# Systemy Baz Danych

## 2023/2024 - projekt

Authors: Urszula Stankiewicz, Michalina Hytrek, Łukasz Kwinta

## 1. Opis systemu

Z tworzonej bazy danych skorzysta firma oferująca różnego rodzaju kursy i szkolenia:

- webinary odbywają się na żywo na jednej z platform chmurowych, a ich nagrania są udostępniane klientom firmy. Nagrania nie są przechowywane w bazie jedynie informacja o nich, którą usunąć może administrator.
- kursy krótkie formy kształcenia, trwające zazwyczaj kilka dni, istnieją wyłącznie kursy płatne. Zaliczenie kursu wymaga zaliczenia min. 80% modułów
- studia kilkuletnie szkolenia odbywające się online i stacjonarnie, wymagają zaliczenia praktyk i zdania egzaminu końcowego

Każda z tych form kształcenia prowadzona jest przez konkretnego wykładowcę w konkretnym języku (najczęściej polskim). Czasami treść jest tłumaczona na żywo przez tłumacza, co też powinno zostać odnotowane w bazie danych.

Możemy wyróżnić następujących aktorów systemu:

- Klient użytkownik chcący skorzystać z oferty firmy szkoleniowej
- Właściciel osoba tworząca materiały video i treść kursów
- Administrator zarządzanie bazą danych oraz jej ulepszanie Aktorzy mogą skorzystać z następujących funkcjonalności:

#### 1.1 Klient

#### 1.1.1. Webinary

- · Korzystanie z nagrań bezpłatnych webinarów przez okres 30 dni od ich umieszczenia na stronie
- Użytkownicy posiadający konto: Po opłaceniu dostępu do webinarów płatnych, korzystanie z nagrań tych webinarów przez kolejne 30 dni od potwierdzenia opłaty

## 1.1.2. Kursy

- Kontrolowanie zaliczenia danego kursu (procent zaliczonych modułów >= 80 %) Sprawdzenie statusu swojej obecności na wybranych modułach
- Dostęp do listy kursów na które użytkownik jest zapisany i dostęp do statusu płatności przy każdym kursie (nieopłacone/ zaliczka/ opłacone w całości)
- Sprawdzenie dostępności wolnych miejsc na kursy hybrydowe i stacjonarne
- Dostęp do dodatkowych informacji o kursach takich jak: język kursu, obecność tłumacza, sposobie organizacji kursu (stacjonarnie/ o-line synchronicznie/ online asynchronicznie/ hybrydowo), dacie rozpoczęcia kursu czy sali zajęciowej (informacja dostępna po uiszczeniu wszelkich opłat) Dostęp do nagranych modułów (moduły online), po opłaceniu dostępu

## 1.1.3. Studia

- Sprawdzenie swojej obecności na zajęciach
- Możliwość zapisania się na odrabianie zajęć w kursie lub zajęciach innego kursu o podobnej tematyce
- Sprawdzenie wyników z egzaminów
- Sprawdzenie informacji o tym, czy odbyło się praktyki (14 dni 2 razy w ciągu roku) i frekwencji na nich
- Możliwość zapisania się na pojedyncze zajęcia
- Wyświetlenie sylabusu studiów

## 1.1.4. Koszyk

• dodawanie produktów do koszyka (kursy, webinary, studia)

#### 1.2. Sekretarz

- Wyświetlanie następujących raportów:
  - o lista osób, które skorzystały z oferty firmy, ale za to nie zapłaciły
  - o lista osób zapisanych na przyszłe wydarzenia z informacją, czy wydarzenia te odbywają się stacjonarnie, czy online

o raport dotyczący frekwencji na wydarzeniach przeszłych - liczba osób które brały udział w każdym kursie/webinarze/studium i były obecne

- o lista osób, które są zapisane na kolidujące ze sobą wydarzenia
- o lista wyników egzaminów dla użytkowników
- o lista obecności na zajęciach dla danego użytkownika
- o lista odbytych praktyk
- o Dodanie nowego klienta
- Wyświetlanie spisu wszystkich zajęć i wszystkich spotkań z datami

## 1.3. Manager

Funkcje jakie ma sekretarz + dodatkowo:

- Wyświetlanie następujących raportów:
  - o finansowe zestawienie przychodów dla każdego kursu/studium/webinaru przesyłana jest informacja o tym do właściciela
  - o lista osób zapisanych na każde szkolenie zawierająca imię, nazwisko, informacja, czy klient był obecny
- Wyświetlanie spisu wszystkich zajęć i wszystkich spotkań z datami oraz możliwość ich zmiany (studia)
- Określenie limitu miejsc na kursy hybrydowe/stacjonarne oraz studia
- Możliwość generowania listy klientów którzy są uprawnieni do otrzymania dyplomów (ukończyli kurs/studia)

## 1.4. Nauczyciel

- Dodawanie nagrań szkoleń
- Dostęp do prowadzonych przez siebie nagrań i list obecności z prowadzonych przez siebie zajęć

#### 1.5. Właściciel

Funkcje managera i sekretarza + dodatkowo:

• Zezwalanie na odroczenie płatności za szkolenia

## 1.6. Funkcje systemu

## 1.6.1. Webinary

- kontrola dostępu klientów do webinarów
  - o webinary bezpłatne dostęp przez 30 dni od umieszczenia nagrania na platformie
  - o webinary płatne dostęp przez 30 dni od uiszczenia opłaty
  - o uniemożliwienie korzystania z płatnych webinarów użytkownikom niezalogowanym i tym, którzy nie uiścili opłaty

## 1.6.2. Kursy

- weryfikacja zaliczenia danych modułów wchodzących w skład kursu
- kontrola dostępu klientów do kursów:
  - o kursy on-line synchronicznie (zasady jak przy webinarach)
  - o kursy online asynchronicznie (dostęp po dodaniu materiałów przez właściciela i po uiszczeniu opłat przez klienta)
  - o uniemożliwienie dostępu do kursów on-line użytkownikom którzy nie wpłacili całości kwoty 3 dni przed rozpoczęciem kursu

#### 1.6.3. Studia

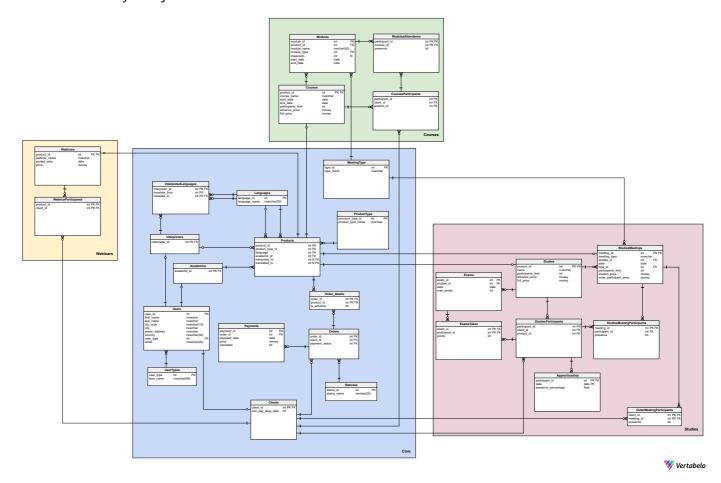
- · kontrola dostępu klientów do studiów
  - o spotkania on-line
  - o spotkania stacjonarnie
  - o spotkania hybrydowe
  - o możliwość wykupienia dostępu płatnego do jednego spotkania
  - o limit miejsc ogólny (nie może być większy niż najmniejszy spośród limitów wszystkich spotkań)
- przechowywanie informacji o sylabusie (przechowywanie listy zajęć na danym studium i listy różnych studiów jeszcze przed danym rokiem)
- przechowywanie informacji o spisie wszystkich zajęć i wszystkich spotkań z datami
  - o limit miejsc na spotkanie
- kontrola, czy studenci zaliczyli praktyki trwające 14 dni 2 razy w ciągu roku
- kontrola obecności klientów na spotkaniach i praktykach
  - o aby zaliczyć studium:
    - 80% obecności na spotkaniach
    - 100% obecności na praktykach
- kontrola, czy studenci uiścili opłatę wpisową oraz za każde spotkanie najpóźniej 3 dni przed zjazdem

• przyznawanie statusu zaliczenia i ew. wysłania dyplomu Pocztą polska na status korespondencyjny (na podstawie zaliczenia praktyk i egzaminu końcowego oraz obecności)

#### 1.6.4. Koszyk

- po kliknięciu przez klienta "Zakończ i zapłać", wygenerowanie linku do płatności.
- po zakończeniu transakcji przesłanie informacji zwrotnej o pomyślnym zakończeniu płatności lub błędzie.

## 2. Schemat bazy danych



## 3. Implementacje tabel

## 3.1 Core

Główna część systemu

#### Users

Zawiera wszystkich użytkowników systemu oraz ich dane - imię, nazwisko, dane adresowe oraz typ użytkownika (klucz obcy do tabeli User\_types), a także informację o tym, ile dni opóźnienia w płatności jest dozwolone danemu użytkownikowi.

```
create table Users
(
   user_id
                 int identity
       constraint user_id
           primary key,
   first_name nvarchar(50)
                                       not null,
                nvarchar(50)
                                       not null,
   last_name
   zip_code
                nvarchar(10)
                                       not null,
                nvarchar(50)
                                       not null,
   city
   street_address nvarchar(50)
                                       not null,
   country nvarchar(50)
                                       not null,
   user_type
                 int
       constraint df_user_type default 1 not null
       constraint User_types_Users
           references User_types
```

```
on update cascade on delete cascade,
email nvarchar(50) not null
constraint email_unique
unique
constraint ValidEmail
check ([Email] like '%_@__%.__%')
)
go

create index Users_first_name_last_name_index
on Users (first_name, last_name)
go

create index Users_zip_code_city_street_address_country_index
on Users (zip_code, city, street_address, country)
go
```

#### **Academics**

Zawiera id wszystkich użytkowników, którzy są nauczycielami - zdecydowaliśmy się na dodanie tabel Academics, Interpreters i Clients, by rozdzielić logikę wykonywaną dla poszczególnych typów użytkownika.

```
create table Academics
(
    academic_id int not null
        constraint Academics_pk
        primary key
        constraint FK_Academics_Users
            references Users
            on update cascade on delete cascade
)
go
```

## Interpreters

Zawiera id wszystkich tłumaczy

```
create table Interpreters
(
  interpreter_id int not null
    constraint Interpreters_pk
    primary key
    constraint Interpreters_Users
    references Users
    on update cascade on delete cascade
)
go
```

#### Clients

Zawiera id wszystkich klientów

```
)
go
```

#### User\_types

Zawiera listę wszystkich typów użytkowników występujących w systemie

```
create table User_types
(
   user_type int identity
      constraint User_types_pk
       primary key,
   type_name nvarchar(50) not null
)
go
```

#### Interpreted\_languages

Każdemu tłumaczowi przyporządkowuje informację o tym, z jakiego języka na jaki tłumaczy (są to FK do tabeli languages)

```
create table Interpreted_languages
(
   interpreter_id int not null
       constraint Interpreted_languages_Interpreters
           references Interpreters
           on update cascade on delete cascade,
   translate_from int not null
       constraint FK_Interpreted_languages_Languages
           references Languages
        constraint FK_Interpreted_languages_Languages2
           references Languages,
   translate to int not null
       constraint FK_Interpreted_languages_Languages1
           references Languages,
   constraint Interpreted_languages_pk
       primary key (interpreter_id, translate_from, translate_to)
)
go
```

## Languages

Lista wszystkich języków, w jakich prowadzone są szkolenia, bądź na jakie są one tłumaczone

#### **Products**

Zawiera wszystkie produkty, informację o ich typie (odwołanie do tabeli ProductType), języku w jakim jest prowadzone dane szkolenie, wykładowcy, który je prowadzi oraz o tłumaczu i języku, na który tłumaczone jest szkolenie

```
create table Products
```

```
constraint Products_pk
          primary key,
   product_type_id int not null
       constraint Products_ProductType
          references ProductType
          on update cascade on delete cascade,
   language int not null
       constraint FK_Products_Languages
          references Languages,
   academic id
                int not null
       constraint FK_Products_Academics
          references Academics
          on update cascade on delete cascade,
   interpreter_id int
       constraint FK_Products_Interpreters1
          references Interpreters,
   translated_to int
       constraint FK_Products_Languages1
          references Languages
)
go
create index Products_product_type_id_index
   on Products (product_type_id)
create index Products_language_index
   on Products (language)
go
```

#### ProductType

Zawiera wszystkie typy produktów (webinary, spotkania, kursy, studia)

```
create table ProductType
(
   product_type_id   int identity
        constraint ProductType_pk
        primary key,
   product_type_name nvarchar(50) not null
)
go
```

## **Payments**

Spis wszystkich płatności (numer zamówienia, data płatności, wpłacona kwota)

```
create table Payments
(
   payment_id int identity
       constraint Payments_pk
          primary key,
   order_id
                                                  not null
             int
       constraint Orders_Payments
          references Orders,
   payment_date date
                                                  not null
        constraint payment_date_check
           check ([payment_date] >= '1990-01-01' AND [payment_date] <= getdate()),</pre>
   price
                                                  not null,
                money
   cancelled
               bit
        constraint DF_Payments_cancelled default 0 not null
go
create index Payments_order_id_index
```

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```
on Payments (order_id)
go

create index Payments_payment_date_index
    on Payments (payment_date)
go
```

## MeetingType

Rodzaje spotkań (online, hybrydowe, stacjonarne)

```
create table MeetingType
(
   type_id int identity
      constraint type_id
      primary key,
   type_name nvarchar(50) not null
)
go
```

#### Orders

Lista wszystkich zamówień (numer klienta, status płatności)

```
create table Orders
   order id
                int identity
       constraint Orders_pk
          primary key,
   client_id
                int
                                            not null
       constraint Orders_Clients
         references Clients,
   payment_status int
       constraint df_payment_status default 2 not null
       constraint Statuses_Orders
          references Statuses
)
go
```

## OrdersDetails

Lista wszystkich zamówień (numer klienta, status płatności)

```
create table Order details
(
   order_id int
                                                        not null
       constraint Order_products_Orders
          references Orders,
   product_id int
                                                        not null
       constraint Order_products_Products
          references Products,
   is_advance bit
       constraint DF_Order_details_is_advance default 0 not null,
   constraint Order_details_pk
       primary key (order_id, product_id)
)
go
```

## Statuses

Rodzaje statusów zamówień ( nieopłacone, opłacone, częsciowo opłacone (z jakiegos produktu tylko zaliczka), anulowane )

```
create table Statuses
(
    status_id    int identity
        constraint Statuses_pk
        primary key,
    status_name varchar(20) not null
)
go
```

## 3.2. Webinars

#### Webinars

Lista wszystkich webinarów wraz z ich nazwami, datą publikacji i ceną

```
create table Webinars
   product_id int
                                        not null
       constraint product_id_webinars
          primary key
       constraint Webinars_Products
          references Products
           on update cascade on delete cascade,
                                not null,
   webinar_name nvarchar(50)
   posted_date date
                                        not null
       constraint check_posted_date
          check ([posted_date] >= '1990-01-01' AND [posted_date] <= getdate()),</pre>
   price money
       constraint def_price default 0.00 not null
)
go
create index Webinars_webinar_name_index
   on Webinars (webinar_name)
go
create index Webinars_posted_date_index
   on Webinars (posted_date)
```

## WebinarParticipants

Lista uczestników poszczególnych webinarów

