

## **Project theme**

The court keeps a register of cases. The register includes: parties to the case, attorneys, judgment, etc.

## **Project description**

The project aims to create a state-of-the-art court case registry system that will enable electronic management of data related to the progress of court cases. The system will be used to store information about case parties, attorneys, verdicts and other key elements of the judicial process. Implementation of such a system will contribute to streamlining the work of the courts, increasing the availability of information and improving the quality of services provided by the judiciary.

## **Detailed description of the project**

The client is the court's management.

The project involves the creation of an information system to support the management of court case data.

The database will include information necessary for effective monitoring, management and handling of court cases

The users of the database are court employees. Employees who, after verifying their authorization to see specific data, will be able to provide this information to outsiders.

Below is a description of the various elements of the project structure:

### **- Register of Court Cases:**

Entering a case into the system begins the process of registering it. Each case is assigned a unique identification number, making it easy to track progress and access information about the case.

The system also allows classification of cases , which allows efficient grouping and sorting of cases.

### **- Judgment and Orders:**

This section contains the essential elements of each court case. The text of the judgment or court orders is stored digitally.

This makes it possible to quickly provide a party or attorney with a copy of the judgment and assign penalties or sanctions, if necessary. In addition, the system collects data on the date of the verdict.

- Case Parties:

This component of the database focuses on the participants in the legal proceedings. The data of the plaintiff and defendant, as well as their attorneys, are stored in the system. This makes it possible to quickly identify parties and contact them when necessary. The system also allows other parties, such as witnesses, to be included.

- Deadlines and Hearings:

This area of the database is used to manage the court calendar. Here you can find information about the set dates of hearings, their possible postponements, as well as the need for the parties or their attorneys to access the case file.

All this is done to ensure the timely implementation of procedural procedures.

- Judges:

This is a section that collects information about the judges involved in a particular case. It allows you to monitor the workload of judges and effectively assign cases to the appropriate people.

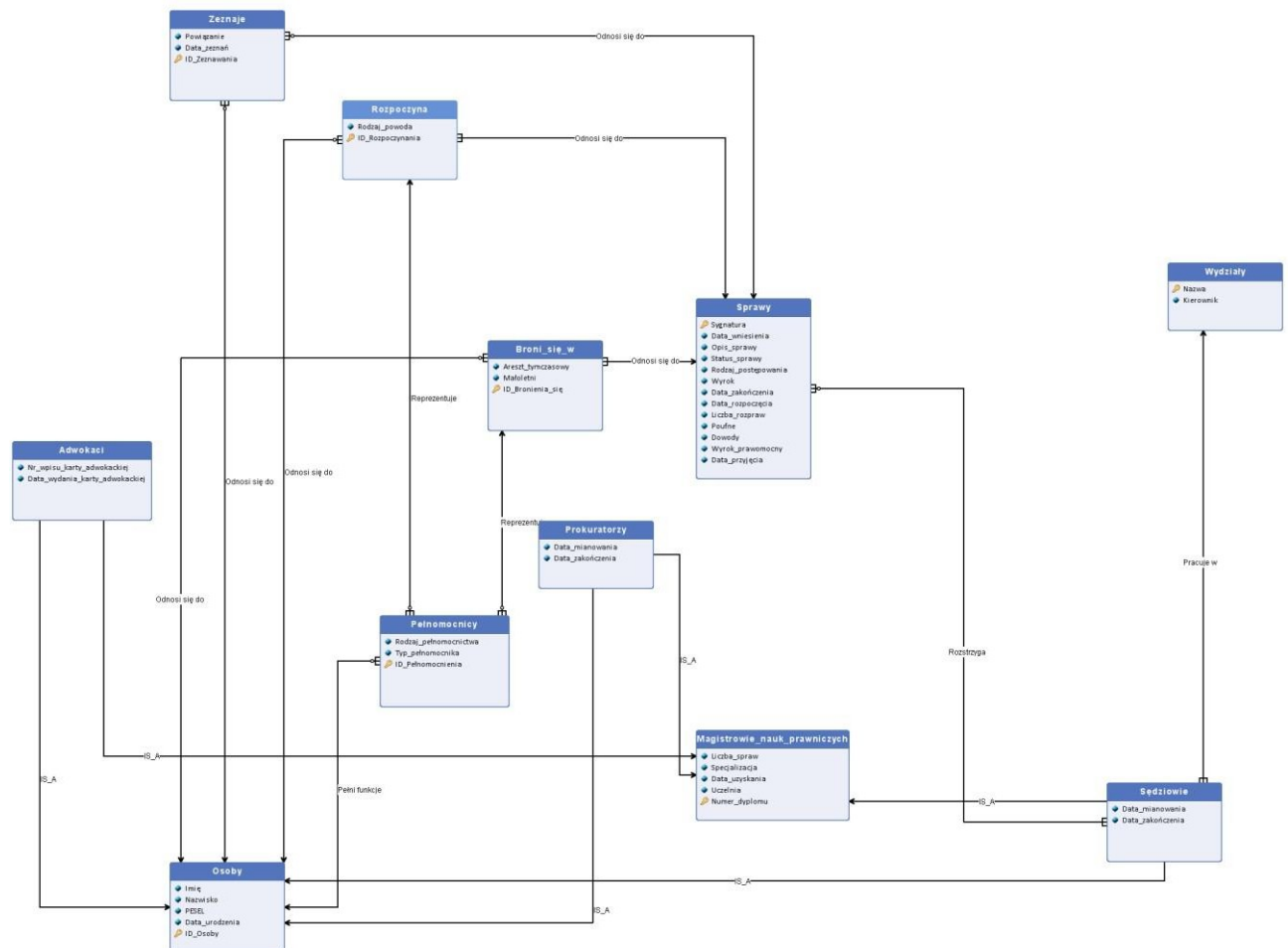
Sample database queries:

- Retrieve information about a specific case based on the case number - Search for all cases handled by a given judge - Find cases in which a judgment has not yet been issued:
- List of cases in which a person is a defendant
- Downloading the list of prosecutors

The base does not include court employees such as accountants, etc.

This project aims to create a tool that will streamline the work of the court, increase its efficiency and improve the availability of information, which will affect the quality and transparency of judicial processes.

## ERD Diagram



## Description of the entity set

Issues			
<p>An entity set containing case data. Defines all the most relevant case data.</p> <p>Number: 420,000, annual case growth of about 40,000</p> <p>We distinguish each entity by its signature, which is unique for each case and is created based on internal arrangements.</p> <p>An entity is added to the collection when a new case is created and is not removed from it.</p>			
Name	Master key	Type/Discipline	Description
Reference	Yes	Text / up to 30 characters	A string based on internal arrangements that is different for each case
Date_brought	Not	Date / as of 1.01.1800	Date of filing the case

Case_description	Not	Text / 1 to 40000 characters	A detailed description of the case with the possibility of including
Case_status	Not	Text / 1 to 50 characters	Determines at what stage the case is
Type_proceeding	Not	Text / 1 to 50 characters	Identifies the type of legal proceedings, e.g. criminal, civil
Verdict	Not	Text / 0 to 500 characters	Describes the judgment established by the judge
Date_completed	Not	Date / as of 1.01.1800	Date of case completion
Date_started	Not	Date / as of 1.01.1800	Start date of the first hearing
Number_of_trials	Not	Number / from 0 to 200	Determines how many hearings were held regarding a particular case
Confidential	Not	Boolean value / YES or NO	Determines whether the matter is confidential
Evidence	Not	Text / 0 to 40000 characters	Description of the evidence in the case
Judgment_enacted	Not	Boolean value / YES or NO	Determines whether the judgment is final
Date_of_admission	Not	Date / as of 1.01.1800	Date of acceptance of the case by the court

Proxies			
<p>An entity set containing proxy data. Specifies the type of proxy and its type.</p> <p>Number: 380,000, proxy growth per year at about 37,000 Each entity is distinguished by the ID of the person acting as a proxy.</p> <p>The entity is added to the collection for each new case and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Type_of_proxy	Not	Text / 1 to 30 characters	As a rule, three types of powers of attorney can be distinguished: general, generic and for a particular action (the so-called "special power of attorney").

