Bazy Danych: Projekt

Raport

Zespół 5: Tomasz Furgała, Łukasz Kluza, Mateusz Sacha

1. Administrator

- Usuwanie webinaru, administrator może usunąć dostępne nagranie webinaru gdy uzna to za stosowne.
- Zarządzanie użytkownikami, administrator ma możliwość edycji kont innych użytkowników.
- Generowanie raportów, administrator generuję raporty zawierająca aktualne statystki.

2. Gość

- Założenie konta, użytkownik może założyć konto, które umożliwia mu korzystanie z systemu
- Przeglądanie kursów, użytkownik ma możliwość zapoznania się z aktualną ofertą kursów i szkoleń.

3. Zalogowany użytkownik

- Zapis na webinar, kurs lub studia, użytkownik może zapisać się na wybraną przez siebie usługę.
- Płatność za usługi, dokonuje opłaty by móc wziąć udział w webinarze, kursie lub studiach oraz wykupuje późniejszy dostęp do materiałów.
- Przeglądanie listy, możliwość przeglądania listy usług, na które dany użytkownik jest zapisany.
- Odbiera dyplom, użytkownik może odebrać dyplom, gdy zostanie on wystawiony przez administratora.

4. Koordynator

- Odraczanie płatności, dyrektor szkoły ma możliwość odroczenia płatności na określony czas.
- Wgląd do kursów oraz webinarów, dyrektor ma możliwość wglądu do danych o kursach i webinarach prowadzonych przez jego pracowników
- Zatwierdzanie programu studiów, dyrektor ma dostęp do ułożonych przez pracowników sylabusów przed opublikowaniem ich oraz możliwość zatwierdzania i wprowadzania poprawek do nich
- Zatwierdzanie nowych kursów i webinarów, dyrektor zatwierdza bądź odrzuca każdy nowy kurs, webinar, stworzony przez jego pracowników

5. Menadżer

- Zarządzaniem limitem miejsc, menadżer ustala maksymalną liczbę osób która może uczestniczyć w danym webinarze, szkoleniu
- Wystawianie dyplomów, menadżer wystawia dyplom użytkownikowi, który spełnił wszystkie regulaminowe przesłanki co to do tego.
- Zarządzanie ofertą, menadżer ma możliwość edycji obecnej oferty jak i możliwość dodawania nowych kursów, szkoleń.