```
create table WebinarParticipants
(
    product_id int not null
        constraint WebinarParticipants_Webinars
            references Webinars
            on update cascade on delete cascade,
    client_id int not null
        constraint FK_WebinarParticipants_Clients
            references Clients
            on update cascade on delete cascade,
        constraint WebinarParticipants_pk
            primary key (client_id, product_id)
)
go
```

## 3.3. Courses

## Courses

Lista kursów wraz z ich nazwami, datami początku i końca kursu, limitem uczestników, ceną zaliczki oraz pełną ceną

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```
create table Courses
(
                 int
                                               not null
   product_id
       constraint product_id
          primary key
       constraint FK_Courses_Products
          references Products
          on update cascade on delete cascade,
   course_name nvarchar(50)
                                               not null,
   start_date date
                                               not null.
   end_date
                     date
                                               not null,
   participants_limit int
                                               not null
       constraint participants_limit
         check ([participants_limit] >= 0),
                   money
   advance_price
       constraint df_advance_price default 50.00 not null,
   full_price money
       constraint df_full_price default 400.00 not null,
   constraint ch_advance_price
      check ([advance_price] < [full_price] AND [advance_price] >= 0),
   constraint ch_end_date
       check ([end_date] >= [start_date])
)
go
create unique index Courses_course_name_uindex
   on Courses (course_name)
create unique index Courses_start_date_end_date_uindex
   on Courses (start_date, end_date)
```

## CoursesParticipants

Lista uczestników poszczególnych kursów

```
create table CoursesParticipants
(
    participant_id int identity
        constraint CoursesParticipants_pk
        primary key,
    client_id int not null
        constraint CursesParticipants_Clients
            references Clients
            on update cascade on delete cascade,
    product_id int not null
        constraint CoursesParticipants_Courses
            references Courses
)
go
```

#### Modules

Lista modułów kursów z nazwami, typem modułu (odwołanie do tabeli MeetingType), numerem sali oraz datą rozpoczęcia i zakończenia modułu

```
module_name varchar(50) not null,
   constraint Modules_MeetingType
         references MeetingType
          on update cascade on delete cascade,
   classroom int,
             date not null,
   start_date date
   end_date
   constraint ch_end_date_courses
      check ([end_date] >= [start_date])
)
go
create unique index Uniq_Modules
   on Modules (module_name)
create index Modules_product_id_index
   on Modules (product_id)
create index Modules_start_date_end_date_index
   on Modules (start_date, end_date)
go
create index Modules_classroom_index
   on Modules (classroom)
go
```

#### ModulesAttendance

Zawiera listę obecności uczestników kursów na poszczególnych modułach

```
create table ModulesAttendance
(
   participant_id int
                                                          not null
       constraint FK_ModulesAttendance_CoursesParticipants
           references CoursesParticipants
           on update cascade on delete cascade,
   module_id
                 int
                                                         not null
       constraint ModulesAttendance_Modules
           references Modules
           on update cascade on delete cascade,
                bit
   presence
       constraint DF_ModulesAttendance_presence default 0 not null,
   constraint PK_ModulesAttendance
       primary key (participant_id, module_id)
)
go
```

#### 3.4. Studies

#### **Studies**

Zawiera listę produktów typu "studia", nazwę studiów, limit uczestników oraz wysokość wpisowego

```
check (len([name]) > 0),
   participants_limit int default 100
                                                        not null
        constraint check_praticipant_limit
           check ([participants_limit] > 0),
   full_price
                      money
        constraint df_studies_full_price default 7000.00 not null
        constraint check_full_price
           check ([full_price] >= 0),
   advance_price
                      money
       constraint df_studies_advance_price default 100.00,
   constraint check advance price
       check ([advance_price] <= [Studies].[full_price] AND [advance_price] >= 0)
)
go
create index Studies_name_index
   on Studies (name)
```

#### **StudiesParticipants**

Zawiera uczestników poszczególnych studiów

```
create table StudiesParticipants
(
   participant_id int identity
        constraint participant_id_studies_participants
           primary key,
    client_id     int not null
        constraint StudiesParticipants_Clients
           references Clients
           on update cascade on delete cascade,
   product id
                int not null
       constraint StudiesParticipants_Studies
           references Studies
)
create index StudiesParticipants client id index
   on StudiesParticipants (client_id)
create index StudiesParticipants_product_id_index
   on StudiesParticipants (product_id)
go
```

## Exams

Zawiera przypisane studiom egzaminy, datę odbycia się egzaminów oraz maksymalne możliwe do zdobycia punkty

```
create index Exams_studies_id_index
    on Exams (studies_id)
go

create index Exams_date_index
    on Exams (date)
go
```

#### **ExamsTaken**

Zawiera dane odnośnie wyników egzaminów w których uczestnik studiów wziął udział

```
create table ExamsTaken
(
    exam_id
                  int
                                 not null
       constraint ExamsTaken_Exams
           references Exams
           on update cascade
        constraint check_date
           check ([dbo].[checkExamDate]([exam_id]) <= getdate()),</pre>
    participant_id int
                                 not null
        constraint ExamsTaken_StudiesParticipants
           references StudiesParticipants,
            int default 50 not null,
    constraint ExamsTaken_pk
       primary key (participant_id, exam_id),
    constraint check_points
        check ([points] >= 0 AND [points] <= [dbo].[checkExamMaxPoints]([exam_id]))</pre>
go
```

## **Apprenticeship**

Zawiera uczestników, którzy odbyli praktyki w określonym terminie

```
create table Apprenticeship
(
   participant id
                     int
                                        not null
       constraint Apprenticeship_StudiesParticipants
           references StudiesParticipants
           on update cascade on delete cascade,
   date
              date
                             not null,
   presence_percentage float default 100 not null
       constraint check_presence_percentage
           check ([presence_percentage] >= 0 AND [presence_percentage] <= 100)</pre>
)
create unique clustered index Apprenticeship_participant_id_date_uindex
   on Apprenticeship (participant_id, date)
go
```

## **StudiesMeetingParticipants**

Zawiera listę obecnych studentów na danych spotkaniach

```
create table StudiesMeetingParticipants
(
   meeting_id     int not null
     constraint FK_MeetingParticipants_StudiesMeetings
        references StudiesMeetings
        on update cascade on delete cascade,
   participant_id int not null
     constraint MeetingParticipants_StudiesParticipants
```

```
references StudiesParticipants
on update cascade on delete cascade,
presence bit default 0,
constraint meeting_id
primary key (meeting_id, participant_id)
)
go
```

#### StudiesMeetings

Lista spotkań poszczególnych studiów, data spotkania, typ spotkania (FK do MeetingTypes), limit uczestników spotkania, cena dla studentów, cena dla uczestników, którzy nie są studentami

```
create table StudiesMeetings
(
   meeting_id
                                                           not null
       constraint StudiesMeetings_pk
          primary key
       constraint StudiesMeetings_Products
           references Products
           on update cascade on delete cascade,
   studies_id
               int
                                                           not null
       constraint StudiesMeetings_Studies
          references Studies,
   date
                                                          not null,
                          date
                          int default 1
                                                           not null
    type_id
       constraint StudiesMeetings_MeetingType
          references MeetingType
           on update cascade on delete cascade,
   participants_limit int default 300
                                                          not null.
   student_price
                          money
       constraint df_student_price default 60.00
                                                          not null
       constraint check_student_price
          check ([student_price] >= 0),
   outer_participant_price money
       constraint df_outer_participant_price default 100.00 not null
       constraint check_outer_participant_price
          check ([outer_participant_price] >= 0),
   meeting_topic
                         nvarchar(50)
                                                          not null
       constraint check_meeting_topic_length
          check (len([meeting_topic]) > 0),
   constraint check_participants_limit
       check ([dbo].[checkParicipantsLimit]([studies_id]) <= [StudiesMeetings].[participants_limit])</pre>
)
go
create index StudiesMeetings_studies_id_index
   on StudiesMeetings (studies_id)
create index StudiesMeetings_date_index
   on StudiesMeetings (date)
```

## OuterMeetingsParticipants

Tabela zawierająca uczestników spotkań na studiach nie będących uczestnikami studiów

```
presence bit
    constraint df_outer_meeting_presence default 0 not null,
    constraint PK_OuterMeetingParticipants
        primary key (client_id, meeting_id)
)
go
```

## Widoki

Dla Sekretarza

#### **BorrowersList**

Lista klientów którzy skorzystali z oferty i za nią nie zapłacili (client\_id, order\_id)

#### **PastEvents**

Raport dotyczący frekwencji na danym wydarzeniu (moduł, spotkanie ze studiów) wraz z podstawowymi informacjami

```
CREATE VIEW PastEventsAttendance
SELECT p.product_id, pt.product_type_name as category, s.name as product_name, sm.meeting_id as id, sm.date as
date, mt.type_name as type, COUNT(mp.client_id) as attendance
FROM StudiesMeetings as sm
   inner join (SELECT participant_id as client_id, meeting_id
                FROM StudiesMeetingParticipants
               WHERE presence=1
               UNION
               SELECT client_id, meeting_id
               FROM OuterMeetingParticipants
               WHERE presence = 1) as mp
               on mp.client id=sm.meeting id
   inner join Studies as s on s.product id=sm.studies id and sm.date <= GETDATE()
   inner join Products as p on p.product_id=s.product_id
   join MeetingType as mt on mt.type_id=sm.type_id
   join ProductType as pt on pt.product_type_id=p.product_type_id
GROUP BY p.product_id, pt.product_type_name, s.name, sm.meeting_id, sm.date, mt.type_name
UNION
SELECT p.product_id, pt.product_type_name as category, c.course_name as product_name, m.module_id as id,
m.start_date as date, mt.type_name as type, COUNT(ma.presence) as attendance
FROM Modules as m
   inner join ModulesAttendance as ma on m.module_id=ma.module_id and ma.presence=1
   inner join Courses as c on c.product_id=m.product_id and m.end_date <= GETDATE()</pre>
   inner join Products as p on p.product_id=c.product_id
   join MeetingType as mt on mt.type_id=m.module_type
   join ProductType as pt on pt.product_type_id=p.product_type_id
GROUP BY p.product_id, pt.product_type_name, c.course_name, m.module_id, m.start_date, mt.type_name
```

## EventsThisMonth

Systemy Baz Danych.md

Spis webinarów, modułów oraz spotkań ze studiów, które odbywają się w aktualnym miesiącu

```
CREATE VIEW EventsThisMonth
SELECT p.product_id, pt.product_type_name as category, s.name as product_name, sm.meeting_id as id, sm.date as
date, mt.type_name as type
FROM StudiesMeetings as sm
   inner join Studies as s on s.product_id=sm.studies_id and YEAR(sm.date) = YEAR(GETDATE()) and MONTH(sm.date)
= MONTH(GETDATE())
   inner join Products as p on p.product_id=s.product_id
   join MeetingType as mt on mt.type_id = sm.type_id
   join ProductType as pt on pt.product_type_id=p.product_type_id
UNION
SELECT p.product_id, pt.product_type_name as category, w.webinar_name as product_name, w.product_id,
w.posted_date as date, 'on-line' as type
FROM Webinars as w
   inner join Products as p on p.product_id=w.product_id and YEAR(w.posted_date) = YEAR(GETDATE()) and
MONTH(w.posted_date) = MONTH(GETDATE())
   join ProductType as pt on pt.product_type_id=p.product_type_id
UNION
SELECT p.product_id, pt.product_type_name as category, c.course_name as product_name, m.module_id as id,
m.start_date as date, mt.type_name as type
FROM Modules as m
   inner join Courses as c on c.product_id=m.product_id and YEAR(m.start_date) = YEAR(GETDATE()) and
MONTH(m.start_date) = MONTH(GETDATE())
   inner join Products as p on p.product_id=c.product_id
   join MeetingType as mt on mt.type_id = m.module_type
   join ProductType as pt on pt.product_type_id=p.product_type_id
GO
```

#### **Exams Stats**

Lista egzaminów wraz z srednia ilościa punktów uzyskanych przez studentów

```
CREATE VIEW ExamsStats
AS
SELECT e.studies_id as studies, e.exam_id as exam, e.max_points as max_points, AVG(et.points) as average_points
FROM Exams as e
   inner join ExamsTaken as et on et.exam_id=e.exam_id
GROUP BY e.studies_id, e.exam_id, e.max_points
```

## **StudentsApprenticeships**

Lista studentów wraz z iloscią odbytych praktyk

```
CREATE VIEW StudentsApprenticeship
AS
SELECT a.participant_id, COUNT(a.date) as apprenticeships_taken
FROM Apprenticeship as a
GROUP BY a.participant_id
```

## **Bilocations**

Lista osób zapisanych na kilka wydarzeń odbywajacych sie w tym samym czasie (client\_id, date, num\_of\_events

```
CREATE VIEW [dbo].[Bilocations] As

Select c.client_id, p.date, COUNT(p.date) as eventsNumber

From Clients as c

inner join Orders as o on c.can_pay_days_later=o.client_id

inner join Order_details as od on od.order_id=o.order_id

inner join( Select m.module_id as p_id, start_date as date from Modules as m where not m.module_type = 1

UNION
```

```
Select sm.meeting_id as p_id, sm.date as date from StudiesMeetings as sm where not sm.type_id = 1
UNION
Select w.product_id as p_id, w.posted_date as date from Webinars as w
UNION
Select sm.student_price as p_id, sm.date as date from StudiesMeetings as sm where not sm.type_id = 1) as

p
on p.p_id = od.product_id
where p.date >= GETDATE()
group by c.client_id, p.date
```

## Dla Managera

#### **Financial Report**

Przedstawia podsumowanie finansowe

```
CREATE VIEW FinancialReport AS

SELECT Products.product_id, dbo.getProductName(Products.product_id) AS product_name, product_type_name,

SUM(price) AS total_income

FROM Payments

INNER JOIN Orders ON Payments.order_id = Orders.order_id

INNER JOIN Order_details ON Orders.order_id = Order_details.order_id

INNER JOIN Products ON Order_details.product_id = Products.product_id

INNER JOIN ProductType ON Products.product_type_id = ProductType.product_type_id

GROUP BY Products.product_id, Products.product_id, product_type_name

GO
```

#### GraduationCandidates

Przedstawia listę osób które zaliczyły studia lub kurs - są kandydatami do otrzymania certyfikatu

```
CREATE VIEW GraduationCandidates AS

SELECT Clients.client_id, first_name, last_name, dbo.getProductName(product_id) AS product_name
FROM StudiesParticipants

INNER JOIN Clients ON StudiesParticipants.client_id = Clients.client_id

INNER JOIN Users ON Clients.client_id = Users.user_id

WHERE dbo.studiesPass(participant_id) = 1

UNION

SELECT Clients.client_id, first_name, last_name, dbo.getProductName(product_id) AS product_name
FROM CoursesParticipants

INNER JOIN Clients ON CoursesParticipants.client_id = Clients.client_id

INNER JOIN Users ON Clients.client_id = Users.user_id

WHERE dbo.coursePass(participant_id) = 1

GO
```