Type_proxy	Not	Text / 3 to 40 characters	Specifies who the attorney is, e.g. attorney, spouse
ID_Proxy	Yes	Text / 3 to 12 characters	A unique identifier for each person, created on the basis of internal arrangements

Attorneys			
<p>An entity set containing data about attorneys. It defines the basic data that identifies an attorney, such as the entry number of the attorney's card, the date the card was issued, and the attorney's ID.</p> <p>Number: 10,000, annual growth of attorneys at about 200.</p> <p>We distinguish each entity by its ID, which is unique for each advocate and is created based on internal arrangements.</p> <p>The entity is added to the collection when a new attorney will participate in a case and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
No_writing_card_advocate	Not	Number / from 1 to 100 000 000	The number of the entry in the lawyer's card
Date_issue_card_advocate	Not	Date / as of 01.01.1800	Date of issuance of the lawyer's card

Judges			
<p>An entity set containing data about judges. It specifies its ID and when the judge was appointed and if he/she has already left office then when.</p> <p>Number: 1,000, annual growth of judges at about 10.</p> <p>We distinguish each entity by its ID, which is unique for each judge and is created by internal arrangements.</p> <p>The entity is added to the collection when a new judge is appointed and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Date_appointment	Not	Text / 3 to 12 characters	Date of appointment to serve as a judge

Date_completed	Not	Date / from 1.01.1800 or blank	Date of termination of the judge's duties
----------------	-----	--------------------------------	---

Testifies			
<p>An entity set containing witness data. Defines the basic data about the witnesses.</p> <p>Number: 500,000, annual witness growth of about 55,000</p> <p>We distinguish each entity by the ID of the person who testifies and by the signature of that case.</p> <p>The entity is added to the collection for each new case involving witnesses and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Link	Not	Text / 0 to 1000 characters	Linking the witness to the case
Date_date	Not	Date / as of 01.01.1800	The date on which the witness gave his testimony
ID_Recognition	Yes	Number / Integer	A unique identifier for each person, created on the basis of internal arrangements

People			
<p>An entity set containing data on all individuals. It defines their basic data, such as first name, last name, PESEL and date of birth.</p> <p>Number: 1,900,000, annual growth of people at about 195,000 Each entity is distinguished by its PESEL, which is unique for each person.</p> <p>The entity is added to the collection for each new person and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Name	Not	Text / 1 to 30 characters	The full name of the person in question

Name	Not	Text / 1 to 30 characters	Name of the person in question
PESEL	Not	A string of 11 characters / from 00000000000 to 99999999999	The PESEL number is an eleven-digit numeric symbol that contains the date of birth, sequence number, gender designation and a check number.
Birthdate	Not	Date / as of 01.01.1800	Date of birth of the person
ID_Person	<b>Yes</b>	Number / Integer	A unique identifier for each person, created on the basis of internal arrangements

Starts			
<p>An entity set containing data about claimants. It defines who the claimant is.</p> <p>Number: 500,000, plaintiff growth per year at about 50,000 Each entity is distinguished by the ID of the plaintiff and by the signature of that case.</p> <p>The entity is added to the collection for each new case and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Type_claimant	Not	Text / 3 to 30 characters	It determines who is the plaintiff. The plaintiff can be a natural person, a legal person, a public prosecutor or an organizational unit without legal personality
ID_Commencement	<b>Yes</b>	Number / Integer	A unique identifier for each person, created on the basis of internal arrangements

Departments			
<p>An entity set containing departmental data. It defines its head and the name of the department.</p> <p>Number: 7, fixed</p> <p>We distinguish each entity by its name, which is unique for each department.</p> <p>An entity is added to the collection when a new department is created and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Name	<b>Yes</b>	Text / 2 to 100 characters	Name of the department
Manager	Not	Text / 5 to 50 characters	Name of the head of the department concerned

