-----|
| <b>Caption</b>          | Adres_ma_poczte |                    |     |
| <b>Type</b>             | Non-identifying | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES             |                    |     |
| <b>Mandatory Child</b>  | NO              |                    |     |
| <b>Parent Entity</b>    | Poczty          |                    |     |
| <b>Child Entity</b>     | Adresy          |                    |     |

## Referential Integrity

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

## Keys

|                                |                   |                  |
|--------------------------------|-------------------|------------------|
| <b>Key Type</b>                | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'PK_<%OwnerName%>' | Nr_poczty         | PK_<%OwnerName%> |

## Notes

Adres ma pocztę.

## Relationship 'Biuro\_ma\_adres'

|                         |                 |                    |     |
|-------------------------|-----------------|--------------------|-----|
| <b>Caption</b>          | Biuro_ma_adres  |                    |     |
| <b>Type</b>             | Non-identifying | <b>Cardinality</b> | 1:1 |
| <b>Mandatory Parent</b> | YES             |                    |     |
| <b>Mandatory Child</b>  | NO              |                    |     |
| <b>Parent Entity</b>    | Adresy          |                    |     |
| <b>Child Entity</b>     | Biura           |                    |     |

## Referential Integrity

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

## Keys

|                                |                   |                  |
|--------------------------------|-------------------|------------------|
| <b>Key Type</b>                | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'PK_<%OwnerName%>' | Nr_adresu         | PK_<%OwnerName%> |

## Notes

Biuro ma adres.

## Relationship 'Biuro\_ma\_wlasciciela'

|                         |                      |                    |     |
|-------------------------|----------------------|--------------------|-----|
| <b>Caption</b>          | Biuro_ma_wlasciciela |                    |     |
| <b>Type</b>             | Non-identifying      | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                  |                    |     |
| <b>Mandatory Child</b>  | NO                   |                    |     |
| <b>Parent Entity</b>    | Biura                |                    |     |
| <b>Child Entity</b>     | Wlasciciele          |                    |     |

## Referential Integrity

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

## Keys

|                       |                   |                  |
|-----------------------|-------------------|------------------|
| <b>Key Type</b>       | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'BiuroPK' | Nr_biura          | BiuroPK          |

## Notes

Biuro ma właściciela.

## Relationship 'Biuro\_oferuje\_czarter'

|                |                       |
|----------------|-----------------------|
| <b>Caption</b> | Biuro_oferuje_czarter |
|----------------|-----------------------|

| Type                    | Non-identifying | Cardinality | 1:N |
|-------------------------|-----------------|-------------|-----|
| <b>Mandatory Parent</b> | YES             |             |     |
| <b>Mandatory Child</b>  | NO              |             |     |
| <b>Parent Entity</b>    | Biura           |             |     |
| <b>Child Entity</b>     | Czartery        |             |     |

### Referential Integrity

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

### Keys

| Key Type              | Parent Key | Child Key |
|-----------------------|------------|-----------|
| Primary Key 'BiuroPK' | Nr_biura   | BiuroPK   |

### Notes

Biuro oferuje czarter.

### Relationship 'Biuro\_oferuje\_kurs'

| <b>Caption</b>          | Biuro_oferuje_kurs |             |     |
|-------------------------|--------------------|-------------|-----|
| Type                    | Non-identifying    | Cardinality | 1:N |
| <b>Mandatory Parent</b> | YES                |             |     |
| <b>Mandatory Child</b>  | NO                 |             |     |
| <b>Parent Entity</b>    | Biura              |             |     |
| <b>Child Entity</b>     | Kursy              |             |     |

### Referential Integrity

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

### Keys

| Key Type              | Parent Key | Child Key |
|-----------------------|------------|-----------|
| Primary Key 'BiuroPK' | Nr_biura   | BiuroPK   |

### Notes

Biuro oferuje kurs.