## **All Meetings**

Wyświetla daty wszystkich spotkań

```
CREATE VIEW AllMeetings AS

SELECT product_id, 'Module' AS type, module_name AS title, start_date AS date
FROM Modules

UNION

SELECT studies_id, 'Studies Meeting' AS type, meeting_topic AS title, date AS date
FROM StudiesMeetings

UNION

SELECT product_id, 'Webinar' AS type, webinar_name, posted_date AS date
FROM Webinars

GO
```

## **Procedury**

Systemy Baz Danych.md

## AddUser

Dodaje użytkownika o podanych danych (imię, nazwisko, adres,email, typ użytkownika)

```
CREATE PROCEDURE [dbo].[uspAddUser]
   @first_name nvarchar(50),
    @last_name nvarchar(50),
    @zip_code nvarchar(10),
    @city nvarchar(50),
    @street_address nvarchar(50),
    @country nvarchar(50),
    @email nvarchar(50),
    @type_id int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
            SELECT *
            FROM User_types
            where @type_id=user_type
        )
        BEGIN
            THROW 52000, N'Taki rodzaj użytkownika nie istnieje',1
        END
        DECLARE @user_type_name nvarchar(50)
        SELECT @user_type_name = type_name
        FROM User_types
        WHERE @type_id=user_type
        BEGIN TRANSACTION
            INSERT INTO Users (first_name,last_name,zip_code,city,street_address,country,user_type,email)
                    values(@first_name,@last_name,@zip_code,@city,@street_address,@country,@type_id,@email)
            DECLARE @user_id INT;
            SET @user_id= SCOPE_IDENTITY();
            IF @user_type_name='client'
            Begin
                insert into clients (client id)
                values(@user_id)
            end
            else IF @user_type_name='academic'
            Begin
               insert into academics (academic id)
                values(@user id)
            else IF @user_type_name='interpreter'
            Begin
               insert into interpreters (interpreter_id)
                values(@user_id)
        COMMIT TRANSACTION
    END TRY
    BEGIN CATCH
        IF @@TRANCOUNT > 0
           ROLLBACK TRAN
        DECLARE @msg nvarchar(2048)=N'Błąd dodawania uzytkownika: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## AddWebinar

Dodaje webinar o podanej nazwie, id nauczyciela, nazwie języka oraz opcjonalnie danych o tłumaczu i języku, na który jest tłumaczone dane szkolenie do tabeli webinars oraz products

```
CREATE PROCEDURE [dbo].[uspAddWebinar]
    @language_id int,
    @academic_id int,
    @interpreter_id int=null,
    @translate_to_id int=null,
    @webinar_name nvarchar(50)
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM Academics
           WHERE academic_id=@academic_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego nauczyciela!',1
        IF NOT EXISTS(
           SELECT *
            FROM Languages
           WHERE @language_id=language_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        FND
        IF NOT EXISTS(
           SELECT *
            FROM Languages
            WHERE @translate_to_id=language_id
        ) AND @translate_to_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM Interpreters
            WHERE interpreter_id=@interpreter_id
        ) AND @interpreter_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego tłumacza!',1
        END
        DECLARE @type_id INT
        SELECT @type_id = product_type_id
        FROM ProductType
        WHERE 'webinar' = product_type_name
        BEGIN TRANSACTION
            INSERT INTO Products (product_type_id,language,academic_id,interpreter_id,translated_to)
                    values(@type_id,@language_id,@academic_id,@interpreter_id,@translate_to_id)
            DECLARE @product_id INT;
            SET @product_id= SCOPE_IDENTITY();
            INSERT INTO Webinars(product_id,webinar_name, posted_date)
            Values (@product_id,@webinar_name, GETDATE());
        COMMIT TRANSACTION
```

```
END TRY

BEGIN CATCH

IF @@TRANCOUNT > 0

ROLLBACK TRAN

DECLARE @msg nvarchar(2048)=N'Błąd dodania webinaru: ' + ERROR_MESSAGE();

THROW 52000, @msg, 1;

END CATCH

END
```

## SetWebinarPrice

Zmienia cenę webinaru o podanej nazwie

```
CREATE PROCEDURE [dbo].[uspSetWebinarPrice]
    @webinar_id int,
    @price money
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM webinars
           where @webinar_id=product_id
        )
        BEGIN
            THROW 52000, N'Webinar o tej nazwie nie istnieje',1
        FND
        UPDATE webinars
        SET price=@price
        where product_id=@webinar_id
    END TRY
    BEGIN CATCH
        DECLARE @msg nvarchar(2048)=N'Błąd zmiany ceny webinaru: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

#### AddCourse

Dodaje kurs o podanej nazwie, id nauczyciela, nazwie języka oraz opcjonalnie danych o tłumaczu i języku, na który jest tłumaczone dane szkolenie oraz dacie rozpoczęcia i zakończenia i limicie uczestników do tabeli courses oraz products

```
CREATE PROCEDURE [dbo].[uspAddCourse]
    @language_id int,
    @academic_id int,
    @interpreter_id int=null,
    @translated_to_id int=null,
    @course_name nvarchar(50),
    @start_date date,
    @end_date date,
    @participants_limit int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
           SELECT *
            FROM Academics
```

```
WHERE academic_id=@academic_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego nauczyciela!',1
        IF NOT EXISTS(
           SELECT *
            FROM Languages
           WHERE @language_id=language_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        FND
        IF NOT EXISTS(
            SELECT *
            FROM Languages
            WHERE @translated_to_id=language_id
        ) AND @translated_to_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM Interpreters
           WHERE interpreter_id=@interpreter_id
        ) AND @interpreter_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego tłumacza!',1
        END
        DECLARE @type_id INT
        SELECT @type_id = product_type_id
        FROM ProductType
        WHERE 'course' = product_type_name
        BEGIN TRANSACTION
            INSERT INTO Products (product_type_id,language,academic_id,interpreter_id,translated_to)
                    values(@type_id,@language_id,@academic_id,@interpreter_id,@translated_to_id)
            DECLARE @product_id INT;
            SET @product_id= SCOPE_IDENTITY();
            INSERT INTO Courses(product_id,course_name, start_date,end_date,participants_limit)
           Values (@product_id,@course_name, @start_date,@end_date,@participants_limit);
        COMMIT
    END TRY
    BEGIN CATCH
        IF @@TRANCOUNT > 0
           ROLLBACK TRAN
        DECLARE @msg nvarchar(2048)=N'Błąd dodania kursu: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## setCoursePrice

Ustawia cenę zaliczki i/lub pełną cenę kursu

```
CREATE PROCEDURE [dbo].[uspSetCoursePrice]

@course_id int,
```

```
@advance_price money=null,
    @full_price money=null
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
           SELECT *
            FROM courses
           where @course_id=product_id
        )
        BEGIN
            THROW 52000, N'Kurs o tej nazwie nie istnieje',1
        END
        IF @advance_price is not null
        Begin
           UPDATE courses
            SET advance_price=@advance_price
            where product_id=@course_id
        IF @full_price is not null
        begin
           UPDATE courses
            SET full_price=@full_price
            where product_id=@course_id
    END TRY
    BEGIN CATCH
        DECLARE @msg nvarchar(2048)=N'Błąd zmiany ceny kursu: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

#### AddStudies

Dodaje studia o podanej nazwie, id nauczyciela, nazwie języka oraz opcjonalnie danych o tłumaczu i języku, na który jest tłumaczone dane szkolenie oraz limicie uczestników do tabeli studies oraz products

```
CREATE PROCEDURE [dbo].[uspAddStudies]
    @language_id int,
    @academic_id int,
    @interpreter_id int=null,
    @translate_to_id int=null,
    @name nvarchar(50),
    @participants_limit int
Δς
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
           SELECT *
            FROM Academics
           WHERE academic_id=@academic_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego nauczyciela!',1
        END
        IF NOT EXISTS(
           SELECT *
            FROM Languages
```

```
WHERE @language_id=language_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        IF NOT EXISTS(
           SELECT *
            FROM Languages
            WHERE @translate_to_id=language_id
        ) AND @translate_to_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        FND
        IF NOT EXISTS(
            SELECT *
            FROM Interpreters
            WHERE interpreter_id=@interpreter_id
        ) AND @interpreter_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego tłumacza!',1
        END
        DECLARE @type_id INT
        SELECT @type_id = product_type_id
        FROM ProductType
        WHERE 'studies' = product_type_name
        BEGIN TRANSACTION
           INSERT INTO Products (product_type_id,language,academic_id,interpreter_id,translated_to)
                    values(@type_id,@language_id,@academic_id,@interpreter_id,@translate_to_id)
            DECLARE @product_id INT;
            SET @product_id= SCOPE_IDENTITY();
            INSERT INTO Studies(product_id,name,participants_limit)
            Values (@product_id,@name,@participants_limit);
        COMMIT TRANSACTION
    END TRY
    BEGIN CATCH
        IF @@TRANCOUNT > 0
           ROLLBACK TRAN
        DECLARE @msg nvarchar(2048)=N'Błąd dodania studiów: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

## setStudiesPrice

Ustawia cenę zaliczki i/lub pełną cenę studiów o podanej nazwie

```
BEGIN
            THROW 52000, N'Studia o tej nazwie nie istnieją',1
        IF @advance_price is not null
        Begin
           UPDATE studies
            SET advance_price=@advance_price
            where product_id=@studies_id
        end
        IF @full_price is not null
        begin
           UPDATE studies
            SET full price=@full price
            where product_id=@studies_id
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd zmiany ceny studiów: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

## AddStudiesMeetings

Dodaje spotkanie o podanej nazwie, id nauczyciela, nazwie języka oraz opcjonalnie danych o tłumaczu i języku, na który jest tłumaczone dane szkolenie oraz limicie uczestników, dacie spotkania i przynależności do danych studiów do tabeli StudiesMeetings oraz products

```
CREATE PROCEDURE [dbo].[uspAddStudiesMeetings]
   @language_id int,
    @academic_id int,
    @interpreter_id int=null,
    @translate_to_id int=null,
    @participants_limit int,
    @type_meeting_id INT,
    @date date,
    @studies id int,
    @meeting_topic nvarchar(50)
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
            SELECT *
            FROM Academics
            WHERE academic_id=@academic_id
        )
        BEGIN
            THROW 52000, N'Nie ma takiego nauczyciela!',1
        END
        IF NOT EXISTS(
           SELECT *
            FROM Languages
            WHERE @language_id=language_id
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        END
        IF NOT EXISTS(
            SELECT *
```

```
FROM Languages
            WHERE @translate_to_id=language_id
        ) AND @translate_to_id is not null
        BEGIN
            THROW 52000, N'Nie ma takiego języka!',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM Interpreters
           WHERE interpreter_id=@interpreter_id
        ) AND @interpreter_id is not null
        BEGIN
           THROW 52000, N'Nie ma takiego tłumacza!',1
        FND
        IF NOT EXISTS(
           SELECT *
            FROM MeetingType
           WHERE type_name=@type_meeting_id
        )
        BEGIN
            THROW 52000, N'!Nie ma takiego typu spotkania!',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM Studies
           WHERE name=@studies_id
        BEGIN
            THROW 52000, N'Nie ma takich studiów',1
        END
        if @meeting_topic IS NULL
            BEGIN
                THROW 52000, N'Temat spotkania nie może być pusty!',1
            END
        DECLARE @type_id INT
        SELECT @type_id = product_type_id
        FROM ProductType
        WHERE 'meeting' = product_type_name
        BEGIN TRANSACTION
           INSERT INTO Products (product_type_id,language,academic_id,interpreter_id,translated_to)
                    values(@type_id,@language_id,@academic_id,@interpreter_id,@translate_to_id)
            DECLARE @product_id INT;
            SET @product_id= SCOPE_IDENTITY();
            INSERT INTO StudiesMeetings(meeting_id,studies_id,date,type_id,participants_limit, meeting_topic)
           Values (@product_id,@studies_id,@date,@type_meeting_id,@participants_limit, @meeting_topic);
        COMMIT TRANSACTION
    END TRY
    BEGIN CATCH
        IF @@TRANCOUNT > ∅
            ROLLBACK TRAN
        DECLARE @msg nvarchar(2048)=N'Błąd dodania spotkania: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

Ustawia cenę danego spotkania dla studentów i/lub uczestników spoza studiów

```
CREATE PROCEDURE [dbo].[uspSetMeetingPrice]
   @meeting_id int,
    @student_price money=null,
    @outer_participant_price money=null
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM StudiesMeetings
           where @meeting_id=meeting_id
        )
        BEGIN
            THROW 52000, N'Taki meeting nie istnieje',1
        IF @student_price is not null
        Begin
           UPDATE StudiesMeetings
           SET student_price=@student_price
            where meeting_id=@meeting_id
        IF @outer_participant_price is not null
        begin
           UPDATE StudiesMeetings
           SET outer_participant_price=@outer_participant_price
            where meeting_id=@meeting_id
        end
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd zmiany ceny spotkania: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
FND
```

## AddMeetingParticipant

Dodaje uczestnika spotkania o podanym id

```
CREATE PROCEDURE [dbo].[uspAddMeetingParticipant]
   @client_id int,
    @product id int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SFLECT *
           FROM Clients
           where @client_id=client_id
        )
        BEGIN
            THROW 52000, N'Klient o podanym id nie istnieje',1
        END
        IF NOT EXISTS(
           SELECT *
            FROM StudiesMeetings
```

```
where @product_id=meeting_id
        )
        BEGIN
            THROW 52000, N'Taki meeting nie istnieje',1
        DECLARE @participant_id INT;
        SELECT @participant_id=participant_id
        from StudiesParticipants
        where @client_id=client_id
        DECLARE @student_studies_id INT;
        SELECT @student_studies_id=product_id
        from StudiesParticipants
        where @client_id=client_id
        DECLARE @meeting_studies_id INT;
        SELECT @meeting_studies_id=studies_id
        from StudiesMeetings
        where meeting_id=@product_id
        IF @participant_id is null or @student_studies_id!=@meeting_studies_id
                INSERT INTO OuterMeetingParticipants(client_id,meeting_id)
                values(@client_id,@product_id)
            FND
        ELSE
            BEGIN
                INSERT INTO StudiesMeetingParticipants(meeting_id,participant_id)
                values(@product_id,@participant_id)
            END
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd dodania uczestnika spotkania: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## AddWCSParticipant

Dodaje uczestnika do szkolenia podanego typu (kurs, studia, webinar)

```
CREATE PROCEDURE [dbo].[uspAddWCSParticipant]
    @type_id int,
    @client_id int,
    @product_id int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       DECLARE @type_name nvarchar(50)
        SELECT @type_name = product_type_name
        FROM ProductType
        WHERE @type_id = product_type_id
        IF NOT EXISTS(
           SELECT *
            FROM ProductType
            where @type_name=product_type_name
        )
        BEGIN
```

```
THROW 52000, N'Taki rodzaj szkolenia nie istnieje',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM Clients
           where @client_id=client_id
        BEGIN
            THROW 52000, N'Klient o podanym id nie istnieje',1
        END
        IF NOT EXISTS(
            SELECT *
            FROM Products
           where @product_id=product_id and @type_id=product_type_id
        )
        BEGIN
            THROW 52000, N'Produkt nie istnieje lub jest innego typu niż podany',1
        FND
        IF @type_name='webinars'
        begin
           INSERT INTO WebinarParticipants(product_id,client_id)
            values(@product_id,@client_id)
        end
        else IF @type_name='course'
        begin
            INSERT INTO CoursesParticipants(product_id,client_id)
            values(@product_id,@client_id)
        end
        else IF @type_name='studies'
        begin
            INSERT INTO StudiesParticipants(product_id,client_id)
            values(@product_id,@client_id)
        end
        else if @type_name='meeting'
        begin
            exec uspAddMeetingParticipant @client_id,@product_id
        end
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd dodania uczestnika: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

## CancelPayment

Dla danego payment\_id ustawia pole cancelled w tabeli Payments na true - anuluje płatność