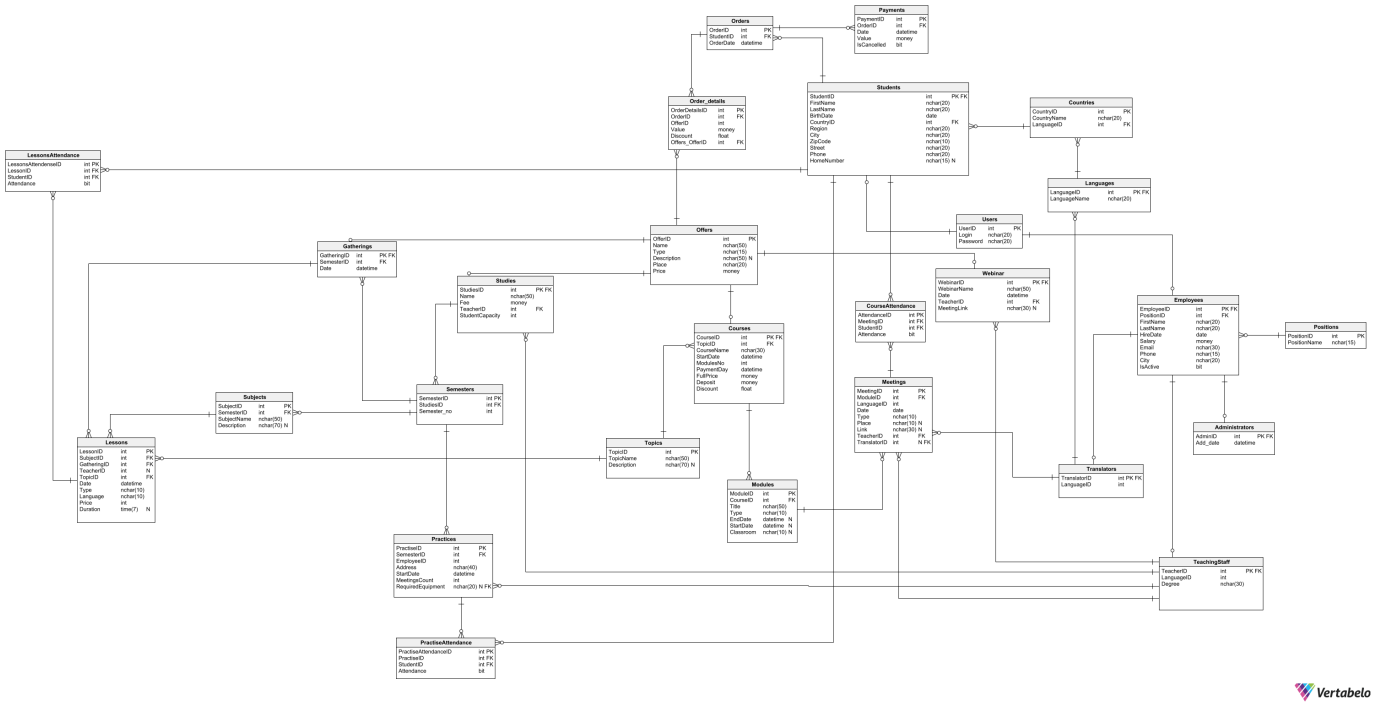
6. Prowadzący/Wykładowca

- Dostęp do swoich webinarów, każdy prowadzący ma nielimitowany czasowo dostęp do nagrań wszystkich swoich webinarów
- Możliwość edycji modułów kursu, prowadzący mają możliwość wprowadzania poprawek oraz modyfikacji materiałów znajdujących się na prowadzonych przez siebie kursach
- Dostęp do systemu ocen i obecności, prowadzący ma dostęp do systemu, w którym może swobodnie zapisywać oraz zmieniać oceny i obecności uczestników jego kursów
- Ułożenie sylabusu, prowadzący musi ułożyć sylabus do każdego z prowadzonych przez siebie przedmiotów w określonym terminie przed rozpoczęciem studiów

7. System

- Generowanie linków do płatności, system sam, automatycznie generuje link do płatności, gdy użytkownik chce opłacić zamówienie.
- Wysyłanie powiadomień, uczestnik spotkania dostaje powiadomienia, gdy rozpoczyna się spotkanie, w którym ma uczestniczyć.
- Powiadomienie o zapłacie, użytkownik do dostaje przypomnienie o konieczności zapłaty tydzień przed ostatecznym terminem dokonania płatności, dotyczy to także zaliczek.

Diagram bazy danych:



Tabele:

1. Offers:

Tabela zawiera informacje o wszystkich wydarzeniach jakie są oferowane. Zawiera idetyfikator wydarzenia (OfferID), nazwe, opis oraz typ (Name, Description, Type), typ określa czy jest to webinar, kurs, studia czy pojedyńcza lekcja. Dodatkowo miejsce wydarzenia oraz jego całkowity koszt (Place, Price).

```
CREATE TABLE [dbo].[Offers](
    [OfferID] [int] IDENTITY(1,1) NOT NULL,
    [Name] [nchar](50) NOT NULL,
    [Type] [nchar](15) NOT NULL,
    [Description] [nchar](50) NULL,
    [Place] [nchar](20) NOT NULL,
    [Price] [money] NOT NULL,
    [DiscountToStudents] [float] NULL,
 CONSTRAINT [PK_Offers] PRIMARY KEY CLUSTERED
(
    [OfferID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Offers] ADD  CONSTRAINT [DF_DiscountToStudents]  DEFAULT ((0.10)) FOR
[DiscountToStudents]

ALTER TABLE [dbo].[Offers]  WITH CHECK ADD  CONSTRAINT [CHK_DiscountToStudentsForGathering] CHECK  (([Type]
<>'Gathering' OR [Type]='Gathering' AND ([DiscountToStudents] IS NULL OR [DiscountToStudents]>=(0) AND
[DiscountToStudents]<=(1))))

ALTER TABLE [dbo].[Offers] CHECK CONSTRAINT [CHK_DiscountToStudentsForGathering]

ALTER TABLE [dbo].[Offers]  WITH CHECK ADD  CONSTRAINT [CHK_PricePrecision] CHECK  (([Price]>=(0) AND
round([Price],(2))=[Price]))

ALTER TABLE [dbo].[Offers] CHECK CONSTRAINT [CHK_PricePrecision]

ALTER TABLE [dbo].[Offers]  WITH CHECK ADD  CONSTRAINT [CHK_Type_Values] CHECK  (([Type]='Gathering' OR
[Type]='Studies' OR [Type]='Courses' OR [Type]='Webinar'))

ALTER TABLE [dbo].[Offers] CHECK CONSTRAINT [CHK_Type_Values]
```

2. Webinar:

Tabela zawiera informacje o webianrach, zawiera klucz główny (WebinarID), nazwę oraz datę rozpoczęcia (WebinarName, Date), inforamcje o osbie, która to prowadzi (TeacherID) i link do webinaru (MeetingLink).

```
CREATE TABLE [dbo].[Webinar](
    [WebinarID] [int] NOT NULL,
    [WebinarName] [nchar](50) NOT NULL,
    [Date] [datetime] NOT NULL,
    [TeacherID] [int] NOT NULL,
    [MeetingLink] [nchar](30) NULL,
 CONSTRAINT [PK_Webinar] PRIMARY KEY CLUSTERED
(
    [WebinarID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Webinar]  WITH CHECK ADD  CONSTRAINT [FK_Webinar_Offers] FOREIGN KEY([WebinarID])
REFERENCES [dbo].[Offers] ([OfferID])

ALTER TABLE [dbo].[Webinar] CHECK CONSTRAINT [FK_Webinar_Offers]

ALTER TABLE [dbo].[Webinar]  WITH CHECK ADD  CONSTRAINT [FK_Webinar_TeachingStaff] FOREIGN KEY([TeacherID])
REFERENCES [dbo].[TeachingStaff] ([TeacherID])

ALTER TABLE [dbo].[Webinar] CHECK CONSTRAINT [FK_Webinar_TeachingStaff]
```