### Relationship 'Biuro\_oferuje\_rejs'

| <b>Caption</b>          | Biuro_oferuje_rejs |             |     |
|-------------------------|--------------------|-------------|-----|
| Type                    | Non-identifying    | Cardinality | 1:N |
| <b>Mandatory Parent</b> | YES                |             |     |
| <b>Mandatory Child</b>  | NO                 |             |     |
| <b>Parent Entity</b>    | Biura              |             |     |

|                     |       |
|---------------------|-------|
| <b>Child Entity</b> | Rejsy |
|---------------------|-------|

### Referential Integrity

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

### Keys

|                       |                   |                  |
|-----------------------|-------------------|------------------|
| <b>Key Type</b>       | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'BiuroPK' | Nr_biura          | BiuroPK          |

### Notes

Biuro oferuje rejsy.

### Relationship 'Biuro\_posiada\_klienta'

|                         |                       |                    |     |
|-------------------------|-----------------------|--------------------|-----|
| <b>Caption</b>          | Biuro_posiada_klienta |                    |     |
| <b>Type</b>             | Non-identifying       | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                   |                    |     |
| <b>Mandatory Child</b>  | NO                    |                    |     |
| <b>Parent Entity</b>    | Biura                 |                    |     |
| <b>Child Entity</b>     | Klienci               |                    |     |

### Referential Integrity

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

### Keys

|                       |                   |                  |
|-----------------------|-------------------|------------------|
| <b>Key Type</b>       | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'BiuroPK' | Nr_biura          | BiuroPK          |

### Notes

Biuro posiada klienta.

### Relationship 'Biuro\_posiada\_lodki'

|                         |                     |                    |     |
|-------------------------|---------------------|--------------------|-----|
| <b>Caption</b>          | Biuro_posiada_lodki |                    |     |
| <b>Type</b>             | Non-identifying     | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                 |                    |     |
| <b>Mandatory Child</b>  | NO                  |                    |     |
| <b>Parent Entity</b>    | Biura               |                    |     |
| <b>Child Entity</b>     | Lodzie              |                    |     |

### Referential Integrity

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

**Keys**

| Key Type              | Parent Key | Child Key |
|-----------------------|------------|-----------|
| Primary Key 'BiuroPK' | Nr_biura   | BiuroPK   |

**Notes**

Biuro posiada łódki.

**Relationship 'Biuro\_posiada\_placowke\_w\_porcie'**

|                         |                                 |                    |     |
|-------------------------|---------------------------------|--------------------|-----|
| <b>Caption</b>          | Biuro_posiada_placowke_w_porcie |                    |     |
| <b>Type</b>             | Non-identifying                 | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                             |                    |     |
| <b>Mandatory Child</b>  | NO                              |                    |     |
| <b>Parent Entity</b>    | Biura                           |                    |     |
| <b>Child Entity</b>     | Porty                           |                    |     |

**Referential Integrity**

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

**Keys**

| Key Type              | Parent Key | Child Key |
|-----------------------|------------|-----------|
| Primary Key 'BiuroPK' | Nr_biura   | BiuroPK   |

**Notes**

Biuro posiada placówki w portach.

**Relationship 'Biuro\_zatrudnia\_pracownika'**

|                         |                            |                    |     |
|-------------------------|----------------------------|--------------------|-----|
| <b>Caption</b>          | Biuro_zatrudnia_pracownika |                    |     |
| <b>Type</b>             | Non-identifying            | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                        |                    |     |
| <b>Mandatory Child</b>  | NO                         |                    |     |
| <b>Parent Entity</b>    | Biura                      |                    |     |
| <b>Child Entity</b>     | Pracownicy                 |                    |     |

**Referential Integrity**

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

**Keys**

| Key Type              | Parent Key | Child Key |
|-----------------------|------------|-----------|
| Primary Key 'BiuroPK' | Nr_biura   | BiuroPK   |

**Notes**

Biuro zatrudnia pracownika.

**Relationship 'Klient\_czarteruje'**

|                         |                   |                    |     |
|-------------------------|-------------------|--------------------|-----|
| <b>Caption</b>          | Klient_czarteruje |                    |     |
| <b>Type</b>             | Non-identifying   | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES               |                    |     |
| <b>Mandatory Child</b>  | NO                |                    |     |
| <b>Parent Entity</b>    | Klienci           |                    |     |
| <b>Child Entity</b>     | Czartery          |                    |     |

**Referential Integrity**

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

**Keys**

| Key Type               | Parent Key | Child Key |
|------------------------|------------|-----------|
| Primary Key 'KlientPK' | Nr_klienta | KlientPK  |

**Notes**

Klient czarteruje.

