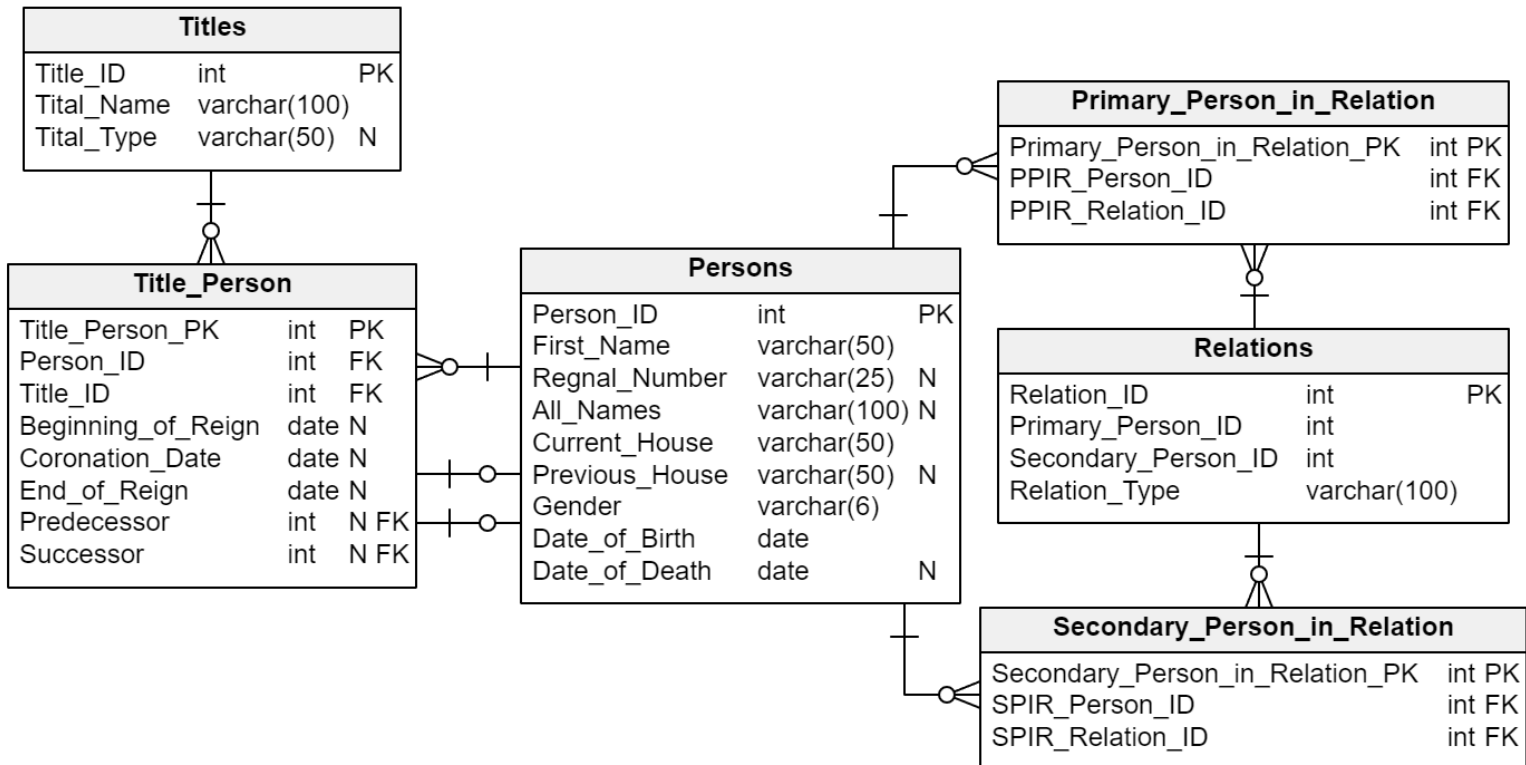


# Bazy Danych Projekt

Tomasz Polit

168160

## Diagram bazy danych:



## Opis tabel bazy danych:

### Tabela 'Persons':

Zawiera personalne dane każdego członka rodziny Windsorów:

Person\_ID (typ całkowity) – unikalny identyfikator osoby

First\_Name (łańcuch 50 znaków) – imię, którym posługują się członkowie rodziny

Regnal\_Number (łańcuch 25 znaków) – porządkowy numer monarchy o tym samym imieniu, co jeden z jego poprzedników

All\_Names (łańcuch 100 znaków) – wszystkie imiona, które nadano członkowi rodziny

Current\_House (łańcuch 50 znaków) – obecny ród, najczęściej Windsor

Previous\_House (łańcuch 50 znaków) – poprzedni ród (najczęściej pusty, ma znaczenie jedynie w przypadku małżonków monarchów)

Gender (łańcuch 6 znaków) – płeć członka rodziny

Date\_of\_Birth (date) – data narodzin

Date\_of\_Death (date) – data śmierci

### **Tabela 'Priamry\_Person\_in\_Relation':**

Tabela pomocnicza umożliwiająca połączenie tabel 'Persons' i 'Relations'

### **Tabela 'Secondary\_Person\_in\_Relation':**

Tabela pomocnicza umożliwiająca połączenie tabel 'Persons' i 'Relations'

### **Tabela Relations:**

Tabela zawiera wszystkie relacje między wszystkimi członkami rodziny Widsorów:

Relation\_ID (typ całkowity) – unikalny identyfikator relacji

Primary\_Person\_ID (typ całkowity) – identyfikator osoby której relcję opisujemy

Secondary\_Person\_ID (typ całkowity) – identyfikator osoby z którą relację opisujemy

Relation\_Type (łańcuch 100 znaków) – nazwa relacji

### **Tabela 'Title':**

Niewielka tabela zawierająca nazwy tytułów, które posiadają członkowie rodziny królewskiej

Title\_ID (typ całkowity) - unikalny identyfikator tytułu

Title\_Name (łańcuch 100 znaków) – pełna nazwa tytułu

Title\_Type (łańcuch 50 znaków) – rodzaj tytułu (tytuły mogą być np. tylko honorowe)

### **Tabela 'Title\_Person':**

Tabela ta przypisuje odpowiednim osobom tytuły, jak również daje informacje na ich temat

Title\_Person\_PK (typ całkowity) – indywidualny identyfikator połączenia osoby z tytułem

Person\_ID (typ całkowity) – unikalny identyfikator osoby, która posiada lub posiadała tytuł