3. Studies:

Tabela zawiera informacje o studiach, zawiera klucz główny (StudiesID), kierunku studiów oraz opłacie za nie (Name, Fee), koorynatorze, maksymalnej ilości studentów na danym studium (MEnagerID, StudentCapacity).

```
CREATE TABLE [dbo].[Studies](
    [StudiesID] [int] NOT NULL,
    [Name] [nchar](50) NOT NULL,
    [Fee] [money] NOT NULL,
    [MenagerID] [int] NOT NULL,
    [StudentCapacity] [int] NOT NULL,
 CONSTRAINT [PK_Studies_1] PRIMARY KEY CLUSTERED
(
    [StudiesID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Studies]  WITH CHECK ADD  CONSTRAINT [FK_Studies_Employees] FOREIGN KEY([MenagerID])
REFERENCES [dbo].[Employees] ([EmployeeID])

ALTER TABLE [dbo].[Studies] CHECK CONSTRAINT [FK_Studies_Employees]

ALTER TABLE [dbo].[Studies]  WITH CHECK ADD  CONSTRAINT [FK_Studies_Offers] FOREIGN KEY([StudiesID])
REFERENCES [dbo].[Offers] ([OfferID])

ALTER TABLE [dbo].[Studies] CHECK CONSTRAINT [FK_Studies_Offers]

ALTER TABLE [dbo].[Studies]  WITH CHECK ADD  CONSTRAINT [CHK_Fee_NonNegative] CHECK  (([Fee]>=(0)))

ALTER TABLE [dbo].[Studies] CHECK CONSTRAINT [CHK_Fee_NonNegative]
```

4. Courses:

Tabela zawiera spis wszystkich kursów z kluczem głównym (CourseID), posiada informację o temacie kursu oraz jego nazwie (TopicID, CourseName), a także dacie rozpoczęcia, ilości modułów z których kurs się składa i dacie zapłaty (StartDate, ModulesNo, PaymentDay), całkowitej kwocie jaką należy za kurs zapłacić, kwocie zaliczki oraz zniżce (FullPrice, Deposit, Discount).

```
CREATE TABLE [dbo].[Courses](
    [CourseID] [int] IDENTITY(1,1) NOT NULL,
    [TopicID] [int] NOT NULL,
    [CourseName] [nchar](30) NOT NULL,
    [StartDate] [datetime] NOT NULL,
    [ModulesNo] [int] NOT NULL,
    [PaymentDay] [datetime] NOT NULL,
    [FullPrice] [money] NOT NULL,
    [Deposit] [money] NOT NULL,
    [Discount] [float] NOT NULL,
 CONSTRAINT [PK_Courses] PRIMARY KEY CLUSTERED
(
    [CourseID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [FK_Courses_Offers] FOREIGN KEY([CourseID])
REFERENCES [dbo].[Offers] ([OfferID])

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [FK_Courses_Offers]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [FK_Courses_Topics] FOREIGN KEY([TopicID])
REFERENCES [dbo].[Topics] ([TopicID])

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [FK_Courses_Topics]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [CHK_Deposit_Range] CHECK  (([Deposit]>=(0) AND
[Deposit]<=[FullPrice]))

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [CHK_Deposit_Range]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [CHK_Discount_Range] CHECK  (([Discount]>=(0) AND
[Discount]<=(1)))

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [CHK_Discount_Range]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [CHK_FullPrice_NonNegative] CHECK  (([FullPrice]>=
(0)))

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [CHK_FullPrice_NonNegative]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [CHK_ModulesNo_Positive] CHECK  (([ModulesNo]>(0)))

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [CHK_ModulesNo_Positive]

ALTER TABLE [dbo].[Courses]  WITH CHECK ADD  CONSTRAINT [CHK_PaymentDay_BeforeStart] CHECK  (([PaymentDay]
<=dateadd(day,(-3),[StartDate])))

ALTER TABLE [dbo].[Courses] CHECK CONSTRAINT [CHK_PaymentDay_BeforeStart]
```

5. Gatherings:

Tabela zawiera informacje o zjazdach, posaida klucz główny (GatheringID) i semestr, w ramach którego odbywa się dany zjazd oraz datę w której zjazd się odbywa (SemestrID, Date).

```
CREATE TABLE [dbo].[Gatherings](
    [GatheringID] [int] IDENTITY(1,1) NOT NULL,
    [Semester] [int] NOT NULL,
    [Date] [datetime] NOT NULL,
 CONSTRAINT [PK_Gatherings] PRIMARY KEY CLUSTERED
```

```
(
    [GatheringID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Gatherings]  WITH CHECK ADD  CONSTRAINT [FK_Gatherings_Offers] FOREIGN KEY([GatheringID])
REFERENCES [dbo].[Offers] ([OfferID])

ALTER TABLE [dbo].[Gatherings] CHECK CONSTRAINT [FK_Gatherings_Offers]

ALTER TABLE [dbo].[Gatherings]  WITH CHECK ADD  CONSTRAINT [FK_Gatherings_Semesters] FOREIGN KEY([Semester])
REFERENCES [dbo].[Semesters] ([SemesterID])

ALTER TABLE [dbo].[Gatherings] CHECK CONSTRAINT [FK_Gatherings_Semesters]
```