```
CREATE PROCEDURE [dbo].[uspCancelPayment]
    @payment_id int

AS

BEGIN

SET NOCOUNT ON;

BEGIN TRY

IF NOT EXISTS(
    SELECT *
    FROM Payments
    where @payment_id=payment_id
)
```

```
BEGIN
;
THROW 52000, N'Płatność o podanym id nie istnieje',1
END

UPDATE Payments
SET cancelled=1
where payment_id=@payment_id

END TRY
BEGIN CATCH
DECLARE @msg nvarchar(2048)=N'Błąd anulowania płatności: ' + ERROR_MESSAGE();
THROW 52000, @msg, 1;
END CATCH
END
```

## LetPayDaysLater

Zezwala użytkownikowi o podanym id na płacenie z podanym opóźnieniem (wartość w dniach)

```
CREATE PROCEDURE [dbo].[uspLetPayDaysLater]
    @client_id int,
    @days int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM Clients
           where @client_id=client_id
        BEGIN
            THROW 52000, N'Klient o podanym id nie istnieje',1
        END
        UPDATE Clients
        SET can_pay_days_later=@days
        where client_id=@client_id
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd zezwolenia na opóźnienie w płatności: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## SetParticipantsLimit

Ustawia limit uczestników dla produktu podanego typu produktu (spotkania, kursu lub studiów)

```
CREATE PROCEDURE [dbo].[uspSetParticipantsLimit]
    @product_id int,
    @limit int,
    @product_type_id int

AS

BEGIN

SET NOCOUNT ON;

BEGIN TRY
```

```
IF NOT EXISTS(
       SELECT *
       FROM ProductType
       where @product_type_id=product_type_id
    )
    BEGIN
        THROW 52000, N'Taki rodzaj szkolenia nie istnieje',1
    FND
    DECLARE @product_type_name nvarchar(50);
    Select @product_type_name=product_type_name
    from ProductType
    where @product_id=product_type_id
    IF @product_type_name='course'
    begin
        IF NOT EXISTS(
            SELECT *
            FROM Courses
            where @product_id=product_id
        )
        BEGIN
            THROW 52000, N'Taki kurs nie istnieje',1
        FND
       UPDATE Courses
        SET participants_limit=@limit
        where product_id=@product_id
    else IF @product_type_name='studies'
    begin
        IF NOT EXISTS(
           SELECT *
           FROM Studies
           where @product_id=product_id
        )
        BEGIN
            THROW 52000, N'Takie studia nie istnieją',1
        END
        UPDATE Studies
       SET participants_limit=@limit
        where product_id=@product_id
    else IF @product_type_name='meeting'
    begin
        IF NOT EXISTS(
           SELECT *
            FROM StudiesMeetings
            where @product_id=meeting_id
        BEGIN
            THROW 52000, N'Takie spotkanie nie istnieje',1
        END
       UPDATE StudiesMeetings
        SET participants_limit=@limit
        where meeting_id=@product_id
    end
    else
    BEGIN
        THROW 52000, N'Na podanym rodzaju szkolenia nie obowiązuje limit miejsc',1
    END
END TRY
BEGIN CATCH
```

```
DECLARE @msg nvarchar(2048)=N'Błąd zmiany limitu miejsc: ' + ERROR_MESSAGE();
THROW 52000, @msg, 1;
END CATCH
END
```

## AddMeetingPresence

Dodaje status obecności na spotkaniu dla podanego użytkownika oraz id spotkania.

```
CREATE PROCEDURE [dbo].[uspAddMeetingPresence]
   @product_id int,
    @participant_id int,
    @presence bit
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
           SELECT *
           FROM StudiesMeetings
           where @product_id=meeting_id
        BEGIN
            THROW 52000, N'Takie spotkanie nie istnieje',1
        END
        INSERT INTO StudiesMeetingParticipants(participant_id,meeting_id,presence)
        values(@participant_id,@product_id,@presence)
    END TRY
    BEGIN CATCH
        DECLARE @msg nvarchar(2048)=N'Błąd wpisywania obecności na spotkaniu: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
FND
```

## SetMeetingPresence

Zmienia status obecności danego użytkownika na spotkaniu.

```
CREATE PROCEDURE [dbo].[uspSetMeetingPresence]
    @product_id int,
    @participant_id int,
    @presence bit
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
            SELECT *
            FROM StudiesMeetings
            where @product_id=meeting_id
        )
        BEGIN
             THROW 52000, N'Takie spotkanie nie istnieje',1
        END
        UPDATE StudiesMeetingParticipants
        SET presence=@presence
        where <code>@participant_id=participant_id</code> and <code>@product_id=meeting_id</code>
```

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```
END TRY

BEGIN CATCH

DECLARE @msg nvarchar(2048)=N'Błąd zmiany obecności na spotkaniu: ' + ERROR_MESSAGE();

THROW 52000, @msg, 1;

END CATCH

END
```

## AddModulePresence

Dodaje status obecności na module dla podanego użytkownika oraz id modułu.

```
CREATE PROCEDURE [dbo].[uspAddModulePresence]
   @module_id int,
    @participant_id int,
    @presence bit
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
           SELECT *
           FROM Modules
           where @module_id=module_id
        )
        BEGIN
            THROW 52000, N'Taki moduł nie istnieje',1
        END
        INSERT INTO ModulesAttendance(participant_id,module_id,presence)
        values(@participant_id,@module_id,@presence)
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd wpisywania obecności na module: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## SetModulePresence

Zmienia status obecności danego użytkownika na module.

```
CREATE PROCEDURE [dbo].[uspSetModulePresence]
    @module_id int,
    @participant_id int,
    @presence bit
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
       IF NOT EXISTS(
           SELECT *
           FROM Modules
           where @module_id=module_id
        )
        BEGIN
            THROW 52000, N'Taki moduł nie istnieje',1
        FND
```

```
UPDATE ModulesAttendance
SET presence=@presence
where @participant_id=participant_id and @module_id=module_id

END TRY
BEGIN CATCH
DECLARE @msg nvarchar(2048)=N'Błąd zmiany obecności na module: ' + ERROR_MESSAGE();
THROW 52000, @msg, 1;
END CATCH
END
```

#### AddExamResult

Dodaje wynik egzaminu po podaniu przez użytkownika id egzaminu, id uczestnika studiów i punktów przez niego zdobytych

```
CREATE PROCEDURE [dbo].[uspAddExamResult]
   @exam_id int,
    @participant_id int,
    @points int
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM Exams
           where @exam_id=exam_id
        )
        BEGIN
            THROW 52000, N'Taki egzamin nie istnieje',1
        FND
        IF NOT EXISTS(
           SELECT *
           FROM StudiesParticipants
           where @participant_id=participant_id
        )
        REGIN
            THROW 52000, N'Taki uczestnik studiów nie istnieje',1
        END
        DECLARE @max_points INT;
        SELECT @max_points = max_points
        FROM Exams
       WHERE exam_id=@exam_id
       IF @max_points<@points</pre>
        Begin
            THROW 52000, N'Liczba punktów przekracza wartość maksymalną',1
        INSERT INTO ExamsTaken(exam_id,participant_id,points)
        values(@exam_id,@participant_id,@points)
    END TRY
       DECLARE @msg nvarchar(2048)=N'Błąd wpisywania wyniku egzaminu: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

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## AddApprenticeship

Dla podanego uczestnika studiów dodaje datę odbycia przez niego praktyk do tabeli Apprenticeship

```
CREATE PROCEDURE [dbo].[uspAddApprenticeship]
    @date date,
    @participant_id int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
            SELECT *
            FROM StudiesParticipants
            where @participant_id=participant_id
        )
        BEGIN
            THROW 52000, N'Taki uczestnik studiów nie istnieje',1
        FND
        IF GETDATE()<@date</pre>
        Begin
            THROW 52000, N'Wprowadzenie praktyk o dacie przyszłej niemożliwe',1
        END
        INSERT INTO Apprenticeship(participant_id,date)
        values(@participant_id,@date)
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd dodania praktyk: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## Change Meeting Date

Zmienia datę spotkania

```
CREATE PROCEDURE [dbo].[uspChangeMeetingDate]
    @meeting_id int,
    @date date
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
            FROM StudiesMeetings
            where @meeting_id=meeting_id
        )
        BEGIN
            THROW 52000, N'Taki meeting nie istnieje',1
        END
        DECLARE @former_date DATE;
        SELECT @former_date=date
```

```
FROM StudiesMeetings
        WHERE meeting_id=@meeting_id
        IF @former_date<GETDATE()</pre>
        Begin
            THROW 52000, N'Spotkanie się już odbyło - nie można zmienić jego daty!',1
        FND
        IF @date<GETDATE()</pre>
        Begin
            THROW 52000, N'Data spotkania może być zmieniona tylko na przyszłą',1
        FND
        UPDATE StudiesMeetings
        SET date=@date
        where meeting_id=@meeting_id
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd zmiany daty spotkania: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
FND
```

#### DeleteProduct

Usuwa produkt o podanym id z bazy

```
CREATE PROCEDURE [dbo].[uspDeleteProduct]
    @product_id int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM Products
           where @product_id=product_id
        )
        BEGIN
            THROW 52000, N'Taki produkt nie istnieje',1
        FND
        DELETE FROM Products Where @product_id=product_id
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd usuwania produktu: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

#### Pay

Dla podanego order\_id sumuje ceny produktów wyszczególnionych w order\_details i dodaje do płatność do tabeli Payments oraz uczestników do tabel odpowiadających opłaconym szkoleniom

```
CREATE PROCEDURE [dbo].[uspPay]

@order_id int
```

```
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
            FROM Orders
            where @order_id=order_id
        )
        BEGIN
            THROW 52000, N'Takie zamówienie nie istnieje',1
        FND
        Declare @total_price money;
        SET @total_price=0;
        DECLARE @client_id INT
        SELECT @client_id=client_id
        from orders
        where order_id=@order_id
        DECLARE @status INT;
        SELECT @status=status_id
        from statuses s
        join orders o
        on o.payment_status=s.status_id
        where order_id=@order_id
        DECLARE @initial_status INT;
        SET @initial_status=@status
        IF @initial_status=1
        BEGIN
            THROW 52000, N'Zamówienie było już opłacone',1
        END
        SELECT @status=status_id
        from statuses
        where status_name='paid'
        print(@status)
        DECLARE curOrder cursor for
        select product_id
        from Order_details
        where order_id=@order_id
        BEGIN TRANSACTION
            DECLARE @product_id INT;
            Open curOrder
            FETCH NEXT FROM curOrder INTO @product_id
            WHILE @@FETCH_STATUS = 0
            BEGIN
                DECLARE @is_advance bit
                SELECT @is_advance=is_advance
                from Order_details
                where @product_id=product_id and @order_id=order_id
                DECLARE @product_type nvarchar(50)
                SELECT @product_type=product_type_name
                from Products p
                join ProductType pt on pt.product_type_id=p.product_type_id
                where product_id=@product_id
```

```
DECLARE @price money
IF @product_type='webinar'
BEGIN
    select @price=price
    from webinars
    where @product_id=product_id
END
else IF @product_type='course'
BEGIN
    IF @is_advance=1
    begin
        SELECT @status=status_id
        from statuses
        where status_name='partially_paid'
        select @price=advance_price
        from courses
        where @product_id=product_id
    end
    ELSE
    begin
        select @price=full_price
        from courses
        where @product_id=product_id
    end
END
else IF @product_type='studies'
    IF @is_advance=1
    begin
        SELECT @status=status_id
        from statuses
        where status_name='partially_paid'
        select @price=advance_price
        from Studies
        where @product_id=product_id
    end
    ELSE
    begin
        select @price=full_price
        from studies
        where @product_id=product_id
    end
else if @product_type='meeting'
begin
    DECLARE @meeting_studies_id1 INT;
    SELECT @meeting_studies_id1=studies_id
    from StudiesMeetings
    where meeting_id=@product_id
    if exists(
        Select *
        from StudiesParticipants
        where @client_id=client_id and product_id=@meeting_studies_id1
    )
    begin
        select @price=student_price
        from StudiesMeetings
        where @product_id=meeting_id
    end
    else
```

```
select @price=outer_participant_price
            from StudiesMeetings
            where @product_id=meeting_id
        end
    end
    SET @total_price = @total_price +@price;
    FETCH NEXT FROM curOrder INTO @product_id;
END
close curOrder
DEALLOCATE curOrder;
IF @initial_status=(
select status_id
from Statuses
where status_name='partially_paid'
)
Begin
    declare @former_price money;
    set @former_price=(select sum(price)
    from payments
    where order_id=@order_id
    group by order_id)
    print(@total_price)
    set @total_price=@total_price-@former_price
end
IF @total_price<0</pre>
    ROLLBACK;
    THROW 52000, N'Cena ujemna!',1
END
INSERT INTO Payments(order_id,payment_date, price)
Values (@order_id,GETDATE(),@total_price);
UPDATE Orders
SET payment_status=@status
where order_id=@order_id
--insert to relevant tables
DECLARE curOrder1 cursor for
select product_id
from Order_details
where order_id=@order_id
Open curOrder1
FETCH NEXT FROM curOrder1 INTO @product_id
WHILE @@FETCH_STATUS = 0
BEGIN
    DECLARE @product_type1 nvarchar(50)
    SELECT @product_type1=product_type_name
    from Products p
    join ProductType pt on pt.product_type_id=p.product_type_id
    where product_id=@product_id
    PRINT(@product_type1)
    IF @product_type1='webinar'
```

```
BEGIN
   if not exists(
    select *
    from WebinarParticipants
    where @client_id=client_id
    begin
        Insert into WebinarParticipants(product_id,client_id)
        values (@product_id,@client_id)
    end
END
else IF @product_type1='course'
BEGIN
    if not exists(
    select *
    from CoursesParticipants
    where @client_id=client_id
    begin
        Insert into CoursesParticipants(product_id,client_id)
        values (@product_id,@client_id)
END
else IF @product_type1='studies'
BEGIN
   if not exists(
    select *
    from StudiesParticipants
    where @client_id=client_id and @product_id=product_id
    begin
        Insert into StudiesParticipants(product_id,client_id)
        values (@product_id,@client_id)
    end
END
else if @product_type1='meeting'
begin
    DECLARE @meeting_studies_id INT;
    SELECT @meeting_studies_id=studies_id
    from StudiesMeetings
    where meeting_id=@product_id
    if exists(
        Select *
        from StudiesParticipants
        where @client_id=client_id and product_id=@meeting_studies_id
    )
    begin
        DECLARE @participant_id int
        select @participant_id=participant_id
        from StudiesParticipants
        where client_id=@client_id
        if not exists(
        select *
        from StudiesMeetingParticipants
        where @participant_id=participant_id
            Insert into StudiesMeetingParticipants(meeting_id,participant_id,presence)
            values (@product_id,@participant_id,₀)
        end
    end
    else
    begin
        if not exists(
        select *
        from OuterMeetingParticipants
        where @client_id=client_id
```