Title\_ID (typ całkowity) - unikalny identyfikator tytułu

Beginning\_of\_Reign (date) – dzień, w którym osoba otrzymała tytuł

Coronation\_Date (date) – dzień, w którym osoba została oficjalnie ukoronowana

End\_of\_Reign (date) – dzień, w którym osoba utraciła tytuł

Predecessor (typ całkowity) – identyfikator poprzednika

Successor (typ całkowity) – identyfikator dziedzica

## SQL:

Funkcja creat tworzy wszystkie niezbędne tabele:

```
1 • CREATE SCHEMA `royal_family_tree` ;
2 • USE royal_family_tree;
3
4 -- Table: Persons
5 • CREATE TABLE Persons (
6     Person_ID int NOT NULL AUTO_INCREMENT,
7     First_Name varchar(50) NOT NULL,
8     Regnal_Number varchar(25) NULL,
9     All_Names varchar(100) NULL,
10    Current_House varchar(50) NOT NULL,
11    Previous_House varchar(50) NULL,
12    Gender varchar(6) NOT NULL,
13    Date_of_Birth date NOT NULL,
14    Date_of_Death date NULL,
15    CONSTRAINT Persons_pk PRIMARY KEY (Person_ID),
16    UNIQUE(Person_ID)
17 );
18
19 -- Table: Relations
20 • CREATE TABLE Relations (
21     Relation_ID int NOT NULL AUTO_INCREMENT,
22     Primary_Person_ID int NOT NULL,
23     Secondary_Person_ID int NOT NULL,
24     Relation_Type varchar(100) NOT NULL,
25     CONSTRAINT Relations_pk PRIMARY KEY (Relation_ID),
26     UNIQUE(Relation_ID)
27 );
28
29 -- Table: Primary_Person_in_Relation
30 • CREATE TABLE Primary_Person_in_Relation (
31     Primary_Person_in_Relation_PK int NOT NULL AUTO_INCREMENT,
32     PPIR_Person_ID int NOT NULL,
33     PPIR_Relation_ID int NOT NULL,
34     CONSTRAINT Primary_Person_in_Relation_pk PRIMARY KEY (Primary_Person_in_Relation_PK),
35     UNIQUE(Primary_Person_in_Relation_PK)
36 );
37
```

```

38  -- Table: Secondary_Person_in_Relation
39  ● ○ CREATE TABLE Secondary_Person_in_Relation (
40      Secondary_Person_in_Relation_PK int NOT NULL AUTO_INCREMENT,
41      SPIR_Person_ID int NOT NULL,
42      SPIR_Relation_ID int NOT NULL,
43      CONSTRAINT Secondary_Person_in_Relation_pk PRIMARY KEY (Secondary_Person_in_Relation_PK),
44      UNIQUE(Secondary_Person_in_Relation_PK)
45  );
46
47  -- Table: Title_Person
48  ● ○ CREATE TABLE Title_Person (
49      Title_Person_PK int NOT NULL AUTO_INCREMENT,
50      Person_ID int NOT NULL,
51      Title_ID int NOT NULL,
52      Beginning_of_Reign date NULL,
53      Coronation_Date date NULL,
54      End_of_Reign date NULL,
55      Predecessor int NULL,
56      Successor int NULL,
57      CONSTRAINT Title_Person_pk PRIMARY KEY (Title_Person_PK),
58      UNIQUE(Title_Person_PK)
59  );
60
61  -- Table: Titles
62  ● ○ CREATE TABLE Titles (
63      Title_ID int NOT NULL AUTO_INCREMENT,
64      Tital_Name varchar(100) NOT NULL,
65      Tital_Type varchar(50),
66      CONSTRAINT Titles_pk PRIMARY KEY (Title_ID),
67      UNIQUE(Title_ID)
68  );
69
70  -- Foreign keys
71  -- Reference: Predecessor (table: Title_Person)
72  ● ALTER TABLE Title_Person ADD CONSTRAINT Predecessor
73      FOREIGN KEY (Predecessor)
74      REFERENCES Persons (Person_ID)
75  ;
76

```

```
77 -- Reference: Successor (table: Title_Person)
78 • ALTER TABLE Title_Person ADD CONSTRAINT Successor
79     FOREIGN KEY (Successor)
80     REFERENCES Persons (Person_ID)
81 ;
82
83 -- Reference: Primary_Person_in_Relation_and_Persons (table: Primary_Person_in_Relation)
84 • ALTER TABLE Primary_Person_in_Relation ADD CONSTRAINT Primary_Person_in_Relation_and_Persons
85     FOREIGN KEY (PPIR_Person_ID)
86     REFERENCES Persons (Person_ID)
87 ;
88
89 -- Reference: Primary_Person_in_Relation_and_Relations (table: Primary_Person_in_Relation)
90 • ALTER TABLE Primary_Person_in_Relation ADD CONSTRAINT Primary_Person_in_Relation_and_Relations
91     FOREIGN KEY (PPIR_Relation_ID)
92     REFERENCES Relations (Relation_ID)
93 ;
94
95 -- Reference: Secondary_Person_in_Relation_and_Persons (table: Secondary_Person_in_Relation)
96 • ALTER TABLE Secondary_Person_in_Relation ADD CONSTRAINT Secondary_Person_in_Relation_and_Persons
97     FOREIGN KEY (SPIR_Person_ID)
98     REFERENCES Persons (Person_ID)
99 ;
100
101 -- Reference: Secondary_Person_in_Relation_and_Relations (table: Secondary_Person_in_Relation)
102 • ALTER TABLE Secondary_Person_in_Relation ADD CONSTRAINT Secondary_Person_in_Relation_and_Relations
103     FOREIGN KEY (SPIR_Relation_ID)
104     REFERENCES Relations (Relation_ID)
105 ;
106
107 -- Reference: Title_Person_and_Persons (table: Title_Person)
108 • ALTER TABLE Title_Person ADD CONSTRAINT Title_Person_and_Persons
109     FOREIGN KEY (Person_ID)
110     REFERENCES Persons (Person_ID)
111 ;
112
113 -- Reference: Title_Person_and_Titles (table: Title_Person)
114 • ALTER TABLE Title_Person ADD CONSTRAINT Title_Person_and_Titles
115     FOREIGN KEY (Title_ID)
116     REFERENCES Titles (Title_ID)
117 ;
```