6. Semesters:

W tabeli znajdują się informacje o wszystkich semestrach na wszystkich kierunkach studiów, klucz główny to (SemesterID), zawiera też informacje o kierunku studiów na którym semestr się znajduje, numerze semestru(StudiesID, Semester_no).

```
CREATE TABLE [dbo].[Semesters](
    [SemesterID] [int] IDENTITY(1,1) NOT NULL,
    [StudiesID] [int] NOT NULL,
    [Semester_no] [int] NOT NULL,
 CONSTRAINT [PK_Semesters] PRIMARY KEY CLUSTERED
(
    [SemesterID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Semesters]  WITH CHECK ADD  CONSTRAINT [FK_Semesters_Studies] FOREIGN KEY([StudiesID])
REFERENCES [dbo].[Studies] ([StudiesID])

ALTER TABLE [dbo].[Semesters] CHECK CONSTRAINT [FK_Semesters_Studies]

ALTER TABLE [dbo].[Semesters]  WITH CHECK ADD  CONSTRAINT [CHK_Semester_no_Positive] CHECK  (([Semester_no]>
(0)))

ALTER TABLE [dbo].[Semesters] CHECK CONSTRAINT [CHK_Semester_no_Positive]
```

7. Practices:

Tabela zawiera dane o praktykach, posiada klucz główny (PractiseID), semestrze na którym się odbywają i pracowniku, który je prowadzi (SemesterID, EmployeeID), posiada informacje o miejscu, w kótrym praktyki się odbywają, dacie rozpoczęcia, ilości spotkań oraz potrzebnym wyposażeniu (Address, StartDate, MeetingsCount, RequiredEquipment).

```
CREATE TABLE [dbo].[Practices](
    [PractiseID] [int] IDENTITY(1,1) NOT NULL,
    [SemesterID] [int] NOT NULL,
    [EmployeeID] [int] NOT NULL,
    [Address] [nchar](40) NOT NULL,
    [StartDate] [datetime] NOT NULL,
    [MeetingsCount] [int] NOT NULL,
    [RequiredEquipment] [nchar](20) NULL,
 CONSTRAINT [PK_Practices] PRIMARY KEY CLUSTERED
(
    [PractiseID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Practices]  WITH CHECK ADD  CONSTRAINT [FK_Practices_Semesters] FOREIGN KEY([SemesterID])
```

```
REFERENCES [dbo].[Semesters] ([SemesterID])

ALTER TABLE [dbo].[Practices] CHECK CONSTRAINT [FK_Practices_Semesters]

ALTER TABLE [dbo].[Practices]  WITH CHECK ADD  CONSTRAINT [FK_Practices_TeachingStaff] FOREIGN
KEY([EmployeeID])
REFERENCES [dbo].[TeachingStaff] ([TeacherID])

ALTER TABLE [dbo].[Practices] CHECK CONSTRAINT [FK_Practices_TeachingStaff]

ALTER TABLE [dbo].[Practices]  WITH CHECK ADD  CONSTRAINT [CHK_MeetingsCount_Positive] CHECK
(([MeetingsCount]>(0)))

ALTER TABLE [dbo].[Practices] CHECK CONSTRAINT [CHK_MeetingsCount_Positive]
```

8. PractiseAttendance:

Tabela posiada informacje o obecności studentów na praktykach, posiada klucz główny (PractiseAttendanceID), dla każdego studenta przypisuje czy był obecny na danych praktykach, na które jest zapisany (PractiseID, StudentID, Attendance).

```
CREATE TABLE [dbo].[PractiseAttendance](
    [PractiseAttendanceID] [int] IDENTITY(1,1) NOT NULL,
    [PractiseID] [int] NOT NULL,
    [StudentID] [int] NOT NULL,
    [Attendance] [bit] NOT NULL,
 CONSTRAINT [PK_PractiseAttendance] PRIMARY KEY CLUSTERED
(
    [PractiseAttendanceID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[PractiseAttendance]  WITH CHECK ADD  CONSTRAINT [FK_PractiseAttendance_Lessons] FOREIGN
KEY([StudentID])
REFERENCES [dbo].[Lessons] ([LessonID])

ALTER TABLE [dbo].[PractiseAttendance] CHECK CONSTRAINT [FK_PractiseAttendance_Lessons]

ALTER TABLE [dbo].[PractiseAttendance]  WITH CHECK ADD  CONSTRAINT [FK_PractiseAttendance_Practices] FOREIGN
KEY([PractiseID])
REFERENCES [dbo].[Practices] ([PractiseID])

ALTER TABLE [dbo].[PractiseAttendance] CHECK CONSTRAINT [FK_PractiseAttendance_Practices]

ALTER TABLE [dbo].[PractiseAttendance]  WITH CHECK ADD  CONSTRAINT [FK_PractiseAttendance_Students] FOREIGN
KEY([StudentID])
REFERENCES [dbo].[Students] ([StudentID])

ALTER TABLE [dbo].[PractiseAttendance] CHECK CONSTRAINT [FK_PractiseAttendance_Students]
```

9. Subjects:

Tabela zawiera informacje o przedmiotach występujących w semestrach z kluczem głównym (SubjectID), przypisuje przemiot do określonego semestru, posiada nazwę przedmiotu oraz jego opis (SemesterID, SubjectName, Description).

```
CREATE TABLE [dbo].[Subjects](
    [SubjectID] [int] IDENTITY(1,1) NOT NULL,
    [SemesterID] [int] NOT NULL,
    [SubjectName] [nchar](50) NOT NULL,
    [Description] [nchar](70) NULL,
 CONSTRAINT [PK_Subjects] PRIMARY KEY CLUSTERED
(
    [SubjectID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
```

```
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Subjects]  WITH CHECK ADD  CONSTRAINT [FK_Subjects_Semesters] FOREIGN KEY([SemesterID])
REFERENCES [dbo].[Semesters] ([SemesterID])

ALTER TABLE [dbo].[Subjects] CHECK CONSTRAINT [FK_Subjects_Semesters]
```