**Relationship 'Klient\_ma\_adres'**

|                         |                 |                    |     |
|-------------------------|-----------------|--------------------|-----|
| <b>Caption</b>          | Klient_ma_adres |                    |     |
| <b>Type</b>             | Non-identifying | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES             |                    |     |
| <b>Mandatory Child</b>  | NO              |                    |     |
| <b>Parent Entity</b>    | Adresy          |                    |     |
| <b>Child Entity</b>     | Klienci         |                    |     |

**Referential Integrity**

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

**Keys**

| Key Type | Parent Key | Child Key |
|----------|------------|-----------|
|----------|------------|-----------|



| Key Type                       | Parent Key | Child Key        |
|--------------------------------|------------|------------------|
| Primary Key 'PK_<%OwnerName%>' | Nr_adresu  | PK_<%OwnerName%> |

### Notes

Klient ma adres.

### Relationship 'Klient\_zapisuje\_sie\_na\_rejs\_Klient'

|                         |                                    |                    |     |
|-------------------------|------------------------------------|--------------------|-----|
| <b>Caption</b>          | Klient_zapisuje_sie_na_rejs_Klient |                    |     |
| <b>Type</b>             | Identifying                        | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                                |                    |     |
| <b>Mandatory Child</b>  | YES                                |                    |     |
| <b>Parent Entity</b>    | Klienci                            |                    |     |
| <b>Child Entity</b>     | Klient_Rejs                        |                    |     |

### Referential Integrity

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

### Keys

| Key Type               | Parent Key | Child Key |
|------------------------|------------|-----------|
| Primary Key 'KlientPK' | Nr_klienta | KlientPK  |

### Relationship 'Klient\_zapisuje\_sie\_na\_rejs\_Rejs'

|                         |                                  |                    |     |
|-------------------------|----------------------------------|--------------------|-----|
| <b>Caption</b>          | Klient_zapisuje_sie_na_rejs_Rejs |                    |     |
| <b>Type</b>             | Identifying                      | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                              |                    |     |
| <b>Mandatory Child</b>  | YES                              |                    |     |
| <b>Parent Entity</b>    | Rejsy                            |                    |     |
| <b>Child Entity</b>     | Klient_Rejs                      |                    |     |

### Referential Integrity

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

### Keys

| Key Type             | Parent Key | Child Key |
|----------------------|------------|-----------|
| Primary Key 'RejsPK' | Nr_rejsu   | RejsPK    |

### Relationship 'Lodz\_jest\_czarterowana\_Czarter'

|                         |                                |                    |     |
|-------------------------|--------------------------------|--------------------|-----|
| <b>Caption</b>          | Lodz_jest_czarterowana_Czarter |                    |     |
| <b>Type</b>             | Identifying                    | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                            |                    |     |

|                        |              |
|------------------------|--------------|
| <b>Mandatory Child</b> | YES          |
| <b>Parent Entity</b>   | Czartery     |
| <b>Child Entity</b>    | Lodz_Czarter |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                         |                   |                  |
|-------------------------|-------------------|------------------|
| <b>Key Type</b>         | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'CzarterPK' | Nr_czarteru       | CzarterPK        |

**Relationship 'Lodz\_jest\_czarterowana\_Lodz'**

|                         |                             |                    |     |
|-------------------------|-----------------------------|--------------------|-----|
| <b>Caption</b>          | Lodz_jest_czarterowana_Lodz |                    |     |
| <b>Type</b>             | Identifying                 | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                         |                    |     |
| <b>Mandatory Child</b>  | YES                         |                    |     |
| <b>Parent Entity</b>    | Lodzie                      |                    |     |
| <b>Child Entity</b>     | Lodz_Czarter                |                    |     |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                      |                   |                  |
|----------------------|-------------------|------------------|
| <b>Key Type</b>      | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'LodzPK' | Nr_lodzi          | LodzPK           |