## Funkcje wypełniające tabele (funkcja INSERT):

Jako przykład podaję funkcję wypełniającą tablicę ‘Persons’, ‘Title’ oraz ‘Title\_Person’, ponieważ tablica ‘Relations’ jest za długa, aby móc ją w prosty sposób przedstawić.

## Wypełnienie tablicy ‘Persons’:

```
1 • INSERT INTO persons VALUES (DEFAULT, 'George', 'V', 'George Frederick Ernest Albert', 'Windsor', 'Saxe-Coburg and Gotha', 'Male', '1865-06-03', '1936-01-20');
2 • INSERT INTO persons VALUES (DEFAULT, 'Mary', NULL, 'Victoria Mary Augusta Louise Olga Pauline Claudine Agnes', 'Teck', NULL, 'Female', '1867-05-26', '1953-03-24');
3 • INSERT INTO persons VALUES (DEFAULT, 'Edward', 'VIII', 'Edward Albert Christian George Andrew Patrick David', 'Windsor', 'Saxe-Coburg and Gotha', 'Male', '1894-06-23', '1972-03-28');
4 • INSERT INTO persons VALUES (DEFAULT, 'George', 'VI', 'Albert Frederick Arthur George', 'Windsor', 'Saxe-Coburg and Gotha', 'Male', '1895-12-14', '1952-02-06');
5 • INSERT INTO persons VALUES (DEFAULT, 'Elizabeth', 'I', 'Elizabeth Angela Marguerite Bowes-Lyon', 'Windsor', 'Bowes-Lyon', 'Female', '1900-08-04', '2002-03-30');
6 • INSERT INTO persons VALUES (DEFAULT, 'Mary', NULL, 'Victoria Alexandra Alice Mary', 'Windsor', 'Saxe-Coburg and Gotha', 'Female', '1897-04-25', '1965-03-28');
7 • INSERT INTO persons VALUES (DEFAULT, 'Henry', NULL, 'Henry William Frederick Albert', 'Windsor', 'Saxe-Coburg and Gotha', 'Male', '1900-03-31', '1974-06-10');
8 • INSERT INTO persons VALUES (DEFAULT, 'Alice', NULL, 'Alice Christabel', 'Montagu Douglas Scott', NULL, 'Female', '1901-12-25', '2004-10-29');
9 • INSERT INTO persons VALUES (DEFAULT, 'George', NULL, 'George Edward Alexander Edmund', 'Windsor', 'Saxe-Coburg and Gotha', 'Male', '1902-12-20', '1942-08-25');
10 • INSERT INTO persons VALUES (DEFAULT, 'Marina', NULL, 'Marina', 'Glücksburg', NULL, 'Female', '1906-12-13', '1968-08-30');
11 • INSERT INTO persons VALUES (DEFAULT, 'John', NULL, 'John Charles Francis', 'Windsor', NULL, 'Male', '1905-07-12', '1919-01-18');
12 • INSERT INTO persons VALUES (DEFAULT, 'Elizabeth', 'II', 'Elizabeth Alexandra Mary', 'Windsor', NULL, 'Female', '1926-04-21', '2022-09-08');
13 • INSERT INTO persons VALUES (DEFAULT, 'Philip', NULL, 'Philip', 'Mountbatten', 'Glücksburg', 'Male', '1921-06-10', '2021-04-09');
14 • INSERT INTO persons VALUES (DEFAULT, 'Margaret', NULL, 'Margaret Rose', 'Windsor', NULL, 'Female', '1930-08-21', '2002-02-09');
15 • INSERT INTO persons VALUES (DEFAULT, 'William', NULL, 'William Henry Andrew Frederick', 'Windsor', NULL, 'Male', '1941-12-18', '1972-08-28');
16 • INSERT INTO persons VALUES (DEFAULT, 'Richard', NULL, 'Richard Alexander Walter George', 'Windsor', NULL, 'Male', '1944-08-26', NULL);
17 • INSERT INTO persons VALUES (DEFAULT, 'Birgitte', NULL, 'Birgitte Eva', 'Windsor', NULL, 'Female', '1946-06-20', NULL);
18 • INSERT INTO persons VALUES (DEFAULT, 'Edward', NULL, 'Edward George Nicholas Paul Patrick', 'Windsor', NULL, 'Male', '1935-10-09', NULL);
19 • INSERT INTO persons VALUES (DEFAULT, 'Katharine', NULL, 'Katharine Lucy Mary', 'Windsor', NULL, 'Female', '1933-02-22', NULL);