10. Lessons:

Tabela zawiera informacje o lekcjach zarówno tych na studiach, oraz tych możliwych do kupienia pojedynczo, posida klucz główny (LessonID), przedmiot i zjazd do którego jest przypisana dana lekcja, oraz nauczyciela który ją prowadzi (SubjectID, GatheringID, TeacherID) zawiera temat, datę, typ, język prowadzenia, cenę i czas trwania (TopicID, Date, Type, Language, Price, Duration).

```
CREATE TABLE [dbo].[Lessons](
    [LessonID] [int] NOT NULL,
    [SubjectID] [int] NOT NULL,
    [GatheringID] [int] NOT NULL,
    [TeacherID] [int] NOT NULL,
    [TopicID] [int] NOT NULL,
    [Date] [datetime] NOT NULL,
    [Type] [nchar](10) NOT NULL,
    [Language] [nchar](10) NOT NULL,
    [Price] [int] NOT NULL,
    [Duration] [time](7) NULL,
 CONSTRAINT [PK_Lessons] PRIMARY KEY CLUSTERED
(
    [LessonID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Lessons]  WITH CHECK ADD  CONSTRAINT [FK_Lessons_Gatherings] FOREIGN KEY([GatheringID])
REFERENCES [dbo].[Gatherings] ([GatheringID])

ALTER TABLE [dbo].[Lessons] CHECK CONSTRAINT [FK_Lessons_Gatherings]

ALTER TABLE [dbo].[Lessons]  WITH CHECK ADD  CONSTRAINT [FK_Lessons_Subjects] FOREIGN KEY([SubjectID])
REFERENCES [dbo].[Subjects] ([SubjectID])

ALTER TABLE [dbo].[Lessons] CHECK CONSTRAINT [FK_Lessons_Subjects]

ALTER TABLE [dbo].[Lessons]  WITH CHECK ADD  CONSTRAINT [FK_Lessons_TeachingStaff] FOREIGN KEY([TeacherID])
REFERENCES [dbo].[TeachingStaff] ([TeacherID])

ALTER TABLE [dbo].[Lessons] CHECK CONSTRAINT [FK_Lessons_TeachingStaff]

ALTER TABLE [dbo].[Lessons]  WITH CHECK ADD  CONSTRAINT [FK_Lessons_Topics] FOREIGN KEY([TopicID])
REFERENCES [dbo].[Topics] ([TopicID])

ALTER TABLE [dbo].[Lessons] CHECK CONSTRAINT [FK_Lessons_Topics]

ALTER TABLE [dbo].[Lessons]  WITH CHECK ADD  CONSTRAINT [CHK_Lessons_Type] CHECK  (([Type]='online' OR
[Type]='hybrid' OR [Type]='stationary'))

ALTER TABLE [dbo].[Lessons] CHECK CONSTRAINT [CHK_Lessons_Type]
```

11. LessonsAttendance:

Tabela posiada informacje o obecności studentów na lekcjach, posiada klucz główny (LessonsAttendenseID), dla każdego studenta przypisuje czy był obecny na danej lekcji, na którą jest zapisany (LessonID, StudentID, Attendance).

```
CREATE TABLE [dbo].[LessonsAttendance](
    [LessonsAttendenseID] [int] IDENTITY(1,1) NOT NULL,
```

```
    [LessonID] [int] NOT NULL,
    [StudentID] [int] NOT NULL,
    [Attendance] [bit] NOT NULL,
 CONSTRAINT [PK_LessonsAttendance] PRIMARY KEY CLUSTERED
(
    [LessonsAttendenseID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[LessonsAttendance]  WITH CHECK ADD  CONSTRAINT [FK_LessonsAttendance_Lessons] FOREIGN
KEY([LessonID])
REFERENCES [dbo].[Lessons] ([LessonID])

ALTER TABLE [dbo].[LessonsAttendance] CHECK CONSTRAINT [FK_LessonsAttendance_Lessons]

ALTER TABLE [dbo].[LessonsAttendance]  WITH CHECK ADD  CONSTRAINT [FK_LessonsAttendance_Students] FOREIGN
KEY([StudentID])
REFERENCES [dbo].[Students] ([StudentID])

ALTER TABLE [dbo].[LessonsAttendance] CHECK CONSTRAINT [FK_LessonsAttendance_Students]

ALTER TABLE [dbo].[LessonsAttendance]  WITH CHECK ADD  CONSTRAINT [FK_LessonsAttendance_Students1] FOREIGN
KEY([StudentID])
REFERENCES [dbo].[Students] ([StudentID])

ALTER TABLE [dbo].[LessonsAttendance] CHECK CONSTRAINT [FK_LessonsAttendance_Students1]
```

12. Topics:

Tabela posiada dane o tematach kursów, bądź lekcji, posiada klucz główny (TopicID) oraz nazwę tematu i jego opis (TopicName, Description).

```
CREATE TABLE [dbo].[Topics](
    [TopicID] [int] IDENTITY(1,1) NOT NULL,
    [TopicName] [nchar](50) NOT NULL,
    [Description] [nchar](70) NULL,
 CONSTRAINT [PK_Topics] PRIMARY KEY CLUSTERED
(
    [TopicID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```

13. Modules:

Tabela zawiera wszystkie moduły, znajdujące się kursach, posiada klucz główny (ModuleID), informacje o kursie, do którego moduł należy oraz jego tytule i typie (CourseID, Title, Type), a także dacie zakończenia i rozpoczęcia oraz klasie, w której się odbywa (EndDate, StartDate, Classroom).