**Relationship 'Lodz\_jest\_modelu'**

|                         |                  |                    |     |
|-------------------------|------------------|--------------------|-----|
| <b>Caption</b>          | Lodz_jest_modelu |                    |     |
| <b>Type</b>             | Non-identifying  | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES              |                    |     |
| <b>Mandatory Child</b>  | NO               |                    |     |
| <b>Parent Entity</b>    | Modele_lodzi     |                    |     |
| <b>Child Entity</b>     | Lodzie           |                    |     |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                             |                   |                  |
|-----------------------------|-------------------|------------------|
| <b>Key Type</b>             | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'Model_lodziPK' | Nr_modelu         | Model_lodziPK    |

**Notes**

Łódź jest modelem.

**Relationship 'Lodz\_nalezy\_do\_portu'**

|                         |                      |                    |     |
|-------------------------|----------------------|--------------------|-----|
| <b>Caption</b>          | Lodz_nalezy_do_portu |                    |     |
| <b>Type</b>             | Non-identifying      | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | NO                   |                    |     |
| <b>Mandatory Child</b>  | YES                  |                    |     |
| <b>Parent Entity</b>    | Porty                |                    |     |
| <b>Child Entity</b>     | Lodzie               |                    |     |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                      |                   |                  |
|----------------------|-------------------|------------------|
| <b>Key Type</b>      | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'PortPK' | Nr_placowki       | PortPK           |

**Notes**

Łódź należy do portu (macierzystego).

**Relationship 'Placowka\_zatrudnia\_pracownika\_Port'**

|                         |                                    |                    |     |
|-------------------------|------------------------------------|--------------------|-----|
| <b>Caption</b>          | Placowka_zatrudnia_pracownika_Port |                    |     |
| <b>Type</b>             | Identifying                        | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                                |                    |     |
| <b>Mandatory Child</b>  | YES                                |                    |     |
| <b>Parent Entity</b>    | Porty                              |                    |     |
| <b>Child Entity</b>     | Port_Pracownik                     |                    |     |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                      |                   |                  |
|----------------------|-------------------|------------------|
| <b>Key Type</b>      | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'PortPK' | Nr_placowki       | PortPK           |

**Relationship 'Placowka\_zatrudnia\_pracownika\_Pracownik'**

|                |   |
|----------------|---|
| <b>Caption</b> | Placowka_zatrudnia_pracownika_Pracownik |
|----------------|---|

| Type             | Identifying    | Cardinality | 1:N |
|------------------|----------------|-------------|-----|
| Mandatory Parent | YES            |             |     |
| Mandatory Child  | YES            |             |     |
| Parent Entity    | Pracownicy     |             |     |
| Child Entity     | Port_Pracownik |             |     |

#### Referential Integrity

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

#### Keys

| Key Type                  | Parent Key    | Child Key   |
|---------------------------|---------------|-------------|
| Primary Key 'PracownikPK' | Nr_pracownika | PracownikPK |

#### Relationship 'Port\_ma\_adres'

|                  |                 |             |     |
|------------------|-----------------|-------------|-----|
| Caption          | Port_ma_adres   |             |     |
| Type             | Non-identifying | Cardinality | 1:N |
| Mandatory Parent | YES             |             |     |
| Mandatory Child  | NO              |             |     |
| Parent Entity    | Adresy          |             |     |
| Child Entity     | Porty           |             |     |

#### Referential Integrity

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

#### Keys

| Key Type                       | Parent Key | Child Key        |
|--------------------------------|------------|------------------|
| Primary Key 'PK_<%OwnerName%>' | Nr_adresu  | PK_<%OwnerName%> |

#### Notes

Port ma adres.

#### Relationship 'Pracownik\_ma\_adres'

|                  |                    |             |     |
|------------------|--------------------|-------------|-----|
| Caption          | Pracownik_ma_adres |             |     |
| Type             | Non-identifying    | Cardinality | 1:1 |
| Mandatory Parent | YES                |             |     |
| Mandatory Child  | NO                 |             |     |
| Parent Entity    | Adresy             |             |     |
| Child Entity     | Pracownicy         |             |     |

#### Referential Integrity

|  | Delete |
|--|--------|
|--|--------|

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

**Keys**

| Key Type                       | Parent Key | Child Key        |
|--------------------------------|------------|------------------|
| Primary Key 'PK_<%OwnerName%>' | Nr_adresu  | PK_<%OwnerName%> |

**Notes**

Pracownik ma adres.