20 • INSERT INTO persons VALUES (DEFAULT, 'Alexandra', NULL, 'Alexandra Helen Elizabeth Olga Christabel', 'Windsor', NULL, 'Female', '1936-12-25', NULL);
21 • INSERT INTO persons VALUES (DEFAULT, 'Michael', NULL, 'Michael George Charles Franklin', 'Windsor', NULL, 'Male', '1942-07-04', NULL);
22 • INSERT INTO persons VALUES (DEFAULT, 'Michael', NULL, 'Marie-Christine Anna Agnes Hedwig Ida', 'Windsor', 'Reibnitz', 'Female', '1945-01-15', NULL);
23 • INSERT INTO persons VALUES (DEFAULT, 'Charles', 'III', 'Charles Philip Arthur George', 'Windsor', NULL, 'Male', '1948-11-14', NULL);
24 • INSERT INTO persons VALUES (DEFAULT, 'Diana', NULL, 'Diana Frances', 'Windsor', 'Spencer', 'Female', '1961-07-01', '1997-08-31');
25 • INSERT INTO persons VALUES (DEFAULT, 'Camilla', NULL, 'Camilla Rosemary', 'Windsor', NULL, 'Female', '1947-07-17', NULL);
26 • INSERT INTO persons VALUES (DEFAULT, 'Anne', NULL, 'Anne Elizabeth Alice Louise', 'Windsor', NULL, 'Female', '1950-08-15', NULL);
27 • INSERT INTO persons VALUES (DEFAULT, 'Andrew', NULL, 'Andrew Albert Christian Edward', 'Windsor', NULL, 'Male', '1960-02-19', NULL);
28 • INSERT INTO persons VALUES (DEFAULT, 'Sarah', NULL, 'Sarah Margaret', 'Windsor', NULL, 'Female', '1959-10-15', NULL);
29 • INSERT INTO persons VALUES (DEFAULT, 'Edward', NULL, 'Edward Antony Richard Louis', 'Windsor', NULL, 'Male', '1964-03-10', NULL);
30 • INSERT INTO persons VALUES (DEFAULT, 'Sophie', NULL, 'Sophie Helen', 'Windsor', NULL, 'Female', '1965-01-20', NULL);
31 • INSERT INTO persons VALUES (DEFAULT, 'William', NULL, 'William Arthur Philip Louis', 'Windsor', NULL, 'Male', '1982-06-21', NULL);
32 • INSERT INTO persons VALUES (DEFAULT, 'Catherine', NULL, 'Catherine Elizabeth', 'Middleton', NULL, 'Female', '1982-01-09', NULL);
33 • INSERT INTO persons VALUES (DEFAULT, 'Harry', NULL, 'Henry Charles Albert David', 'Windsor', NULL, 'Male', '1984-09-15', NULL);
34 • INSERT INTO persons VALUES (DEFAULT, 'Meghan', NULL, 'Rachel Meghan', 'Windsor', NULL, 'Female', '1981-08-04', NULL);
35 • INSERT INTO persons VALUES (DEFAULT, 'Beatrice', NULL, 'Beatrice Elizabeth Mary', 'Windsor', NULL, 'Female', '1988-08-08', NULL);
36 • INSERT INTO persons VALUES (DEFAULT, 'Eugenie', NULL, 'Eugenie Victoria Helena', 'Windsor', NULL, 'Female', '1990-03-23', NULL);
37 • INSERT INTO persons VALUES (DEFAULT, 'Louise', NULL, 'Louise Alice Elizabeth Mary', 'Windsor', NULL, 'Female', '2003-11-08', NULL);
38 • INSERT INTO persons VALUES (DEFAULT, 'James', NULL, 'James Alexander Philip Theo', 'Windsor', NULL, 'Male', '2007-12-17', NULL);
39 • INSERT INTO persons VALUES (DEFAULT, 'George', NULL, 'George Alexander Louis', 'Windsor', NULL, 'Male', '2013-07-22', NULL);
40 • INSERT INTO persons VALUES (DEFAULT, 'Charlotte', NULL, 'Charlotte Elizabeth Diana', 'Windsor', NULL, 'Female', '2015-05-02', NULL);
41 • INSERT INTO persons VALUES (DEFAULT, 'Louis', NULL, 'Louis Arthur Charles', 'Windsor', NULL, 'Male', '2018-04-23', NULL);
42 • INSERT INTO persons VALUES (DEFAULT, 'Archie', NULL, 'Archie Harrison', 'Windsor', NULL, 'Male', '2019-03-06', NULL);
43 • INSERT INTO persons VALUES (DEFAULT, 'Lilibet', NULL, 'Lilibet Diana', 'Windsor', NULL, 'Female', '2021-06-04', NULL);
```