```
)
                        begin
                            Insert into OuterMeetingParticipants(meeting_id,client_id,presence)
                            values (@product_id,@client_id,0)
                        end
                    end
                end
                FETCH NEXT FROM curOrder1 INTO @product_id;
            END
            close curOrder1
           DEALLOCATE curOrder1;
        COMMIT TRANSACTION
    END TRY
    BEGIN CATCH
       IF @@TRANCOUNT > ❷
           ROLLBACK TRAN
       DECLARE @msg nvarchar(2048)=N'Błąd płatności: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

#### AddOrder

Tworzy zamówienie dla klienta o podanym id

```
CREATE PROCEDURE [dbo].[uspAddOrder]
    @client_id int
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM Clients
           where @client_id=client_id
        )
        BEGIN
            THROW 52000, N'Taki klient nie istnieje',1
        END
        INSERT INTO Orders(client_id)
        values(@client_id)
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd tworzenia nowego zamówienia: ' + ERROR_MESSAGE();
       THROW 52000, @msg, 1;
    END CATCH
END
```

### AddProductToOrder

Dodaje produkt do podanego zamówienia oraz informację, czy jest to zaliczka czy nie

```
CREATE PROCEDURE [dbo].[uspAddProductToOrder]
    @order_id int,
    @product_id int,
    @is_advance bit
AS
BEGTN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
            FROM orders
           where @order_id=order_id
        BEGIN
            THROW 52000, N'Takie zamówienie nie istnieje',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM products
           where @product_id=product_id
        )
        BEGIN
            THROW 52000, N'Taki produkt nie istnieje',1
        FND
        IF @is_advance=1
        begin
           DECLARE @product_type nvarchar(50)
            select @product_type=product_type_name
            from Products p
           join ProductType pt
            on pt.product_type_id=p.product_type_id
           where @product_id=product_id
            if @product_type!='studies' and @product_type!='course'
            begin
                THROW 52000, N'Ten produkt nie posaida opcji "zaliczka"',1
            end
        end
        declare @status nvarchar(50)
        select @status=status_name
        from Statuses s
        join orders o
        on o.payment_status=s.status_id
        where order_id=@order_id
        IF @status!='not_paid'
        BEGIN
            THROW 52000, N'Nie można dodać produktu do zamówienia, którego płatność zaczęła być realizowana',1
        FND
        INSERT INTO Order_details(order_id,product_id,is_advance)
        values(@order_id,@product_id,@is_advance)
    END TRY
    BEGIN CATCH
        DECLARE @msg nvarchar(2048)=N'Błąd dodawania produktu zamówienia: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
```

```
END CATCH
END
```

## ChangeToFullPrice

Zmienia pole is\_advance tabeli Order\_details na false - oznacza to, że klient chce zapłacić pełną cenę po uprzednim zapłaceniu zaliczki

```
CREATE PROCEDURE [dbo].[uspChangeToFullPrice]
   @order_id int,
    @product_id int
AS
BEGIN
    SET NOCOUNT ON;
    BEGIN TRY
        IF NOT EXISTS(
           SELECT *
           FROM orders
           where @order_id=order_id
        )
        BEGIN
            THROW 52000, N'Takie zamówienie nie istnieje',1
        END
        IF NOT EXISTS(
           SELECT *
           FROM products
           where @product_id=product_id
        )
        BEGIN
            THROW 52000, N'Taki produkt nie istnieje',1
        END
       Update Order_details
        set is_advance=0
        where order_id=@order_id and product_id=@product_id
    END TRY
    BEGIN CATCH
       DECLARE @msg nvarchar(2048)=N'Błąd zmiany zaliczki na pełną cenę: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

### DeleteProductFromOrder

Usuwa produkt z zamówienia

```
CREATE PROCEDURE [dbo].[uspDeleteProductFromOrder]
    @order_id int,
    @product_id int

AS

BEGIN

SET NOCOUNT ON;
BEGIN TRY

IF NOT EXISTS(
```

```
SELECT *
            FROM orders
           where @order_id=order_id
        BEGIN
            THROW 52000, N'Takie zamówienie nie istnieje',1
        FND
        IF NOT EXISTS(
           SELECT *
            FROM Order_details
            where @product_id=product_id and @order_id=order_id
        )
        BEGIN
            THROW 52000, N'Taki produkt nie istnieje w podanym zamówieniu',1
        declare @status nvarchar(50)
        select @status=status_name
        from Statuses s
        join orders o
        on o.payment_status=s.status_id
        where order_id=@order_id
        IF @status!='not_paid'
        BEGIN
            THROW 52000, N'Nie można usunąć produktu z zamówienia, którego płatność zaczęła być realizowana',1
        FND
        DELETE FROM Order_details
        where product_id=@product_id and order_id=@order_id
    END TRY
    BEGIN CATCH
        DECLARE @msg nvarchar(2048)=N'Błąd usunięcia produktu z zamówienia: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## AddParticipantAboveLimit

Dodaje uczestnika pomimo wyczerpania limitu uczestników

```
CREATE PROCEDURE [dbo].[uspAddParticipantAboveLimit]
   @type_id INT,
   @client_id int,
   @product id int
AS
BEGIN
   SET NOCOUNT ON;
   BEGIN TRY
       DISABLE TRIGGER checkStudiesParticipantsLimit trg on StudiesParticipants;
        DISABLE TRIGGER checkStudiesMeetingLimit_studiesParticipants_trg on StudiesMeetingParticipants;
       DISABLE TRIGGER checkStudiesMeetingLimit_outerParticipants_trg on OuterMeetingParticipants;
       DISABLE TRIGGER checkCourseParticipantsLimit_trg on CoursesParticipants;
       DISABLE TRIGGER checkIfClientPaidForStudies_outerParticipant_trg on OuterMeetingParticipants;
       DISABLE TRIGGER checkIfClientPaidForStudiesMeeting_outerParticipant_trg on OuterMeetingParticipants;
       DISABLE TRIGGER checkIfClientPaidForCourse_trg on CoursesParticipants;
        begin transaction
            exec uspAddWCSParticipant @type_id,@client_id,@product_id;
```

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```
INSERT INTO Orders(client_id)
            values(@client_id)
            DECLARE @order_id INT;
            SET @order_id= SCOPE_IDENTITY();
            PRINT(@order_id)
            DECLARE @is_advance BIT;
            IF @type_id=2 or @type_id=3
            BEGIN
                SET @is_advance=1
            ELSE
            BEGIN
                SET @is_advance=0
            FND
            exec uspAddProductToOrder @order_id,@product_id,@is_advance;
        commit transaction;
        ENABLE TRIGGER checkStudiesParticipantsLimit_trg on StudiesParticipants;
        ENABLE TRIGGER checkStudiesMeetingLimit_studiesParticipants_trg on StudiesMeetingParticipants;
        ENABLE TRIGGER checkStudiesMeetingLimit_outerParticipants_trg on OuterMeetingParticipants;
        ENABLE TRIGGER checkCourseParticipantsLimit_trg on CoursesParticipants;
        ENABLE TRIGGER checkIfClientPaidForStudies_outerParticipant_trg on OuterMeetingParticipants;
        ENABLE TRIGGER checkIfClientPaidForStudiesMeeting_outerParticipant_trg on OuterMeetingParticipants;
        ENABLE TRIGGER checkIfClientPaidForCourse_trg on CoursesParticipants;
    END TRY
    BEGIN CATCH
        IF @@TRANCOUNT > 0
           ROLLBACK TRAN
        DECLARE @msg nvarchar(2048)=N'Błąd dodania uczestnika ponad limit: ' + ERROR_MESSAGE();
        THROW 52000, @msg, 1;
    END CATCH
END
```

## **Funkcje**

### Ogólne

#### GetProductName

Umożliwia konwersję id produktu na nazwę, wykorzystywaną w innych funkcjach i widokach

```
CREATE FUNCTION getProductName(@product_id int)
    RETURNS nvarchar(50)
AS
    BEGIN
        DECLARE @product_type nvarchar(50)
        SET @product_type = ISNULL((SELECT product_type_name
                             FROM Products INNER JOIN ProductType ON Products.product_type_id =
ProductType.product_type_id
                             WHERE product_id = @product_id), 'Nan')
        RETURN CASE @product_type
                WHEN 'Nan' THEN ''
                WHEN 'webinar' THEN (SELECT webinar_name FROM Webinars WHERE product_id) = @product_id)
                WHEN 'studies' THEN (SELECT name FROM Studies WHERE product_id = @product_id)
                WHEN 'meeting' THEN (SELECT meeting_topic FROM StudiesMeetings WHERE meeting_id = @product_id)
                WHEN 'course' THEN (SELECT course_name FROM Courses WHERE product_id = @product_id)
            FND
    END
```

#### **GetUserIdFromUserEmail**

```
CREATE FUNCTION getUserIdFromUserEmail(@user_email nvarchar(50))

RETURNS int

AS

BEGIN

DECLARE @user_id int

SET @user_id = (SELECT user_id FROM Users WHERE email = @user_email)

RETURN @user_id

END
```

#### GetParticipantIdFromUserAndProduct

```
CREATE FUNCTION getParticipantIdFromUserAndProduct(@user_id int, @product_id int)
    RETURNS int
AS
    BEGIN
        DECLARE @product_type nvarchar(50)
        SET @product_type = (SELECT product_type_name
                             FROM Products
                                INNER JOIN ProductType ON Products.product_type_id = ProductType.product_type_id
                             WHERE product_id = @product_id)
        RETURN CASE @product_type
            WHEN 'webinar' THEN (SELECT client_id
                                 FROM WebinarParticipants
                                 WHERE product_id = @product_id AND client_id = @user_id )
            WHEN 'course' THEN (SELECT participant_id
                                FROM CoursesParticipants
                                WHERE product_id = @product_id AND client_id = @user_id)
            WHEN 'studies' THEN (SELECT participant_id
                                 FROM StudiesParticipants
                                 WHERE product_id = @product_id AND client_id = @user_id)
            WHEN 'meeting' THEN (SELECT client_id
                                 FROM OuterMeetingParticipants
                                 WHERE meeting_id = @product_id AND client_id = @user_id)
        END
    END
```

#### CheckIfClientPaid

Sprawdza czy dany klient zapłacił za dany produkt

```
CREATE FUNCTION checkIfClientPaid(@client_id int, @product_id int)
   RETURNS bit
BEGIN
   DECLARE @payment_status nvarchar(50)
    SET @payment_status = ISNULL((SELECT status_name
                                  FROM Orders
                                           INNER JOIN Order_details ON Orders.order_id = Order_details.order_id
                                           INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id
                                  WHERE
                                          Order_details.product_id = @product_id AND
                                          Orders.client_id = @client_id), 'none')
    IF @payment_status = 'paid' OR @payment_status = 'partially_paid' BEGIN
        RETURN 1
    FND
    RETURN 0
END
```

Sekretarz

#### ClientsExams

Lista wyników egzaminów dla danego klienta

```
CREATE FUNCTION clientsExam(@participant_id int)

RETURNS table

AS

RETURN Select e.studies_id, et.exam_id, et.points

FROM Exams as e

inner join ExamsTaken as et on et.exam_id=e.exam_id and et.participant_id = @participant_id
```

#### ClientsApprenticeships

Liczba odbytych praktyk przez danego klienta

```
CREATE FUNCTION clientsApprenticeships(@participant_id int)
RETURNS int

AS
BEGIN
RETURN ( SELECT COUNT(date) FROM Apprenticeship
Where participant_id = @participant_id
Group By participant_id)

END
```

Kursy

#### **CoursePass**

Wypisanie wartości 1 gdy uczestnik zaliczył kurs i 0 gdy nie zaliczył

```
CREATE FUNCTION coursePass(@participant_id int)

RETURNS bit

AS

BEGIN

DECLARE @course_id int

SET @course_id = (Select product_id

FROM CoursesParticipants

WHERE @participant_id=participant_id)

DECLARE @presence float

SET @presence = [dbo].[coursesPresence](@participant_id, @course_id)

DECLARE @pass bit

SET @pass = IIF(@presence >= 80, 1, 0)

RETURN @pass

END
```

#### CourseInfo

Wypisanie podstawowych informacji o kursie takich jak: nazwa, cena, zaliczka, data rozpoczecia, data zakonczenia oraz język główny i jezyk na który kurs jest tłumaczony.

```
CREATE FUNCTION courseInfo(@product_id int)

RETURNS table

AS

RETURN Select c.course_name as course_name,

c.full_price as price,

c.advance_price as advance_price,

c.start_date as start_date,

c.end_date as end_date,

p.language as orginal_language,

l.language_name as translated_to

FROM Products as p

join Courses as c on c.product_id=p.product_id

left outer join Languages as l on l.language_id=p.translated_to

WHERE p.product_id=@product_id
```

#### **ModulesPresence**

Sprawdzenie statusu swojej obecności na wybranych modułach

```
CREATE FUNCTION modulesPresence(@participant_id int, @module_id int)

RETURNS bit

AS

BEGIN

DECLARE @presence BIT

SET @presence = ISNULL((SELECT presence

FROM ModulesAttendance

WHERE participant_id=@participant_id AND

module_id=@module_id),0)

RETURN @presence

END
```

#### CoursesPresence

Sprawdzenie procentowej obecności na modułach w danym kursie

```
CREATE FUNCTION [dbo].[coursesPresence](@participant_id int, @product_id int)
    RETURNS FLOAT
AS
BEGIN
    DECLARE @presence float
    SET @presence = ISNULL((SELECT COUNT(ma.presence)
                                FROM ModulesAttendance as ma
                                inner join Modules as m
                                    on m.module_id=ma.module_id and m.product_id = @product_id
                                WHERE ma.participant_id=@participant_id and ma.presence=1),0)
    DECLARE @modules_num int
    SET @modules_num = ISNULL((SELECT COUNT(module_id))
                        FROM Modules
                        WHERE product_id = @product_id), 0)
    IF @modules_num = 0
       RETURN 100
    RETURN (@presence/@modules_num) *100
END
go
```

#### CoursesFreeSlots

Sprawdzenie ilości wolnych miejsc na kursach hybrydowych i stacjonarnych

### ClientsCourses

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Sprawdzenie na jakie kursy jest zapisany dany klient oraz status płatności tego kursu

```
CREATE FUNCTION clientCourses(@client_id int)

RETURNS table

AS

RETURN Select c.course_name, s.status_name

FROM Orders as o inner join Order_details as od on od.order_id=o.order_id

inner join Courses as c on c.product_id=od.product_id

inner join Statuses as s on s.status_id=o.payment_status

WHERE o.client_id=@client_id
```

#### CheckIfCourseParticipantsAllowed

Sprawdza czy do kursu można dopisać więcej osób - czy limit miejsc nie został jeszcze przekroczony

```
CREATE FUNCTION checkIfCourseParticipantsAllowed(@product_id int)
        RETURNS bit
    AS
        BEGIN
            DECLARE @participant_limit int
            DECLARE @participants_count int
            SET @participants_count = ISNULL((SELECT COUNT(*)
                                              FROM CoursesParticipants
                                              WHERE product_id = @product_id
                                              GROUP BY product_id), 0)
            SET @participant_limit = ISNULL((SELECT participants_limit
                                             FROM Courses
                                             WHERE product_id = @product_id), 0)
            IF @participants_count > @participant_limit BEGIN
                RETURN 0
            END
            RETURN 1
END
```

## Studia

## StudiesPass

Umożliwia sprawdzenie czy dany uczestnik studiów zaliczył studia