**Relationship 'Rejs\_jest\_przypisany\_do\_lodzi\_Lodz'**

|                         |                                    |                    |     |
|-------------------------|------------------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_jest_przypisany_do_lodzi_Lodz |                    |     |
| <b>Type</b>             | Identifying                        | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                                |                    |     |
| <b>Mandatory Child</b>  | YES                                |                    |     |
| <b>Parent Entity</b>    | Lodzie                             |                    |     |
| <b>Child Entity</b>     | Rejs_Lodz                          |                    |     |

**Referential Integrity**

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

**Keys**

| Key Type             | Parent Key | Child Key |
|----------------------|------------|-----------|
| Primary Key 'LodzPK' | Nr_lodzi   | LodzPK    |

**Relationship 'Rejs\_jest\_przypisany\_do\_lodzi\_Rejs'**

|                         |                                    |                    |     |
|-------------------------|------------------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_jest_przypisany_do_lodzi_Rejs |                    |     |
| <b>Type</b>             | Identifying                        | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                                |                    |     |
| <b>Mandatory Child</b>  | YES                                |                    |     |
| <b>Parent Entity</b>    | Rejsy                              |                    |     |
| <b>Child Entity</b>     | Rejs_Lodz                          |                    |     |

**Referential Integrity**

|        |               |
|--------|---------------|
|        | <b>Delete</b> |
| Parent | NO ACTION     |

**Keys**

| Key Type             | Parent Key | Child Key |
|----------------------|------------|-----------|
| Primary Key 'RejsPK' | Nr_rejsu   | RejsPK    |

**Relationship 'Rejs\_ma\_atrakcje\_Atrakcja'**

|                         |                           |                    |     |
|-------------------------|---------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_ma_atrakcje_Atrakcja |                    |     |
| <b>Type</b>             | Identifying               | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                       |                    |     |
| <b>Mandatory Child</b>  | YES                       |                    |     |
| <b>Parent Entity</b>    | Atrakcje                  |                    |     |
| <b>Child Entity</b>     | Rejs_Atrakcja             |                    |     |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                          |                   |                  |
|--------------------------|-------------------|------------------|
| <b>Key Type</b>          | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'AtrakcjaPK' | Nr_atrakcji       | AtrakcjaPK       |

**Relationship 'Rejs\_ma\_atrakcje\_Rejs'**

|                         |                       |                    |     |
|-------------------------|-----------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_ma_atrakcje_Rejs |                    |     |
| <b>Type</b>             | Identifying           | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                   |                    |     |
| <b>Mandatory Child</b>  | YES                   |                    |     |
| <b>Parent Entity</b>    | Rejsy                 |                    |     |
| <b>Child Entity</b>     | Rejs_Atrakcja         |                    |     |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                      |                   |                  |
|----------------------|-------------------|------------------|
| <b>Key Type</b>      | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'RejsPK' | Nr_rejsu          | RejsPK           |

**Relationship 'Rejs\_odwiedza\_port\_Port'**

|                         |                         |                    |     |
|-------------------------|-------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_odwiedza_port_Port |                    |     |
| <b>Type</b>             | Identifying             | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                     |                    |     |
| <b>Mandatory Child</b>  | YES                     |                    |     |
| <b>Parent Entity</b>    | Porty                   |                    |     |
| <b>Child Entity</b>     | Rejs_Port               |                    |     |

**Referential Integrity**

|  |               |
|--|---------------|
|  | <b>Delete</b> |
|--|---------------|

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

**Keys**

| Key Type             | Parent Key  | Child Key |
|----------------------|-------------|-----------|
| Primary Key 'PortPK' | Nr_placowki | PortPK    |