Prosecutors			
<p>An entity set containing data on prosecutors. Specifies the date of appointment and termination of prosecutors.</p> <p>Number: 10,000, annual growth of prosecutors at about 100.</p> <p>We distinguish each entity by its ID, which is unique for each prosecutor and is created based on internal arrangements.</p> <p>The entity is added to the collection when a new person serves as a prosecutor and is never deleted.</p>			
Name	Master key	Type/Discipline	Description
Date_appointment	Not	Date / as of 01.01.1800	Date of appointment to the office of prosecutor
Date_completed	Not	Date / as of 1.01.1800	Date of termination as a prosecutor

Masters_of_law_science			
<p>An entity set containing data on master's degree holders in legal sciences. It identifies their specializations, the date of obtaining and the university at which they obtained the degree, as well as the number of cases in which they participated. Count: 22,000, growth of master's degrees in legal sciences per year at about 150.</p> <p>We distinguish each entity by its master degree number.</p> <p>The entity is added to the collection when a new attorney, prosecutor, or judge begins to serve on the court and is never removed from the collection.</p>			
Name	Master key	Type/Discipline	Description
Number_of_cases	Not	Number / from 0 to 5000	Number of cases in which the person participated
Specialization	Not	Text / 0 to 100 characters	The area of law in which the person specializes
Date_obtained	Not	Date / as of 1.01.1800	The date on which the person obtained the title
University	Not	Text / 0 to 100 characters	The university at which the person obtained his or her degree
Number_diploma	Yes	Number / 0 to 1,000 000	Number of master's degree obtained



Broni_się_in			
<p>An entity set containing data about defendants. Identifies who the defendant is.</p> <p>Count: 430,000, annual growth of defendants at about 42,000.</p> <p>We distinguish each entity by the ID of the person who is being sued and by the signature of that case.</p> <p>The entity is added to the collection for each new case and is never removed from it.</p>			
Name	Master key	Type/Discipline	Description
Detention_temporary	Not	Boolean value / YES or NO	Determines whether the defendant is under pretrial detention
Minor	Not	Boolean value / YES or NO	Determines whether the defendant is a minor
ID_Defense_self	Yes	Number / Integer	A unique identifier for each person, created on the basis of internal arrangements

## Relationship descriptions

Name	Entity collection 1	Entity collection 2	The number of the relationship	Description
Resolves	Issues	Judges	0..n : 1..n	The union assigns a judge to the case in which he participates. A case can be handled by multiple judges. A judge, on the other hand, can not pursue any case or

				<p>may have several of them. The relationship exists because of the fact that it is the judge who must decide the case.</p> <p>This relationship is formed when a new case is created.</p>
--	--	--	--	--

It refers to	Issues	Testifies	1 : 0..n	<p>The union assigns a witness to the case in which it participates.</p> <p>A case may have many witnesses or may not have one at all. Witness on the other hand, may have only one case. The relationship exists because of obtaining new evidence in the case through the testimony of a witness. A case may have multiple witnesses for the reason that the plaintiff, or the defendant, may have called several witnesses to testify.</p>
IS_A	Judges	People	IS_A : 1	<p>The union attributes a judge to a person. Every judge is a person. We obtain through temu such data as name, surname, PESEL and date of birth.</p>
It refers to	Testifies	People	0..n : 1	<p>The relationship attributes a witness to a person. Each witness is a person. This gives us such data as first name, last name, PESEL and date of birth.</p>
It performs the functions of	Proxies	People	0..n : 1	<p>The association attributes a proxy to a person. Each proxy is a person.</p> <p>With this we obtain such data as name, surname, PESEL and date of birth.</p>
It refers to	Starts	Issues	1..n : 1	<p>The union assigns a plaintiff to the case in which it participates.</p> <p>A plaintiff can be only one person, but there can also be many due to class action lawsuits. A given plaintiff can only have one case.</p>