```
CREATE FUNCTION studiesPass(@participant_id int)
RETURNS bit

AS

BEGIN

IF dbo.checkApprenticeshipStatus(@participant_id) = 1 AND
dbo.studiesPresence(@participant_id) >= 80 AND
dbo.checkExamStatus(@participant_id) = 1
RETURN 1
RETURN 0

END
```

#### StudiesPresence

Sprawdzenie obecności danego uczestnika studiów

```
CREATE FUNCTION studiesPresence(@participant_id int)

RETURNS float
AS
```

```
BEGIN
        DECLARE @meetingsCount int
        SET @meetingsCount = ISNULL((SELECT COUNT(*)
                                  FROM StudiesMeetings
                                    INNER JOIN StudiesMeetingParticipants ON StudiesMeetings.meeting_id =
StudiesMeetingParticipants.meeting_id
                                   WHERE date < GETDATE() AND participant_id = @participant_id), 0)</pre>
        IF @meetingsCount = ∅ BEGIN
          RETURN 100
        END
        DECLARE @attendedMeetings int
        SET @attendedMeetings = ISNULL((SELECT COUNT(*)
                                        FROM StudiesMeetings
                                           INNER JOIN StudiesMeetingParticipants ON StudiesMeetings.meeting_id =
StudiesMeetingParticipants.meeting_id
                                        WHERE
                                            date < GETDATE() AND</pre>
                                            presence = 1 AND
                                            participant_id = @participant_id), 0)
        RETURN CAST(@attendedMeetings AS float)/@meetingsCount * 100.0
    END
go
```

### **GetExamScores**

Umożliwia wyświetlenie punktów i wyniku procentowego z egzaminów w których uczestnik studiów brał udział (dla wszystkich studiów na które dany klient zostął zapisany)

```
CREATE FUNCTION getExamScores(@student_id int)
RETURNS table

AS

RETURN

SELECT name, date, points, CAST(points AS float)/max_points*100 AS percentScore
FROM ExamsTaken

INNER JOIN Exams ON ExamsTaken.exam_id = Exams.exam_id

INNER JOIN dbo.Studies S on Exams.studies_id = S.product_id

WHERE participant_id = @student_id
```

## CheckExamStatus

Umożliwia sprawdzenie czy dany uczestnik studiów zaliczył egzaminy

```
CREATE FUNCTION checkExamStatus(@participan_id int)
RETURNS bit

AS

BEGIN
DECLARE @passed_exams_count int
SET @passed_exams_count = ISNULL((SELECT COUNT(*)
FROM dbo.getExamScores(@participan_id)
WHERE percentScore >= 50), 0)

IF @passed_exams_count >= 1
RETURN 1
RETURN 0
END

go
```

## CheckExamMaxPoints

Pozwala sprawdzić maksymalną ilość punktów na danym egzaminie

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```
CREATE FUNCTION checkExamMaxPoints(@exam_id int)
RETURNS int

AS

BEGIN

DECLARE @exam_max_points int
SET @exam_max_points = ISNULL((SELECT max_points
FROM Exams
WHERE exam_id = @exam_id), 0)

RETURN @exam_max_points

END

go
```

#### CheckExamDate

Pozwala sprawdzić datę wybranego egzaminu

```
CREATE FUNCTION checkExamDate(@exam_id int)

RETURNS date

AS

BEGIN

DECLARE @exam_date date

SET @exam_date = ISNULL((SELECT date

FROM Exams

WHERE exam_id = @exam_id), NULL)

RETURN @exam_date

END
```

### CheckExamDate

Pozwala sprawdzić maksymalną ilość punktów na egzaminie

```
CREATE FUNCTION checkExamDate(@exam_id int)
RETURNS date

AS
BEGIN
DECLARE @exam_date date
SET @exam_date = ISNULL((SELECT date
FROM Exams
WHERE exam_id = @exam_id), NULL)
RETURN @exam_date

END
```

## GetStudiesMeetings

Umożliwia wyświetlenie wszystkich zaplanowanych spotkań na studiach

```
CREATE FUNCTION getStudiesMeetings(@studies_id int)

RETURNS table

AS RETURN

SELECT meeting_topic, date, participants_limit

FROM StudiesMeetings

WHERE studies_id = @studies_id

ORDER BY date
```

### GetRegisteredApprenticeship

Umożliwia wyświetlenie praktyk danego uczestnika studiów

```
CREATE FUNCTION getRegisteredApprenticeship(@participant_id int)
RETURNS table
```

```
AS RETURN

SELECT name, Apprenticeship.*

FROM Apprenticeship

INNER JOIN StudiesParticipants ON Apprenticeship.participant_id = StudiesParticipants.participant_id

INNER JOIN Studies ON StudiesParticipants.product_id = Studies.product_id

WHERE Apprenticeship.participant_id = @participant_id
```

### CheckApprenticeshipStatus

Umożliwia sprawdzenie czy dany uczestnik studiów ma zaliczone praktyki

```
CREATE FUNCTION checkApprenticeshipStatus(@participant_id int)
RETURNS bit

AS

BEGIN

DECLARE @acceptedApprenticeshipStatus int
SET @acceptedApprenticeshipStatus = ISNULL((SELECT COUNT(*) FROM Apprenticeship
WHERE presence_percentage = 100 AND participant_id =
@participant_id), 0)

IF @acceptedApprenticeshipStatus >= 2
RETURN 1

RETURN 0
END
go
```

#### CheckParticipantsLimit

Pozwala sprawdzić limit osób zapisanych na studiach

```
CREATE FUNCTION checkParicipantsLimit(@studies_id int)

RETURNS int

AS

BEGIN

DECLARE @paricipantsLimit int

SET @paricipantsLimit = ISNULL((SELECT participants_limit

FROM Studies

WHERE product_id = @studies_id), 0)

RETURN @paricipantsLimit

END

go
```

### CheckIfStudiesMeetingParticipantsAllowed

Pozwala sprawdzić czy do listy uczestników spotkania na studiach można dopisać więcej osób

```
CREATE FUNCTION checkIfStudiesMeetingParticipantsAllowed(@meeting_id int)

RETURNS bit

AS

BEGIN

DECLARE @outer_participant_count int

DECLARE @studies_participant_count int

DECLARE @participant_limit int

SET @studies_participant_count = ISNULL((SELECT COUNT(*) FROM StudiesMeetingParticipants WHERE meeting_id = @meeting_id

GROUP BY meeting_id, 0)

SET @outer_participant_count = ISNULL((SELECT COUNT(*) FROM OuterMeetingParticipants

WHERE meeting_id = @meeting_id

GROUP BY meeting_id = @meeting_id
```

### CheckIfStudiesParticipantsAllowed

Pozwala sprawdzić czy limit uczestników zapisanych na dane studia nie został przekroczony

```
CREATE FUNCTION checkIfStudiesParticipantsAllowed(@product_id int)
    RETURNS bit
AS
BEGIN
    DECLARE @participant_limit int
    DECLARE @participants_count int
    SET @participants_count = ISNULL((SELECT COUNT(*)
                                             FROM StudiesParticipants
                                             WHERE product_id = @product_id
                                             GROUP BY product_id), 0)
    SET @participant_limit = dbo.checkParicipantsLimit(@product_id)
    IF @participants_count > @participant_limit BEGIN
        RETURN 0
    END
    RETURN 1
END
```

Nauczyciel

## **GetTaughtWebinars**

Umożliwia wyświetlenie prowadzonych przez nauczyciela webinarów

```
CREATE FUNCTION getTaughtWebinars(@academic_id int)
RETURNS table
AS RETURN
SELECT webinar_name, Webinars.product_id
FROM Products
INNER JOIN Webinars ON Products.product_id = Webinars.product_id
WHERE academic_id = @academic_id
```

## **GetTaughtWebinars**

Umożliwia wyświetlenie prowadzonych przez nauczyciela kurśów

```
CREATE FUNCTION getTaughtCurses(@academic_id int)

RETURNS table

AS RETURN

SELECT course_name, Courses.product_id

FROM Products

INNER JOIN Courses ON Products.product_id = Courses.product_id
```

```
WHERE academic_id = @academic_id
```

## GetTaughtMeetings

Umożliwia wyświetlenie prowadzonych przez nauczyciela kurśów

```
CREATE FUNCTION getTaughtStudiesMeetings(@academic_id int)
   RETURNS table
AS RETURN
SELECT meeting_topic, meeting_id
FROM Products
   INNER JOIN StudiesMeetings ON Products.product_id = StudiesMeetings.meeting_id
WHERE academic_id = @academic_id
```

#### **GetTaughtStudies**

Umożliwia wyświetlenie prowadzonych przez nauczyciela kurśów

```
CREATE FUNCTION getTaughtStudies(@academic_id int)
   RETURNS table

AS RETURN

SELECT name, Studies.product_id
FROM Products
   INNER JOIN Studies ON Products.product_id = Studies.product_id
WHERE academic_id = @academic_id
```

## ${\bf Get Studies Meeting Attendance List}$

Umożliwia wyswietlenie listy obecności na danym spotkaniu na studiach

```
CREATE FUNCTION getStudiesMeetingAttendanceList(@meeting_id int)
   RETURNS table
AS RETURN
   SELECT StudiesMeetingParticipants.participant_id, U.last_name, U.first_name
   FROM StudiesMeetingParticipants
       INNER JOIN dbo.StudiesMeetings SM on StudiesMeetingParticipants.meeting_id = SM.meeting_id
       INNER JOIN StudiesParticipants SP on StudiesMeetingParticipants.participant_id = SP.participant_id
       INNER JOIN Clients C on SP.client_id = C.client_id
       INNER JOIN Users U on C.client_id = U.user_id
   WHERE SM.meeting_id = @meeting_id
   SELECT OuterMeetingParticipants.client_id, U.last_name, U.first_name
   FROM OuterMeetingParticipants
        INNER JOIN Clients C ON OuterMeetingParticipants.client_id = C.client_id
        INNER JOIN Users U ON C.client_id = U.user_id
   WHERE meeting_id = @meeting_id
go
```

### GetCourseModuleAttendanceList

Wyświetla liste uczestników danego modułu z kursu

```
CREATE FUNCTION getCourseModuleAttendanceList(@module_id int)
RETURNS table
AS RETURN
SELECT ModulesAttendance.participant_id, last_name, first_name
```

```
FROM ModulesAttendance
    INNER JOIN CoursesParticipants CP ON ModulesAttendance.participant_id = CP.participant_id
    INNER JOIN dbo.Clients C on C.client_id = CP.client_id
    INNER JOIN Users U on C.client_id = U.user_id
WHERE module_id = @module_id
```

Klient

#### **GetOwnedWebinars**

Umożliwia wyświetlenie zakupionych webinarów przez klienta

```
CREATE FUNCTION getOwnedWebinars(@client_id int)
   RETURNS table

AS RETURN

SELECT webinar_name
FROM Webinars

INNER JOIN Products ON Webinars.product_id = Products.product_id

INNER JOIN Order_details ON Products.product_id = Order_details.product_id

INNER JOIN Orders ON Order_details.order_id = Orders.order_id

INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id

WHERE status_name = 'paid' AND client_id = @client_id
```

#### **GetOwnedStudies**

Umożliwia wyświetlenie zakupionych studiów przez klienta

```
CREATE FUNCTION getOwnedStudies(@client_id int)

RETURNS table

AS RETURN

SELECT name

FROM Studies

INNER JOIN Products ON Studies.product_id = Products.product_id

INNER JOIN Order_details ON Products.product_id = Order_details.product_id

INNER JOIN Orders ON Order_details.order_id = Orders.order_id

INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id

WHERE status_name = 'paid' AND client_id = @client_id
```

### GetOwnedStudiesMeetings

Umożliwia wyświetlenie zakupionych spotkań ze studiów przez klienta

```
CREATE FUNCTION getOwnedStudiesMeetings(@client_id int)

RETURNS table

AS RETURN

SELECT meeting_topic

FROM StudiesMeetings

INNER JOIN Products ON StudiesMeetings.meeting_id = Products.product_id

INNER JOIN Order_details ON Products.product_id = Order_details.product_id

INNER JOIN Orders ON Order_details.order_id = Orders.order_id

INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id

WHERE status_name = 'paid' AND client_id = @client_id
```

#### GetOwnedCourses

Umożliwia wyświetlenie zakupionych kursów przez klienta

```
CREATE FUNCTION getOwnedCourses(@client_id int)

RETURNS table

AS RETURN
```

```
SELECT course_name
FROM Courses

INNER JOIN Products ON Courses.product_id = Products.product_id

INNER JOIN Order_details ON Products.product_id = Order_details.product_id

INNER JOIN Orders ON Order_details.order_id = Orders.order_id

INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id

WHERE status_name = 'paid' AND client_id = @client_id
```

#### GetBucket

Pozwala wyświetlić zawartość koszyka klientów

```
CREATE FUNCTION getBucket(@client_id int)
    RETURNS table

AS RETURN

SELECT dbo.getProductName(Products.product_id) AS product_name, product_type_name, Payments.price
FROM Products

INNER JOIN Order_details ON Products.product_id = Order_details.product_id
INNER JOIN Orders ON Order_details.order_id = Orders.order_id
INNER JOIN ProductType ON Products.product_type_id = ProductType.product_type_id
INNER JOIN Payments ON Orders.order_id = Payments.order_id
INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id
WHERE status_name = 'not_paid' AND client_id = @client_id
go
```

#### GetPaymentHistory

Umożliwia wyświetlenie historii płatności danego klienta

```
CREATE FUNCTION getPaymentHistory(@client_id int)

RETURNS table

AS RETURN

SELECT payment_date, price, Orders.order_id

FROM Payments

INNER JOIN Orders ON Payments.order_id = Orders.order_id

INNER JOIN Statuses ON Orders.payment_status = Statuses.status_id

WHERE status_name = 'paid' AND client_id = @client_id

go
```

# Triggery

Studia

## CheckStudiesMeetingLimit

Przy dodawaniu nowych uczestników spotkań sprawdza czy nie został przekroczony limit miejsc na spotkaniu na studiach podczas wpisywania do tabeli StudiesMeetingParticipants lub OuterMeetingParticipants

```
CREATE TRIGGER checkStudiesMeetingLimit_studiesParticipants_trg

ON StudiesMeetingParticipants

AFTER INSERT

AS

BEGIN

SET NOCOUNT ON

DECLARE @meeting_id int

DECLARE curs CURSOR FOR

(SELECT meeting_id FROM inserted)

OPEN curs

FETCH NEXT FROM curs INTO @meeting_id

WHILE @@FETCH_STATUS = 0 BEGIN
```

```
IF NOT dbo.checkIfStudiesMeetingParticipantsAllowed(@meeting_id) = 1 BEGIN
                RAISERROR(N'Studies Meetings participants limit exceeded', 12, 1)
            END
            FETCH NEXT FROM curs INTO @meeting_id
        END
        CLOSE curs
        DEALLOCATE curs
    END
CREATE TRIGGER checkStudiesMeetingLimit_outerParticipants_trg
ON OuterMeetingParticipants
AFTER INSERT
AS
    BEGIN
       SET NOCOUNT ON
       DECLARE @meeting_id int
        DECLARE curs CURSOR FOR
           (SELECT meeting_id FROM inserted)
        OPEN curs
        FETCH NEXT FROM curs INTO @meeting_id
        WHILE @@FETCH_STATUS = 0 BEGIN
            IF NOT dbo.checkIfStudiesMeetingParticipantsAllowed(@meeting_id) = 1 BEGIN
               RAISERROR(N'Studies Meetings participants limit exceeded', 12, 1)
            FETCH NEXT FROM curs INTO @meeting_id
        END
        CLOSE curs
        DEALLOCATE curs
    END
```