## Wypełnienie tablicy 'Title':

1 •	INSERT INTO titles VALUES (1, 'King of the United Kingdom and other Commonwealth realms', 'Substantive');
2 •	INSERT INTO titles VALUES (DEFAULT, 'Queen of the United Kingdom and other Commonwealth realms', 'Substantive');
3 •	INSERT INTO titles VALUES (DEFAULT, 'Consort of the United Kingdom and other Commonwealth realms', 'Substantive');
4	
5 •	INSERT INTO titles VALUES (DEFAULT, 'Emiperor of India', 'Substantive');
6 •	INSERT INTO titles VALUES (DEFAULT, 'Empress of India', 'Substantive');
7	
8 •	INSERT INTO titles VALUES (DEFAULT, 'Prince of Wales', 'Substantive');
9 •	INSERT INTO titles VALUES (DEFAULT, 'Princess of Wales', 'Substantive');
10	
11 •	INSERT INTO titles VALUES (DEFAULT, 'Duke of Sussex', 'Substantive');
12 •	INSERT INTO titles VALUES (DEFAULT, 'Duchess of Sussex', 'Substantive');
13	
14 •	INSERT INTO titles VALUES (DEFAULT, 'Duke of Gloucester', 'Substantive');
15 •	INSERT INTO titles VALUES (DEFAULT, 'Duchess of Gloucester', 'Substantive');
16	
17 •	INSERT INTO titles VALUES (DEFAULT, 'Duke of Kent', 'Substantive');
18 •	INSERT INTO titles VALUES (DEFAULT, 'Duchess of Kent ', 'Substantive');
19	
20 •	INSERT INTO titles VALUES (DEFAULT, 'Duke of York', 'Substantive');
21 •	INSERT INTO titles VALUES (DEFAULT, 'Duchess of York ', 'Substantive');
22	
23 •	INSERT INTO titles VALUES (DEFAULT, 'Earl of Wessex', 'Substantive');
24 •	INSERT INTO titles VALUES (DEFAULT, 'Countess of Wessex ', 'Substantive');
25	
26 •	INSERT INTO titles VALUES (DEFAULT, 'Earl of Forfar', 'Substantive');
27 •	INSERT INTO titles VALUES (DEFAULT, 'Countess of Forfar ', 'Substantive');
28	
29 •	INSERT INTO titles VALUES (DEFAULT, 'Princess Royal', 'Honorary');