It refers to	Starts	People	0..n : 1	The relationship attributes the claimant to a person. Every claimant is a person. We obtain through temu such data as name, surname, PESEL and date of birth.
He works in	Judges	Departments	1..n : 1	The union assigns a judge to a department. A judge can be assigned to only one department, while a department must have at least one judge for any cases to be decided in it. This gives us data on which department a judge works in and which judges work in a particular department.
IS_A	Prosecutors	Masters_of_law_science	IS_A : 1	The union attributes a prosecutor to a master's degree in legal science. Every prosecutor must be a master of legal sciences. This gives us such data as the number of cases, specialization, date of attainment and the university where the person earned his degree and diploma number.
IS_A	Attorneys	Masters_of_law_science	IS_A : 1	The union attributes a lawyer to a master's degree in legal science. Every lawyer must be a master of legal sciences. This gives us such data as the number of cases, specialization, date of attainment and the university where the person earned his degree and diploma number.

IS_A	Judges	Masters_of_law_science	IS_A : 1	The union attributes a judge to a master's degree in legal science. Every judge must be a master of legal sciences. With this, we obtain such data as the number of cases, specialization, date of obtaining and the university at which the the person has won his title
------	--------	------------------------	----------	---

				And the diploma number.
Represents	Proxies	Starts	0..n : 1	The union assigns an attorney to the claimant. The claimant does not necessarily have to use the power of attorney option. The union informs us that the plaintiff has benefited z proxy option. A proxy can be assigned to only one plaintiff at a time, while the plaintiff's may have multiple attorneys due to the fact that they could change it during the process.
IS_A	Attorneys	People	IS_A : 1	The relationship attributes a lawyer to a person. Every lawyer is a person. This gives us such data as first name, last name, PESEL and date of birth.
IS_A	Prosecutors	People	IS_A : 1	The association attributes the prosecutor to a person. Every prosecutor is a person. With this we obtain such data as name, surname, PESEL and date of birth.

It refers to	Broni_się_in	Issues	1..n : 1	The union assigns a defendant to the case in which it participates. A defendant can be only one person, but there can also be many of them due to class action lawsuits. A given defendant can have only one case.
Represents	Proxies	Broni_się_in	0..n : 1	The union assigns an attorney to the defendant. The respondent does not necessarily have to use the power of attorney option. The union informs us that the defendant has benefited z proxy option. The proxy can be assigned simultaneously to only one
				Defendant, while defendants may have multiple attorneys due to the fact that they could change it during the process.
It refers to	Broni_się_in	People	0..n : 1	The relationship attributes the claimant to a person. Every claimant is a person. We obtain through temu such data as name, surname, PESEL and date of birth.

## Relational database schema

Testifies(Testimony ID, Witness ID REF Person, Case Reference REF Case, Relation, Testimony Date)

Starts(ID\_Starts, ID\_Cause REF Person, Signature\_Case REF Case, Type\_Cause)

Defend\_you\_in(ID\_defend\_you, ID\_defendant REF Person, Reference\_case REF Case, Arrest\_temporary, Minor)

Attorneys(ID\_Advocate REF Person, No\_written\_advocate\_card, Date\_issue\_of\_attorney\_card, Number\_diploma REF Masters\_of\_law\_science).

Prosecutors(**ID\_Prosecutor** REF Persons, Date\_appointment, Date\_completed, Number\_diploma REF Masters\_of\_law\_science)

Proxies(proxy **ID**, Proxy ID REF Person, Proxy\_type, Proxy\_type, Proxy\_type, Proxy ID\_Starting REF Starts, Proxy ID\_Defending\_You REF Defends\_You)

Persons(**ID\_Person**, First Name, Last Name, PESEL, Date\_Birth)

Masters\_of\_law\_science(**Diploma\_number**, Number\_of\_cases, Specialization, Date\_obtained, University)

Cases(**Reference**, Date\_filed, Case\_description, Case\_status, Type\_of\_proceeding, Judgment, Date\_completed, Date\_started, Number\_of\_trials, Confidential, Evidence, Judgment\_final, Date\_received)

Departments(**Name**, Head)

**Judges\_Cases**(**ID\_Judge** REF Judges, **Reference\_Case** REF Cases)

Judges(**ID\_Judge** REF Persons, Date\_appointment, Date\_completed, Number\_diploma REF Masters\_of\_law\_science Name REF Departments)