**Relationship 'Rejs\_odwiedza\_port\_Rejs'**

|                         |                         |                    |     |
|-------------------------|-------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_odwiedza_port_Rejs |                    |     |
| <b>Type</b>             | Identifying             | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                     |                    |     |
| <b>Mandatory Child</b>  | YES                     |                    |     |
| <b>Parent Entity</b>    | Rejsy                   |                    |     |
| <b>Child Entity</b>     | Rejs_Port               |                    |     |

**Referential Integrity**

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

**Keys**

| Key Type             | Parent Key | Child Key |
|----------------------|------------|-----------|
| Primary Key 'RejsPK' | Nr_rejsu   | RejsPK    |

**Relationship 'Rejs\_zawiera\_kurs\_Kurs'**

|                         |                        |                    |     |
|-------------------------|------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_zawiera_kurs_Kurs |                    |     |
| <b>Type</b>             | Identifying            | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                    |                    |     |
| <b>Mandatory Child</b>  | YES                    |                    |     |
| <b>Parent Entity</b>    | Kursy                  |                    |     |
| <b>Child Entity</b>     | Rejs_Kurs              |                    |     |

**Referential Integrity**

|        | Delete    |
|--------|-----------|
| Parent | NO ACTION |

**Keys**

| Key Type             | Parent Key | Child Key |
|----------------------|------------|-----------|
| Primary Key 'KursPK' | Nr_kursu   | KursPK    |

**Relationship 'Rejs\_zawiera\_kurs\_Rejs'**

|                         |                        |                    |     |
|-------------------------|------------------------|--------------------|-----|
| <b>Caption</b>          | Rejs_zawiera_kurs_Rejs |                    |     |
| <b>Type</b>             | Identifying            | <b>Cardinality</b> | 1:N |
| <b>Mandatory Parent</b> | YES                    |                    |     |

|                        |           |
|------------------------|-----------|
| <b>Mandatory Child</b> | YES       |
| <b>Parent Entity</b>   | Rejsy     |
| <b>Child Entity</b>    | Rejs_Kurs |

**Referential Integrity**

|               |               |
|---------------|---------------|
|               | <b>Delete</b> |
| <b>Parent</b> | NO ACTION     |

**Keys**

|                      |                   |                  |
|----------------------|-------------------|------------------|
| <b>Key Type</b>      | <b>Parent Key</b> | <b>Child Key</b> |
| Primary Key 'RejsPK' | Nr_rejsu          | RejsPK           |



**Domain Report**

| Full Name  | Type      | Data Type     |
|------------|-----------|---------------|
| Plec       | Data Type | Char(1 )      |
| Stanowisko | Data Type | Varchar2(20 ) |
| TypPaliwa  | Data Type | Varchar2(12 ) |

**Domain 'Plec'**

|                  |          |
|------------------|----------|
| <b>Caption</b>   | Plec     |
| <b>Data Type</b> | Char(1 ) |

**Check Constraints**

|                              |                    |
|------------------------------|--------------------|
| <b>Check Constraint Name</b> | CheckConstraintD1  |
| <b>Check Constraint Rule</b> | PlecR              |
| <b>Check</b>                 | PLEC IN ('K', 'M') |

**Used in**

|               |                  |
|---------------|------------------|
| <b>Entity</b> | <b>Attribute</b> |
| Pracownicy    | Plec             |

**Domain 'Stanowisko'**

|                  |               |
|------------------|---------------|
| <b>Caption</b>   | Stanowisko    |
| <b>Data Type</b> | Varchar2(20 ) |

**Check Constraints**

|                              |   |
|------------------------------|---|
| <b>Check Constraint Name</b> | CheckConstraintD1   |
| <b>Check Constraint Rule</b> | StanowiskoR   |
| <b>Check</b>                 | STANOWISKO IN ('MENADZER', 'KAPITAN', 'TECHNIK', 'SPRZATACZ', 'INNE') |

**Used in**

|               |                  |
|---------------|------------------|
| <b>Entity</b> | <b>Attribute</b> |
| Pracownicy    | Stanowisko       |

**Domain 'TypPaliwa'**

|                  |               |
|------------------|---------------|
| <b>Caption</b>   | TypPaliwa     |
| <b>Data Type</b> | Varchar2(12 ) |