#### CheckStudiesParticipantsLimit

Przy dodawaniu nowych uczestników na studia do tabli StudiesParticipants, sprawdza czy limit zapisanych uczestników nie został przekroczony

```
CREATE TRIGGER checkStudiesParticipantsLimit_trg
   ON StudiesParticipants
    AFTER INSERT
    AS
BEGIN
    SET NOCOUNT ON
   DECLARE @studies_id int
    DECLARE curs CURSOR FOR
       (SELECT product_id FROM inserted)
    OPEN curs
    FETCH NEXT FROM curs INTO @studies_id
    WHILE @@FETCH_STATUS = ♥ BEGIN
        IF NOT dbo.checkIfStudiesParticipantsAllowed (@studies_id) = 1 BEGIN
            RAISERROR(N'Studies Participants limit exceeded', 12, 1)
        FETCH NEXT FROM curs INTO @studies_id
    FND
    CLOSE curs
    DEALLOCATE curs
END
```

#### CheckIfClientPaidForStudies

Podczas wpisywania do tabeli StudiesParticipants sprawdza czy wpisywany klient zapłacił za studia

```
CREATE TRIGGER checkIfClientPaidForStudies_trg
       ON StudiesParticipants
       AFTER INSERT
AS
    BEGIN
       SET NOCOUNT ON
       DECLARE @client_id int
       DECLARE @product_id int
        DECLARE curs CURSOR FOR
            (SELECT client_id, product_id FROM inserted)
        OPEN curs
        FETCH NEXT FROM curs INTO @client_id, @product_id
        WHILE @@FETCH STATUS = 0 BEGIN
            IF NOT dbo.checkIfClientPaid(@client_id, @product_id) = 1 BEGIN
                RAISERROR(N'Client did not pay for the product', 12, 1)
            FND
            FETCH NEXT FROM curs INTO @client_id, @product_id
        END
        CLOSE curs
        DEALLOCATE curs
    FND
```

### CheckIfClientPaidForStudiesMeeting

Podczas wpisywania do tabeli OuterMeetingParticipants sprawdza czy wpisywani klienci mają status zamówienia jako zapłacony.

```
{\tt CREATE\ TRIGGER\ checkIfClientPaidForStudiesMeeting\_outerParticipant\_trg}
    ON OuterMeetingParticipants
    AFTER INSERT
BEGIN
    SET NOCOUNT ON
    DECLARE @client_id int
    DECLARE @meeting_id int
    DECLARE curs CURSOR FOR
        (SELECT client_id, meeting_id FROM inserted)
    OPEN curs
    FETCH NEXT FROM curs INTO @client_id, @meeting_id
    WHILE @@FETCH_STATUS = 0 BEGIN
        IF NOT dbo.checkIfClientPaid(@client_id, @meeting_id) = 1 BEGIN
           RAISERROR(N'Client did not pay for the product', 12, 1)
        END
        FETCH NEXT FROM curs INTO @client_id, @meeting_id
    END
    CLOSE curs
    DEALLOCATE curs
END
```

### Kursy

### CheckCourseParticipantsLimit

Przy wpisywaniu do tabeli CoursesParticipants sprawdza czy limit uczestników zapisanych na kurs nie został przekroczony

```
CREATE TRIGGER checkCourseParticipantsLimit_trg
ON CoursesParticipants
AFTER INSERT
```

```
BEGIN

SET NOCOUNT ON

DECLARE @course_id int

DECLARE curs CURSOR FOR

(SELECT product_id FROM inserted)

OPEN curs

FETCH NEXT FROM curs INTO @course_id

WHILE @@FETCH_STATUS = 0 BEGIN

IF NOT dbo.checkIfCourseParticipantsAllowed(@course_id) = 1 BEGIN

RAISERROR(N'Course Participants limit exceeded', 12, 1)

END

FETCH NEXT FROM curs INTO @course_id

END

CLOSE curs

DEALLOCATE curs

END
```

#### CheckIfClientPaidForCourse

Przy wpisywaniu do tabeli CoursesParticipants sprawdza czy klient zapłacił za dany kurs

```
CREATE TRIGGER checkIfClientPaidForCourse_trg
   ON CoursesParticipants
   AFTER INSERT
   AS
BEGIN
   SET NOCOUNT ON
   DECLARE @client id int
   DECLARE @product_id int
   DECLARE curs CURSOR FOR
       (SELECT client_id, product_id FROM inserted)
   OPEN curs
   FETCH NEXT FROM curs INTO @client_id, @product_id
   WHILE @@FETCH_STATUS = 0 BEGIN
       IF NOT dbo.checkIfClientPaid(@client_id, @product_id) = 1 BEGIN
           RAISERROR(N'Client did not pay for the product', 12, 1)
       FETCH NEXT FROM curs INTO @client_id, @product_id
   END
   CLOSE curs
   DEALLOCATE curs
END
```

### Webinary

Przy wpisywaniu do tabeli WebinarParticipants sprawdza czy klient zapłacił za webinar.

```
CREATE TRIGGER checkIfClientPaidForWebinar_trg
ON WebinarParticipants
AFTER INSERT
AS
BEGIN
SET NOCOUNT ON
DECLARE @product_id int
DECLARE @client_id int

DECLARE curs CURSOR FOR
```

```
(SELECT product_id, client_id FROM inserted)

OPEN curs

FETCH NEXT FROM curs INTO @product_id, @client_id

WHILE @@FETCH_STATUS = 0 BEGIN
    IF NOT dbo.checkIfClientPaid(@client_id, @product_id) = 1 BEGIN
        RAISERROR(N'Client did not pay for the product', 12, 1)
    END

FETCH NEXT FROM curs INTO @product_id, @client_id

END
CLOSE curs
DEALLOCATE curs
END
```

## Role i upoważnienia

#### Sekretarz

```
Create role secretary
GRANT SELECT ON PastEventsAttendance to secretary
GRANT SELECT ON BorrowersList to secretary
GRANT SELECT ON EventsThisMonth to secretary
GRANT SELECT ON ExamsStats to secretary
GRANT SELECT ON StudentsApprenticeship to secretary
GRANT SELECT ON Bilocations to secretary
GRANT EXECUTE ON GetProductName to secretary
GRANT EXECUTE ON GetUserIdFromUserEmail to secretary
GRANT EXECUTE ON GetParticipantIdFromUserAndProduct to secretary
GRANT SELECT ON ClientsExam to secretary
GRANT EXECUTE ON ClientsApprenticeships to secretary
GRANT EXECUTE ON CoursePass to secretary
GRANT SELECT ON CourseInfo to secretary
GRANT EXECUTE ON ModulesPresence to secretary
GRANT EXECUTE ON GetProductName to secretary
GRANT EXECUTE ON CoursesPresence to secretary
GRANT EXECUTE ON CoursesFreeSlots to secretary
GRANT SELECT ON ClientCourses to secretary
GRANT EXECUTE ON StudiesPass to secretary
GRANT EXECUTE ON StudiesPresence to secretary
GRANT EXECUTE ON CheckExamStatus to secretary
GRANT EXECUTE ON CheckExamDate to secretary
GRANT SELECT ON GetStudiesMeetings to secretary
GRANT SELECT ON GetRegisteredApprenticeship to secretary
GRANT EXECUTE ON GetApprenticeshipStatus to secretary
GRANT EXECUTE ON ParticipantsLimit to secretary
GRANT EXECUTE ON checkIfStudiesMeetingParticipantsAllowed to secretary
GRANT EXECUTE ON GetStudiesMeetingAttendance to secretary
GRANT EXECUTE ON GetCourseModuleAttendanceList to secretary
GRANT EXECUTE ON GetProductName to secretary
GRANT EXECUTE ON uspAddApprenticeship to secretary
GRANT EXECUTE ON uspAddUser to secretary
GRANT EXECUTE ON uspChangeMeetingDate to secretary
GRANT EXECUTE ON uspAddCourse to secretary
GRANT EXECUTE ON uspAddStudies to secretary
GRANT EXECUTE ON uspAddStudiesMeetings to secretary
GRANT EXECUTE ON uspAddWebinar to secretary
```

#### Manager

```
Create role manager
GRANT SELECT ON FinancialReport to manager
GRANT SELECT ON GraduationCandidates to manager
GRANT SELECT ON AllMeetings to manager
GRANT SELECT ON PastEventsAttendance to manager
GRANT SELECT ON BorrowersList to manager
GRANT SELECT ON EventsThisMonth to manager
GRANT SELECT ON ExamsStats to manager
GRANT SELECT ON StudentsApprenticeship to manager
GRANT SELECT ON Bilocations to manager
GRANT EXECUTE ON GetProductName to manager
GRANT EXECUTE ON GetUserIdFromUserEmail to manager
GRANT EXECUTE ON GetParticipantIdFromUserAndProduct to manager
GRANT SELECT ON ClientsExam to manager
GRANT EXECUTE ON ClientsApprenticeships to manager
GRANT EXECUTE ON CoursePass to manager
GRANT SELECT ON CourseInfo to manager
GRANT EXECUTE ON ModulesPresence to manager
GRANT EXECUTE ON GetProductName to manager
GRANT EXECUTE ON CoursesPresence to manager
GRANT EXECUTE ON CoursesFreeSlots to manager
GRANT SELECT ON ClientCourses to manager
GRANT EXECUTE ON StudiesPass to manager
GRANT EXECUTE ON StudiesPresence to manager
GRANT EXECUTE ON CheckExamStatus to manager
GRANT EXECUTE ON CheckExamDate to manager
GRANT SELECT ON GetStudiesMeetings to manager
GRANT SELECT ON GetRegisteredApprenticeship to manager
GRANT EXECUTE ON GetApprenticeshipStatus to manager
GRANT EXECUTE ON ParticipantsLimit to manager
GRANT EXECUTE ON checkIfStudiesMeetingParticipantsAllowed to manager
GRANT EXECUTE ON GetStudiesMeetingAttendance to manager
GRANT EXECUTE ON GetCourseModuleAttendanceList to manager
GRANT EXECUTE ON GetProductName to manager
GRANT EXECUTE ON uspAddApprenticeship to manager
GRANT EXECUTE ON uspAddUser to manager
GRANT EXECUTE ON uspChangeMeetingDate to manager
GRANT EXECUTE ON uspAddCourse to manager
GRANT EXECUTE ON uspAddStudies to manager
GRANT EXECUTE ON uspAddStudiesMeetings to manager
GRANT EXECUTE ON uspAddWebinar to manager
GRANT EXECUTE ON uspSetCoursePrice to manager
GRANT EXECUTE ON uspSetMeetingPrice to manager
GRANT EXECUTE ON uspSetStudiesPrice to manager
GRANT EXECUTE ON uspSetWebinarPrice to manager
GRANT EXECUTE ON uspParticipantsLimit to manager
GRANT EXECUTE ON uspDeleteProduct to manager
```

### Nauczyciel

```
Create role teacher

GRANT SELECT ON getTaughtWebinars to teacher
GRANT SELECT ON getTaughtCurses to teacher
GRANT SELECT ON getTaughtStudiesMeetings to teacher
GRANT SELECT ON getTaughtStudies to teacher
GRANT SELECT ON getStudiesMeetingAttendanceList to teacher
GRANT SELECT ON getCourseModuleAttendanceList to teacher
GRANT SELECT ON getTaughtWebinars to teacher

GRANT EXECUTE on uspAddExamResult to teacher
GRANT EXECUTE on uspMeetingPresence to teacher
GRANT EXECUTE on uspModulePresence to teacher
GRANT EXECUTE on uspSetMeetingPresence to teacher
```

### Klient

```
Create role client
GRANT EXECUTE on CoursePass to client
GRANT SELECT on CourseInfo to client
GRANT EXECUTE on ModulesPresence to client
GRANT EXECUTE on CoursesPresence to client
GRANT EXECUTE on coursesFreeSlots to client
GRANT SELECT on ClientCourses to client
GRANT EXECUTE on StudiesPass to client
GRANT EXECUTE on StudiesPresence to client
GRANT SELECT on getExamScores to client
GRANT EXECUTE on checkExamStatus to client
GRANT EXECUTE on checkExamMaxPoints to client
GRANT EXECUTE on checkExamDate to client
GRANT SELECT on getStudiesmeetings to client
GRANT SELECT on getRegisteredApprenticeship to client
GRANT EXECUTE on CheckApprenticeshipStatus to client
GRANT EXECUTE on checkParicipantsLimit to client
GRANT EXECUTE on uspAddProductToOrder to client
GRANT EXECUTE on uspCancelPayment to client
GRANT EXECUTE on uspChangeToFullPrice to client
GRANT EXECUTE on uspDeleteProductFromOrder to client
GRANT EXECUTE on uspPay to client
GRANT EXECUTE on uspAddOrder to client
```

### Właściciel

```
Create role owner
grant all privileges ON u_stankiew to owner
```

# Indeksy

```
-- imię i nazwisko użytkownika
create index Users_first_name_last_name_index
on Users (first_name, last_name)
-- adres użytkownika
create index Users_zip_code_city_street_address_country_index
on Users (zip_code, city, street_address, country)
--typ produktu
create index Products_product_type_id_index
on Products (product_type_id)
--język
create index Products_language_index
on Products (language)
--numer zamówienia
create index Payments_order_id_index
on Payments (order_id)
--data zamówienia
create index Payments_payment_date_index
on Payments (payment_date)
--nazwa webinaru
create index Webinars_webinar_name_index
on Webinars (webinar_name)
```