```
CREATE TABLE [dbo].[Modules](
    [ModuleID] [int] IDENTITY(1,1) NOT NULL,
    [CourseID] [int] NOT NULL,
    [Title] [nchar](50) NOT NULL,
    [Type] [nchar](10) NOT NULL,
    [EndDate] [datetime] NULL,
    [StartDate] [datetime] NULL,
    [Classroom] [nchar](10) NULL,
 CONSTRAINT [PK_Modules] PRIMARY KEY CLUSTERED
(
    [ModuleID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```

```
ALTER TABLE [dbo].[Modules]  WITH CHECK ADD  CONSTRAINT [FK_Modules_Courses] FOREIGN KEY([CourseID])
REFERENCES [dbo].[Courses] ([CourseID])

ALTER TABLE [dbo].[Modules] CHECK CONSTRAINT [FK_Modules_Courses]

ALTER TABLE [dbo].[Modules]  WITH CHECK ADD  CONSTRAINT [CHK_Modules_Date_Order] CHECK  (([EndDate]>
[StartDate]))

ALTER TABLE [dbo].[Modules] CHECK CONSTRAINT [CHK_Modules_Date_Order]

ALTER TABLE [dbo].[Modules]  WITH CHECK ADD  CONSTRAINT [CHK_Modules_Type_Values] CHECK  (([Type]='online'
OR [Type]='hybrid' OR [Type]='stationary'))

ALTER TABLE [dbo].[Modules] CHECK CONSTRAINT [CHK_Modules_Type_Values]
```

14. Meetings:

Tabela zawiera dane o spotkaniach odbywających się w ramach konkretnego modułu, posiada klucz główny (MeetingID), przypisuje spotkanie do modułu, zawiera datę odbycia się i język prowadzenia oraz typ (ModuleID, Date, LanguageID, Type), miejsce odbywania się modułu, link do ewentualnego spotlania online, nauczyciela prowadzącego i tłumacza (Place, Link, TeacherID, TranslatorID).

```
CREATE TABLE [dbo].[Meetings](
    [MeetingID] [int] IDENTITY(1,1) NOT NULL,
    [ModuleID] [int] NOT NULL,
    [LanguageID] [int] NOT NULL,
    [Date] [date] NOT NULL,
    [Type] [nchar](10) NOT NULL,
    [Place] [nchar](10) NULL,
    [Link] [nchar](30) NULL,
    [TeacherID] [int] NOT NULL,
    [TranslatorID] [int] NULL,
 CONSTRAINT [PK_Meetings] PRIMARY KEY CLUSTERED
(
    [MeetingID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Meetings]  WITH CHECK ADD  CONSTRAINT [FK_Meetings_Modules] FOREIGN KEY([ModuleID])
REFERENCES [dbo].[Modules] ([ModuleID])

ALTER TABLE [dbo].[Meetings] CHECK CONSTRAINT [FK_Meetings_Modules]

ALTER TABLE [dbo].[Meetings]  WITH CHECK ADD  CONSTRAINT [FK_Meetings_TeachingStaff] FOREIGN
KEY([TeacherID])
REFERENCES [dbo].[TeachingStaff] ([TeacherID])

ALTER TABLE [dbo].[Meetings] CHECK CONSTRAINT [FK_Meetings_TeachingStaff]

ALTER TABLE [dbo].[Meetings]  WITH CHECK ADD  CONSTRAINT [FK_Meetings_Translators] FOREIGN
KEY([TranslatorID])
REFERENCES [dbo].[Translators] ([TranslatorID])

ALTER TABLE [dbo].[Meetings] CHECK CONSTRAINT [FK_Meetings_Translators]

ALTER TABLE [dbo].[Meetings]  WITH CHECK ADD  CONSTRAINT [CHK_Meetings_Type_Values] CHECK  (([Type]='online'
OR [Type]='hybrid' OR [Type]='stationary'))

ALTER TABLE [dbo].[Meetings] CHECK CONSTRAINT [CHK_Meetings_Type_Values]
```

15. CourseAttendace:

Tabela posiada informacje o obecności studentów na spotkaniach w donym module kursu, posiada klucz główny (AttendanceID), dla każdego studenta przypisuje czy był obecny na danym spotkaniu, na które jest zapisany (MeetingID, StudentID, Attendance).

```
CREATE TABLE [dbo].[CourseAttendance](
    [AttendanceID] [int] IDENTITY(1,1) NOT NULL,
    [MeetingID] [int] NOT NULL,
    [StudentID] [int] NOT NULL,
    [Attendance] [bit] NOT NULL,
 CONSTRAINT [PK_Attendance] PRIMARY KEY CLUSTERED
(
    [AttendanceID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[CourseAttendance]  WITH CHECK ADD  CONSTRAINT [FK_Attendance_Meetings] FOREIGN
KEY([MeetingID])
REFERENCES [dbo].[Meetings] ([MeetingID])

ALTER TABLE [dbo].[CourseAttendance] CHECK CONSTRAINT [FK_Attendance_Meetings]

ALTER TABLE [dbo].[CourseAttendance]  WITH CHECK ADD  CONSTRAINT [FK_Attendance_Students] FOREIGN
KEY([StudentID])
REFERENCES [dbo].[Students] ([StudentID])

ALTER TABLE [dbo].[CourseAttendance] CHECK CONSTRAINT [FK_Attendance_Students]
```