**Check Constraints**

|                              |                   |
|------------------------------|-------------------|
| <b>Check Constraint Name</b> | CheckConstraintD1 |
| <b>Check Constraint Rule</b> | TypPaliwaR        |

|              |  |
|--------------|--|
| <b>Check</b> | TYP_PALIWA IN ('BENZYNĄ', 'DIESEL', 'LPG', 'HYBRYDOWY', 'ELEKTRYCZNY', 'INNY') |
|--------------|--|

**Used in**

| <b>Entity</b> | <b>Attribute</b> |
|---------------|------------------|
| Modele_lodzi  | Typ_paliwa       |

## Check Constraint Rule Report

| Full Name   |
|-------------|
| PlecR       |
| StanowiskoR |
| TypPaliwaR  |

**Check Constraint Rule 'PlecR'**

|                              |                    |
|------------------------------|--------------------|
| <b>Caption</b>               | PlecR              |
| <b>Check Constraint Rule</b> | PLEC IN ('K', 'M') |

**Check Constraint Rule 'StanowiskoR'**

|                              |   |
|------------------------------|---|
| <b>Caption</b>               | StanowiskoR   |
| <b>Check Constraint Rule</b> | STANOWISKO IN ('MENADZER', 'KAPITAN', 'TECHNIK', 'SPRZATACZ', 'INNE') |

**Check Constraint Rule 'TypPaliwaR'**

|                              |   |
|------------------------------|---|
| <b>Caption</b>               | TypPaliwaR  |
| <b>Check Constraint Rule</b> | TYP_PALIWA IN ('BENZYN', 'DIESEL', 'LPG', 'HYBRYDOWY', 'ELEKTRYCZNY', 'INNY') |

**Used in**

| <b>Entity</b> | <b>Attribute</b> | <b>Check Constraint</b> |
|---------------|------------------|-------------------------|
| Modele_Iodzi  | Typ_paliwa       | CheckConstraintA1       |

## Check Constraint Report

| Full Name         | Type      | Object Name               |
|-------------------|-----------|---------------------------|
| CheckConstraintA1 | Attribute | Typ_paliwa (Modele_lodzi) |
| CheckConstraintD1 | Domain    | Plec                      |
| CheckConstraintD1 | Domain    | Stanowisko                |
| CheckConstraintD1 | Domain    | TypPaliwa                 |

### Check Constraint 'CheckConstraintA1'

|                              |                   |
|------------------------------|-------------------|
| <b>Caption</b>               | CheckConstraintA1 |
| <b>Entity</b>                | Modele_lodzi      |
| <b>Attribute</b>             | Typ_paliwa        |
| <b>Check Constraint Rule</b> | TypPaliwaR        |

TYP\_PALIWA IN ('BENZYNA', 'DIESEL', 'LPG', 'HYBRYDOWY', 'ELEKTRYCZNY', 'INNY')

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#### Notes

Check Constraint was created from Logical Model. SQL could be mismatch.

### Check Constraint 'CheckConstraintD1'

|                              |                   |
|------------------------------|-------------------|
| <b>Caption</b>               | CheckConstraintD1 |
| <b>Domain</b>                | Plec              |
| <b>Check Constraint Rule</b> | PlecR             |

PLEC IN ('K', 'M')

---

#### Notes

Check Constraint was created from Logical Model. SQL could be mismatch.

### Check Constraint 'CheckConstraintD1'

|                              |                   |
|------------------------------|-------------------|
| <b>Caption</b>               | CheckConstraintD1 |
| <b>Domain</b>                | Stanowisko        |
| <b>Check Constraint Rule</b> | StanowiskoR       |

STANOWISKO IN ('MENADZER', 'KAPITAN', 'TECHNIK', 'SPRZATACZ', 'INNE')

---

#### Notes

Check Constraint was created from Logical Model. SQL could be mismatch.