## Wypełnienie tablicy 'Title\_Person':




```
1  -- Kingdom of England
2  ● INSERT INTO title_person VALUES (1, 1, 1, '1910-05-06', '1911-06-22', '1936-01-20', NULL, 3);
3  ● INSERT INTO title_person VALUES (DEFAULT, 3, 1, '1936-01-20', NULL, '1936-12-11', 1, 4);
4  ● INSERT INTO title_person VALUES (DEFAULT, 4, 1, '1936-12-11', '1937-05-12', '1952-02-06', 3, 12);
5  ● INSERT INTO title_person VALUES (DEFAULT, 12, 2, '1952-02-06', '1953-06-02', '2022-09-08', 12, 23);
6  ● INSERT INTO title_person VALUES (DEFAULT, 23, 1, '2022-09-08', NULL, NULL, 23, NULL);
7
8  -- Empire of India
9  ● INSERT INTO title_person VALUES (DEFAULT, 1, 4, '1910-05-06', '1911-06-22', '1936-01-20', NULL, 3);
10 ● INSERT INTO title_person VALUES (DEFAULT, 3, 4, '1936-01-20', NULL, '1936-12-11', 1, 4);
11 ● INSERT INTO title_person VALUES (DEFAULT, 4, 4, '1936-12-11', '1937-05-12', '1947-08-15', 3, NULL);
12
13 -- Prince of Wales
14 ● INSERT INTO title_person VALUES (DEFAULT, 1, 6, '1901-11-09', NULL, '1910-05-06', NULL, 3);
15 ● INSERT INTO title_person VALUES (DEFAULT, 3, 6, '1910-06-23', NULL, '1936-01-20', 1, 23);
16 ● INSERT INTO title_person VALUES (DEFAULT, 23, 6, '1958-07-26', NULL, '2022-09-08', 3, 31);
17 ● INSERT INTO title_person VALUES (DEFAULT, 31, 6, '2022-09-09', NULL, NULL, 23, NULL);
18
19 -- Duke of Sussex
20 ● INSERT INTO title_person VALUES (DEFAULT, 33, 8, '2018-05-3', '2018-05-19', NULL, NULL, NULL);
21
22 -- Duke of Gloucester
23 ● INSERT INTO title_person VALUES (DEFAULT, 7, 10, '1928-03-31', '1928-03-31', '1974-06-10', NULL, 16);
24 ● INSERT INTO title_person VALUES (DEFAULT, 16, 10, '1974-06-10', '1974-06-10', NULL, 7, NULL);
25
26 -- Duke of Kent
27 ● INSERT INTO title_person VALUES (DEFAULT, 9, 12, '1934-10-09', '1934-10-09', '1942-08-25', NULL, 18);
28 ● INSERT INTO title_person VALUES (DEFAULT, 18, 12, '1942-08-25', '1942-08-25', NULL, 9, NULL);
29
30 -- Duke of York
31 ● INSERT INTO title_person VALUES (DEFAULT, 1, 14, '1892-05-24', '1892-05-24', '1910-05-06', NULL, NULL);
32 ● INSERT INTO title_person VALUES (DEFAULT, 4, 14, '1920-06-04', '1920-06-04', '1936-12-11', NULL, NULL);
33 ● INSERT INTO title_person VALUES (DEFAULT, 27, 14, '1986-07-23', '1986-07-23', NULL, NULL, NULL);
34
35 -- Earl of Wessex
36 ● INSERT INTO title_person VALUES (DEFAULT, 29, 16, '1999-06-19', '1999-06-19', NULL, NULL, NULL);
37
38 -- Earl of Forfar
39 ● INSERT INTO title_person VALUES (DEFAULT, 29, 18, '2019-03-10', '2019-03-10', NULL, NULL, NULL);
40
41 -- Princess Royal
42 ● INSERT INTO title_person VALUES (DEFAULT, 26, 20, '1987-06-13', NULL, NULL, NULL, NULL);
```