16. Orders:

Tabela przypisuje zamówienie do określonego studenta, posiada klucz główny (OrderID), studenta, do którego należy zamówienie, datę jego złożenia (StudentID, OrderDate).

```
CREATE TABLE [dbo].[Orders](
    [OrderID] [int] IDENTITY(1,1) NOT NULL,
    [StudentID] [int] NOT NULL,
    [OrderDate] [datetime] NOT NULL,
 CONSTRAINT [PK_Cart] PRIMARY KEY CLUSTERED
(
    [OrderID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Orders]  WITH CHECK ADD  CONSTRAINT [FK_Orders_Students] FOREIGN KEY([StudentID])
REFERENCES [dbo].[Students] ([StudentID])

ALTER TABLE [dbo].[Orders] CHECK CONSTRAINT [FK_Orders_Students]
```

17. Order_Details:

Tabela zawiera szczegółowe informacje o konkretnym zamówieniu, posiada klucz główny (OrderDetailsID), przypisuje ofertę do złożonego zamówienia, który się w nim znajdu (OrderID, OfferID), wartość produktu i zniżke(Value, Discount), zniażka jest wartoscia typu float z zakresu od 0 do 1.

```
CREATE TABLE [dbo].[Order_details](
    [OrderDetailsID] [int] IDENTITY(1,1) NOT NULL,
    [OrderID] [int] NOT NULL,
    [OfferID] [int] NOT NULL,
    [Value] [money] NOT NULL,
    [Discount] [float] NOT NULL,
 CONSTRAINT [PK_Cart_details] PRIMARY KEY CLUSTERED
(
    [OrderDetailsID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```

```
ALTER TABLE [dbo].[Order_details]  WITH CHECK ADD  CONSTRAINT [FK_Cart_details_Cart] FOREIGN KEY([OrderID])
REFERENCES [dbo].[Orders] ([OrderID])

ALTER TABLE [dbo].[Order_details] CHECK CONSTRAINT [FK_Cart_details_Cart]

ALTER TABLE [dbo].[Order_details]  WITH CHECK ADD  CONSTRAINT [FK_Order_details_Offers] FOREIGN
KEY([OfferID])
REFERENCES [dbo].[Offers] ([OfferID])

ALTER TABLE [dbo].[Order_details] CHECK CONSTRAINT [FK_Order_details_Offers]

ALTER TABLE [dbo].[Order_details]  WITH CHECK ADD  CONSTRAINT [CHK_OrderDetails_Discount_Range] CHECK
(([Discount]>=(0) AND [Discount]<=(1)))

ALTER TABLE [dbo].[Order_details] CHECK CONSTRAINT [CHK_OrderDetails_Discount_Range]

ALTER TABLE [dbo].[Order_details]  WITH CHECK ADD  CONSTRAINT [CHK_OrderDetails_Value_NonNegative] CHECK
(([Value]>=(0)))

ALTER TABLE [dbo].[Order_details] CHECK CONSTRAINT [CHK_OrderDetails_Value_NonNegative]
```

18. Payments:

Tabela zawiera dane o płatnościach, posiada klucz główny (PaymentID), łączy płatność z określonym zamówieniem(OrderID), zawiera datę, wartość oraz status płatności (Date, Value, IsCancelled), status jest typu bit.

```
CREATE TABLE [dbo].[Payments](
    [PaymentID] [int] IDENTITY(1,1) NOT NULL,
    [OrderID] [int] NOT NULL,
    [Date] [datetime] NOT NULL,
    [Value] [money] NOT NULL,
    [IsCancelled] [bit] NOT NULL,
 CONSTRAINT [PK_Payments] PRIMARY KEY CLUSTERED
(
    [PaymentID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Payments]  WITH CHECK ADD  CONSTRAINT [FK_Payments_Cart] FOREIGN KEY([OrderID])
REFERENCES [dbo].[Orders] ([OrderID])

ALTER TABLE [dbo].[Payments] CHECK CONSTRAINT [FK_Payments_Cart]

ALTER TABLE [dbo].[Payments]  WITH CHECK ADD  CONSTRAINT [CHK_Payments_Value_Positive] CHECK  (([Value]>
(0)))

ALTER TABLE [dbo].[Payments] CHECK CONSTRAINT [CHK_Payments_Value_Positive]
```

19. Users:

Tabela zawiera wszystkich użytkowników z całej bazy danych, posiada klucz główny (UserID), do tego dla każdego użytkownika przypisuje login i hasło (Login, Password).