### Check Constraint 'CheckConstraintD1'

|                              |                   |
|------------------------------|-------------------|
| <b>Caption</b>               | CheckConstraintD1 |
| <b>Domain</b>                | TypPaliwa         |
| <b>Check Constraint Rule</b> | TypPaliwaR        |

TYP\_PALIWA IN ('BENZYNA', 'DIESEL', 'LPG', 'HYBRYDOWY', 'ELEKTRYCZNY', 'INNY')

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#### Notes

Check Constraint was created from Logical Model. SQL could be mismatch.



## Sequence Report

| Full Name      |
|----------------|
| AdresySeq      |
| AtrakcjeSeq    |
| BiuroSeq       |
| CzarterySeq    |
| KlienciSeq     |
| KursySeq       |
| LodzieSeq      |
| ModeleLodziSeq |
| PocztySeq      |
| PortySeq       |
| PracownicySeq  |
| RejsySeq       |
| WlascicieleSeq |

**Sequence 'AdresySeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'AtrakcjeSeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'BiuroSeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'CzarterySeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'KlienciSeq'**

|                     |   |
|---------------------|---|
| <b>Increment By</b> | 1 |
|---------------------|---|

|                   |            |
|-------------------|------------|
| <b>Start With</b> | 1          |
| <b>Max Value</b>  | NOMAXVALUE |
| <b>Min Value</b>  | NOMINVALUE |
| <b>Cycle</b>      | NO         |
| <b>Cache</b>      | 20         |
| <b>Order</b>      | NO         |
| <b>Keep</b>       | NO         |

### Sequence 'KursySeq'

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

### Sequence 'LodzieSeq'

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

### Sequence 'ModeleLodziSeq'

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

### Sequence 'PocztySeq'

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'PortySeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'PracownicySeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'RejsySeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

**Sequence 'WlascieleSeq'**

|                     |            |
|---------------------|------------|
| <b>Increment By</b> | 1          |
| <b>Start With</b>   | 1          |
| <b>Max Value</b>    | NOMAXVALUE |
| <b>Min Value</b>    | NOMINVALUE |
| <b>Cycle</b>        | NO         |
| <b>Cache</b>        | 20         |
| <b>Order</b>        | NO         |
| <b>Keep</b>         | NO         |

## Statistic Information

|                               |    |                                   |                              |
|-------------------------------|----|-----------------------------------|------------------------------|
| <b>Entities</b>               | 20 | <b>Entity Check Constraints</b>   | 0                            |
| <b>Attributes</b>             | 98 | <b>Attribute Check Constrains</b> | 1                            |
| <b>Domains</b>                | 3  | <b>Domain Check Constrains</b>    | 3                            |
| <b>User Data Types</b>        | 0  |                                   |                              |
| <b>Relationships</b>          | 31 | <b>Identifying</b>                | 14 <b>Non-identifying</b> 17 |
| <b>Indexes</b>                | 17 |                                   |                              |
| <b>Keys</b>                   | 21 | <b>Primary Keys</b>               | 20 <b>Alternate Keys</b> 1   |
| <b>Entity Triggers</b>        | 0  |                                   |                              |
| <b>Views</b>                  | 0  |                                   |                              |
| <b>View Relationships</b>     | 0  |                                   |                              |
| <b>View Triggers</b>          | 0  |                                   |                              |
| <b>Procedures</b>             | 0  |                                   |                              |
| <b>Functions</b>              | 0  |                                   |                              |
| <b>Defaults</b>               | 0  |                                   |                              |
| <b>Check Constraint Rules</b> | 3  |                                   |                              |
| <b>Synonyms</b>               | 0  |                                   |                              |
| <b>Materialized Views</b>     | 0  |                                   |                              |
| <b>Zone Maps</b>              | 0  |                                   |                              |
| <b>Sequences</b>              | 13 |                                   |                              |
| <b>Packages</b>               | 0  |                                   |                              |
| <b>Tablespaces</b>            | 0  |                                   |                              |
| <b>Directories</b>            | 0  |                                   |                              |
| <b>Java Objects</b>           | 0  |                                   |                              |
| <b>Editions</b>               | 0  |                                   |                              |
| <b>Users</b>                  | 0  |                                   |                              |
| <b>User Groups</b>            | 0  |                                   |                              |
| <b>Notes</b>                  | 0  |                                   |                              |