## Przykładowy SELECT:

### Prostszy SELECT:

Poszukujemy imienia, numeru porządkowego, nazwy tytułu, daty początków rządów oraz daty końca rządów wszystkich osób, które siadały tytuł króla lub królowej Anglii, cesarza lub cesarzowej Indii lub księcia lub księżnej Walii.

```
1 • USE royal_family_tree;
2 • SELECT
3     p.First_Name,
4     p.Regnal_Number,
5     t.Title_Name,
6     tp.Beginning_of_Reign,
7     tp.End_of_Reign
8
9 FROM persons p
10 JOIN title_person tp
11     ON p.Person_ID = tp.Person_ID
12 JOIN titles t
13     ON tp.Title_ID = t.Title_ID
14 WHERE tp.Title_ID >= 1 AND tp.Title_ID <= 7
15 ORDER BY First_Name, Regnal_Number
```

<					
Result Grid    Filter Rows: <input type="text"/>   Export:  Wrap Cell Content: 					
	First_Name	Regnal_Number	Title_Name	Beginning_of_Reign	End_of_Reign
▶	Charles	III	King of the United Kingdom and other Commonwealth realms	2022-09-08	NULL
	Charles	III	Prince of Wales	1958-07-26	2022-09-08
	Edward	VIII	King of the United Kingdom and other Commonwealth realms	1936-01-20	1936-12-11
	Edward	VIII	Emiperor of India	1936-01-20	1936-12-11
	Edward	VIII	Prince of Wales	1910-06-23	1936-01-20
	Elizabeth	II	Queen of the United Kingdom and other Commonwealth re...	1952-02-06	2022-09-08
	George	V	King of the United Kingdom and other Commonwealth realms	1910-05-06	1936-01-20
	George	V	Emiperor of India	1910-05-06	1936-01-20
	George	V	Prince of Wales	1901-11-09	1910-05-06
	George	VI	King of the United Kingdom and other Commonwealth realms	1936-12-11	1952-02-06
	George	VI	Emiperor of India	1936-12-11	1947-08-15
	William	NULL	Prince of Wales	2022-09-09	NULL

## Bardziej rozbudowany SELEC

Wykorzystuję w nim wszystkie tablice. Poszukujemy imienia, numeru porządkowego, nazwy tytułu, typu relacji wszystkich osób, które są dla Wiliama Windsora ojcem, dziadkiem, pradziadkiem itd., które posiadały tytuł króla Anglii.

```

1 • USE royal_family_tree;
2 • SELECT
3     p.First_Name,
4     p.Regnal_Number,
5     t.Title_Name,
6     r.Relation_Type
7
8 FROM persons p
9 JOIN title_person tp
10    ON p.Person_ID = tp.Person_ID
11 JOIN titles t
12    ON tp.Title_ID = t.Title_ID
13 JOIN primary_person_in_relation ppir
14    ON ppir.PPIR_Person_ID = p.Person_ID
15 JOIN secondary_person_in_relation spir
16    ON spir.SPIR_Person_ID = p.Person_ID
17 JOIN relations r
18    ON ppir.PPIR_Relation_ID = r.Relation_ID
19    OR spir.SPIR_Relation_ID = r.Relation_ID
20 WHERE (tp.Title_ID = 1 OR tp.Title_ID = 2) AND (r.Secondary_Person_ID = 31
21 AND (r.Relation_Type LIKE '%fathe_' OR r.Relation_Type LIKE '%Fathe_'))
22
23 GROUP BY p.First_Name, p.Regnal_Number
24 ORDER BY p.First Name, p.Regnal Number

```

	First_Name	Regnal_Number	Title_Name	Relation_Type
▶	Charles	III	King of the United Kingdom and other Commonwealth realms	Father
	George	V	King of the United Kingdom and other Commonwealth realms	Great-Great-Grandfather
	George	VI	King of the United Kingdom and other Commonwealth realms	Great-Grandfather