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```
--data publikacji webinaru
create index Webinars_posted_date_index
on Webinars (posted_date)
--nazwa kursu
create unique index Courses_course_name_uindex
on Courses (course_name)
--data rozpoczęcia i zakońćzenia kursu
create unique index Courses_start_date_end_date_uindex
on Courses (start_date, end_date)
--nazwa modułu
create unique index Uniq_Modules
on Modules (module_name)
--id modułu
create index Modules_product_id_index
on Modules (product_id)
--data rozpoczęcia i zakońćzenia modułu
create index Modules_start_date_end_date_index
on Modules (start_date, end_date)
--sala, w której odbywa się moduł
create index Modules_classroom_index
on Modules (classroom)
--nazwa studiów
create index Studies_name_index
on Studies (name)
--id klienta, który jest uczestnikiem studiów
create index StudiesParticipants_client_id_index
on StudiesParticipants (client_id)
--id studiów
create index StudiesParticipants_product_id_index
on StudiesParticipants (product_id)
--id studiów
create index Exams_studies_id_index
on Exams (studies_id)
--data egzaminu
create index Exams_date_index
on Exams (date)
--data praktyk i id uczestnika studiów
create unique clustered index Apprenticeship_participant_id_date_uindex
on Apprenticeship (participant_id, date)
--id studiów
create index StudiesMeetings_studies_id_index
on StudiesMeetings (studies_id)
--data studiów
create index StudiesMeetings_date_index
on StudiesMeetings (date)
```

### Dane testowe

### **Academics**

#### academic id

2

8

academic_id
10
12
21

# Apprenticeship

27

participant_id	date	presence_percentage
1	2023-11-15	100
4	2023-08-23	100
4	2023-12-17	100

# Clients

client_id	can_pay_days_later
1	0
3	0
4	0
5	12
6	0
7	0
9	10
11	0
13	0
15	0
23	0
24	0
26	0
29	2
30	0
31	4
38	0

# Courses

product_id	course_name	start_date	end_date	participants_limit	advance_price	full_price
2	SQL for begineers	2022-12-12	2023-02-20	15	500.0000	2500.0000
6	SQL for intermediate	2024-03-20	2024-06-30	10	1000.0000	3000.0000
10	Python algoritms and structures	2023-10-10	2024-01-20	25	1500.0000	4000.0000
14	UNIX comends	2024-01-05	2024-01-31	20	200.0000	1000.0000
22	Object oriented Programming in C++	2024-01-01	2024-06-28	23	20.0000	400.0000

# CoursesParticipants

# participant\_id client\_id product\_id

participant_id	client_id	product_id
1	1	2
2	1	6
3	4	2
4	4	6
5	7	10
6	7	14
7	1	10
8	1	14
9	11	10
10	15	10
11	5	10
12	13	10
13	9	10
14	3	10
15	24	22
16	24	14

## Exams

exam_id	studies_id	date	max_points
1	4	2023-10-12	60
2	8	2024-12-06	100
3	12	2024-08-14	20
4	16	2023-11-23	97
5	19	2024-05-23	150
6	4	2023-12-16	100
7	20	2023-10-04	80
8	20	2023-12-08	60

## ExamsTaken

exam_id	participant_id	points
1	1	55
6	1	92
7	4	66
8	4	53
4	5	82
4	6	95
1	9	40
1	10	49

Interpreted\_language

interpreter id	translate from	translate to

interpreter_id	translate_from	translate_to
14	2	1
14	2	3
14	3	1
22	4	1

# Interpreters

interpreter_id		
14		
22		

# Languages

language_id	language_name
3	English
2	German
4	Italian
1	Polish
5	Spanish

# MeetingType

type_id type_nam	
1	on-line
2	in-person
3	hybrid

# Modules

module_id	product_id	module_name	module_type	classroom	start_date	end_date
1	2	Primary Keys	2	10	2022-12-12	2022-12-14
2	2	Basic commands	1	null	2022-12-19	2022-12-20
3	2	The basics of joins	1	null	2023-01-04	2023-01-10
4	2	Exercises	1	null	2023-01-15	2023-02-20
5	6	Group by your data	2	15	2024-03-20	2024-04-20
6	6	Sort your data	2	15	2024-04-25	2024-04-30
7	6	Exercices	1	null	2024-05-01	2024-06-30
8	10	Sorting algoritms	2	20	2023-10-10	2023-11-10
9	10	Graph Algoritms	3	15	2023-11-15	2023-12-15
10	10	Dynamic Programming	2	20	2023-12-20	2024-01-20
11	14	Files and folders	1	null	2024-01-05	2024-01-10
12	14	Grep and awk	1	null	2024-01-11	2024-01-20
13	14	Bash and regex	1	null	2024-01-21	2024-01-31

# Modules Attendance

# participant\_id module\_id presence

participant_id	module_id	presence
1	1	true
1	2	true
1	3	true
1	4	true
3	1	true
3	2	false
3	3	false
3	4	true
5	8	true
5	9	true
7	8	true
7	9	true
9	8	true
9	9	true
10	8	true
10	9	false
11	8	true
11	9	true
12	8	true
12	9	true
13	8	true
13	9	true
14	8	true
14	9	true
15	1	true
15	13	true

# Order\_details

order_id	product_id	is_advance
1	5	false
1	9	false
1	21	false
2	5	false
3	9	false
3	13	false
4	9	false
5	21	false
6	5	false
7	13	false
7	21	false

order_id	product_id	is_advance
8	13	false
8	14	false
8	22	false
12	2	false
12	6	false
12	10	false
12	14	true
14	2	false
14	6	false
15	10	false
15	14	true
16	10	false
17	10	false
18	10	false
19	10	false
20	6	false
21	10	false
22	10	false
23	4	false
24	12	false
25	16	false
26	20	false
27	16	false
28	16	false
29	19	false
30	20	false
31	4	false
32	4	false
33	8	false

# Orders

order_id	client_id	payment_status
1	1	1
2	7	1
3	9	1
4	15	1
5	23	1
6	30	1
7	24	1
8	24	1

order_id	client_id	payment_status
9	4	2
12	1	1
14	4	1
15	7	4
16	11	1
17	5	1
18	13	1
19	3	1
20	3	2
21	15	1
22	9	1
23	30	1
24	23	1
25	4	1
26	23	1
27	23	1
28	24	1
29	3	1
30	4	1
31	5	1
32	29	1
33	5	1

# Outer Meeting Participants

client_id	meeting_id	presence
1	24	false
3	24	false
5	24	false
38	24	false

# Payments

payment_id	order_id	payment_date	price	cancelled
4	2	2023-12-10	50.0000	false
5	3	2023-12-14	60.0000	false
6	4	2023-12-17	60.0000	false
7	5	2023-12-15	12.0000	false
8	6	2023-12-16	50.0000	false
9	7	2023-12-16	12.0000	false
14	1	2023-12-17	122.0000	false
15	8	2023-12-17	220.0000	false
22	8	2023-12-17	800.0000	false

payment_id	order_id	payment_date	price	cancelled
23	8	2023-12-17	380.0000	false
24	12	2022-12-01	5250.0000	false
25	12	2023-10-01	4500.0000	false
26	14	2022-12-05	5500.0000	false
27	15	2023-09-10	4250.0000	false
28	16	2023-07-23	4000.0000	false
29	17	2023-02-20	4000.0000	false
30	18	2023-06-01	1500.0000	true
31	18	2023-06-02	1500.0000	false
32	18	2023-08-01	2500.0000	false
33	19	2023-09-12	4000.0000	false
36	21	2023-10-01	4000.0000	false
37	22	2023-10-02	4000.0000	false
38	23	2023-10-03	40.0000	false
39	24	2023-10-04	35.0000	false
40	25	2023-10-11	25.0000	false
41	26	2023-10-11	10.0000	false
42	27	2023-10-20	25.0000	false
43	28	2023-10-04	25.0000	false
44	29	2023-10-03	25.0000	false
45	30	2023-10-01	10.0000	false
46	31	2023-09-22	40.0000	false
47	32	2023-09-23	40.0000	false
48	33	2023-09-29	30.0000	false

# **Products**

product_id	product_type_id	language	academic_id	interpreter_id	translated_to
1	1	3	8	null	null
2	2	2	2	14	1
3	1	4	10	22	1
4	3	1	21	null	null
5	1	3	2	null	null
6	2	4	8	22	1
7	4	2	10	14	3
8	3	1	12	null	null
9	1	3	12	null	null
10	2	2	2	null	null
11	4	4	10	null	null
12	3	1	21	null	null
13	1	3	21	null	null

product_id	product_type_id	language	academic_id	interpreter_id	translated_to
14	2	4	2	null	null
15	4	2	8	14	3
16	3	2	2	null	null
17	1	1	8	14	1
18	2	1	8	22	3
19	3	2	10	null	null
20	3	3	12	null	null
21	1	3	2	null	null
22	2	2	2	null	null
23	3	2	2	null	null
24	4	2	2	null	null
26	4	2	2	null	null
27	4	3	12	null	null
28	4	2	10	null	null
29	4	2	12	14	1
30	4	2	8	null	null
31	4	1	8	22	3
32	4	1	21	null	null
33	4	1	21	null	null
34	4	2	2	22	3
35	4	3	2	null	null

# ProductType

procduct_type_id	product_type_name
1	webinar
2	course
3	studies
4	meeting

# Statuses

status_id	status_name
1	paid
2	not_paid
4	partially_paid

# Studies

product_id	name	participants_limit	full_price	advance_price
4	Computer Science	50	40.0000	20.0000
8	Astrophysics	20	30.0000	12.0000
12	Cybersecurity	30	35.0000	10.0000
16	Biomedic Engineering	15	50.0000	25.0000

product_id	name	participants_limit	full_price	advance_price
19	Economy	100	25.0000	10.0000
20	Marketing	200	10.0000	5.0000
23	Geschichte und Okonomie	23	2000 0000	100 0000

# Studies Meetings

meeting_id	studies_id	date	type_id	participants_limit	student_price	outer_participant_price	meeting_topic
3	4	2023-10- 30	1	60	0.0000	15.0000	"Programming Basics"
6	8	2023-10- 20	2	30	0.0000	20.0000	"Black holes explained"
7	4	2023-12- 25	1	50	0.0000	10.0000	"Operating Systems"
11	4	2023-12- 15	2	65	0.0000	5.0000	"Network Architecture"
15	4	2023-11- 22	1	100	60.0000	100.0000	"Algorithms Part 1"
24	4	2023-12- 23	1	50	60.0000	200.0000	"Object Oriented Programing"
26	4	2023-12- 05	1	150	60.0000	15.0000	"Algorithms Part 2"
27	8	2023-10- 18	2	35	60.0000	20.0000	"Introduction to Astrophysiscs "
28	8	2023-10- 25	3	40	60.0000	100.0000	"Modern cosmology theories"
29	12	2023-12- 24	3	50	5.0000	20.0000	"Introduction to cybersecurity"
30	19	2023-11- 13	2	100	0.0000	5.0000	"Basics of market analysys"
31	20	2023-12- 28	2	200	0.0000	13.0000	"Data-driven marketing introduction"
32	4	2024-01- 03	3	100	0.0000	12.0000	"Introduction to AI"
33	4	2024-03- 04	2	65	6.0000	20.0000	"Functional Programming"
34	20	2024-03- 05	2	200	7.0000	30.0000	"Digital marketing strategies"
35	20	2024-03- 12	2	200	2.0000	10.0000	"Introduction to marketing metrics"

# Studies Meeting Participants

meeting_id	participant_id	presence
3	1	false
3	9	true
6	11	true
7	1	true
7	9	false

	meeting_id	participant_id	presence
	7	10	false
	27	11	true
•	28	11	false
•	29	2	true
	30	7	true

# StudiesParticipants

participant_id	client_id	product_id
1	30	4
2	23	12
3	4	16
4	23	20
5	23	16
6	24	16
7	3	19
8	4	20
9	5	4
10	29	4
11	5	8

# User\_type

user_type	type_name
1	client
2	academic
3	interpreter
4	owner
5	manager
6	secretary

# Users

user_id	first_name	last_name	zip_code	city	street_address	country	user_type	email
1	Jan	Nowak	00-001	Warsaw	ul. Prosta 5	Poland	1	Jan.Nowak@gmail.com
2	Hans	Müller	10115	Berlin	Unter den Linden 15	Germany	2	Hans.Müller@gmail.com
3	John	Smith	10001	New York	123 Main St	USA	1	John.Smith@gmail.com
4	Alice	Williams	SW1A 1AA	London	Buckingham Palace Rd	England	1	Alice.Williams@gmail.com
5	Giuseppe	Rossi	00100	Rome	Via del Corso 10	Italy	1	Giuseppe.Rossi@gmail.com
6	Katarzyna	Kowalska	03-040	Krakow	ul. Glówna 20	Poland	1	Katarzyna.Kowalska@gmail.com
7	Lukas	Schmidt	10178	Berlin	Alexanderplatz 1	Germany	1	Lukas.Schmidt@gmail.com

user_id	first_name	last_name	zip_code	city	street_address	country	user_type	email
8	Emily	Jones	90210	Los Angeles	345 Maple St	USA	2	Emily.Jones@gmail.com
9	Sophie	Taylor	SW1A 1BA	London	Westminster Bridge Rd	England	1	Sophie.Taylor@gmail.com
10	Luca	Bianchi	00144	Rome	Via Appia Nuova 25	Italy	2	Luca.Bianchi@gmail.com
11	Marek	Wozniak	50-001	Wroclaw	ul. Rynek 1	Poland	1	Marek.Wozniak@gmail.com
12	Elena	Schneider	60311	Frankfurt	Hauptwache 6	Germany	2	Elena.Schneider@gmail.com
13	Michael	Brown	33101	Miami	678 Ocean Dr	USA	1	Michael.Brown@gmail.com
14	Olivia	Smith	SW1A 1AB	London	Buckingham Gate 12	England	3	Olivia.Smith@gmail.com
15	Giovanni	Ferrari	00192	Rome	Via della Conciliazione 50	Italy	1	Giovanni.Ferrari@gmail.com
16	Karolina	Lewandowska	02-020	Warsaw	ul. Kwiatowa 7	Poland	4	Karolina.Lewandowska@gmail.com
17	Mateusz	Kowalczyk	50-500	Wroclaw	ul. Piekna 12	Poland	5	Mateusz.Kowalczyk@gmail.com
18	Adrian	Szymanski	80-080	Gdansk	ul. Morska 3	Poland	6	Adrian.Szymanski@gmail.com
19	Ewa	Jankowska	01-010	Lodz	ul. Ogrodowa 25	Poland	6	Ewa. Jankowska@gmail.com
20	Mikolaj	Wójcik	33-330	Krakow	ul. Slowackiego 10	Poland	5	Mikolaj.Wójcik@gmail.com
21	Aleksandra	Dabrowska	03-030	Warsaw	ul. Lipowa 8	Poland	2	Aleksandra. Dabrowska@gmail.com
22	Andrzej	Kowalczyk	50-501	Wroclaw	ul. Zielona 14	Poland	3	Andrzej.Kowalczyk@gmail.com
23	Welby	Churchouse	22300	Dallas	Hunt St 10	USA	1	Welby.Churchouse@gmail.com
24	lve	Boyington	10550	Hamburg	Alter Vall 43	Germany	1	lve.Boyington@gmail.com
25	Eric	Warren	90543	Brema	Neuenstrasse 12	Germany	6	Eric.Warren@gmail.com
26	Vincent	Cunningham	15250	Vancouver	Davie St 12	Canada	1	Vincent.Cunningham@gmail.com
27	Janina	Wiśniowska	43-442	Szczeciń	ul. Długa 15	Poland	2	Janina.Wiśniowska@gmail.com
28	John	Richardson	32455	Florencja	via Palazzulo 95	Italy	6	John.Richardson@gmail.com
29	Alexander	Fowler	43533	Neapol	Via Campania 5	Italy	1	AlexanderFowler@gmail.com
30	Andrzej	Bogdański	35-234	Gdańsk	ul. Portowa 41	Poland	1	Andrzej. Bogdański @gmail.com
31	Mark	Brown	12-234	London	Downing Street 5	England	1	br@gmail.com
38	Aleksander	Kowalski	20-200	Kraków	Lea 5	Poland	1	alkowalski@gmail.com

# WebinarParticipants

product_id	client_id
1	1
5	1
9	1
21	1
	ı

product_id	client_id
1	3
5	3
9	3
13	4
9	7
9	9
5	11
9	13
1	15
13	24

# Webinars

product_id	webinar_name	posted_date	price
1	Present Simple for beginners	2023-12-02	0.0000
5	Cooking is fun	2023-01-01	50.0000
9	Robotics for children	2023-10-11	60.0000
13	Advanced constructions in English	2023-12-12	0.0000
21	First Aid Basics	2023-12-14	12.0000