```
CREATE TABLE [dbo].[Users](
    [UserID] [int] IDENTITY(1,1) NOT NULL,
    [Login] [nchar](20) NOT NULL,
    [Password] [nchar](20) NOT NULL,
 CONSTRAINT [PK_Users] PRIMARY KEY CLUSTERED
(
    [UserID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY],
```

```
 CONSTRAINT [UQ_Users_Login] UNIQUE NONCLUSTERED
(
    [Login] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Users]  WITH CHECK ADD  CONSTRAINT [CHK_Users_Login_Length] CHECK  ((len([Login])>=(5)))

ALTER TABLE [dbo].[Users] CHECK CONSTRAINT [CHK_Users_Login_Length]

ALTER TABLE [dbo].[Users]  WITH CHECK ADD  CONSTRAINT [CHK_Users_Password_Length] CHECK  ((len([Password])>=
(8)))

ALTER TABLE [dbo].[Users] CHECK CONSTRAINT [CHK_Users_Password_Length]
```

20. Students:

Tabela posiada wszystkch zarejestrowanych studentów, zawiera klucz główny (StudentID). Przechowuje informacje o studentach takie jak: imię, nazwisko, datę urodzenia (FirstName, LastName, BirthDate), z jakiego kraju pochodzi i dane adresowe (CountryID, Country, Region, City, ZipCode, Street), numer prywatnego i domowego telefonu (Phone, HomeNumber).

```
CREATE TABLE [dbo].[Students](
    [StudentID] [int] NOT NULL,
    [FirstName] [nchar](20) NOT NULL,
    [LastName] [nchar](20) NOT NULL,
    [BirthDate] [date] NOT NULL,
    [CountryID] [int] NOT NULL,
    [Region] [nchar](20) NOT NULL,
    [City] [nchar](20) NOT NULL,
    [ZipCode] [nchar](10) NOT NULL,
    [Street] [nchar](20) NOT NULL,
    [Phone] [nchar](20) NOT NULL,
    [HomeNumber] [nchar](15) NULL,
 CONSTRAINT [PK_Students] PRIMARY KEY CLUSTERED
(
    [StudentID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Students]  WITH CHECK ADD  CONSTRAINT [FK_Students_Countries] FOREIGN KEY([CountryID])
REFERENCES [dbo].[Countries] ([CountryID])

ALTER TABLE [dbo].[Students] CHECK CONSTRAINT [FK_Students_Countries]

ALTER TABLE [dbo].[Students]  WITH CHECK ADD  CONSTRAINT [FK_Students_Users] FOREIGN KEY([StudentID])
REFERENCES [dbo].[Users] ([UserID])

ALTER TABLE [dbo].[Students] CHECK CONSTRAINT [FK_Students_Users]

ALTER TABLE [dbo].[Students]  WITH CHECK ADD  CONSTRAINT [CHK_Students_BirthDate] CHECK  (([BirthDate]
<=getdate()))

ALTER TABLE [dbo].[Students] CHECK CONSTRAINT [CHK_Students_BirthDate]
```

21. Employees:

Tabela zawiera o wszystkich pracownikach, posiada klucz główny (EmployeeID) oraz inforamcaje o pracowniku takie jak: pozycję, imię, nazwisko (PositionID, FirstName, LastName), datę zatrudnienia, pensje, email, numer telefonu oraz miasto (HireDate, Salary, Email, Phone, City), dodatkowo informację czy dany pracownik wciąż dla nas pracuje(IsActive).

```
CREATE TABLE [dbo].[Employees](
    [EmployeeID] [int] IDENTITY(1,1) NOT NULL,
```

```
    [PositionID] [int] NOT NULL,
    [FirstName] [nchar](20) NOT NULL,
    [LastName] [nchar](20) NOT NULL,
    [HireDate] [date] NOT NULL,
    [Salary] [money] NOT NULL,
    [Email] [nchar](30) NOT NULL,
    [Phone] [nchar](15) NOT NULL,
    [City] [nchar](20) NOT NULL,
    [IsActive] [bit] NOT NULL,
 CONSTRAINT [PK_Employees] PRIMARY KEY CLUSTERED
(
    [EmployeeID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY],
 CONSTRAINT [UQ_Employees_Email] UNIQUE NONCLUSTERED
(
    [Email] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Employees]  WITH CHECK ADD  CONSTRAINT [FK_Employees_Position] FOREIGN KEY([PositionID])
REFERENCES [dbo].[Positions] ([PositionID])

ALTER TABLE [dbo].[Employees] CHECK CONSTRAINT [FK_Employees_Position]

ALTER TABLE [dbo].[Employees]  WITH CHECK ADD  CONSTRAINT [FK_Employees_Users] FOREIGN KEY([EmployeeID])
REFERENCES [dbo].[Users] ([UserID])

ALTER TABLE [dbo].[Employees] CHECK CONSTRAINT [FK_Employees_Users]

ALTER TABLE [dbo].[Employees]  WITH CHECK ADD  CONSTRAINT [CHK_Employees_Email_Format] CHECK
((charindex('@',[Email])>(0)))

ALTER TABLE [dbo].[Employees] CHECK CONSTRAINT [CHK_Employees_Email_Format]

ALTER TABLE [dbo].[Employees]  WITH CHECK ADD  CONSTRAINT [CHK_Employees_Salary] CHECK  (([Salary]>(0)))

ALTER TABLE [dbo].[Employees] CHECK CONSTRAINT [CHK_Employees_Salary]
```

22. TeachingStaff:

Tabela zawiera inforamacje o kadrze nauczycielskiej, posiada klucz główny (TeacherID) oraz informajce o tym w jakim języku prowadzi zajęcia i jego stopień naukowy (LanguageID, Degree).

```
CREATE TABLE [dbo].[TeachingStaff](
    [TeacherID] [int] NOT NULL,
    [LanguageID] [int] NOT NULL,
    [Degree] [nchar](30) NOT NULL,
 CONSTRAINT [PK_TeachingStaff] PRIMARY KEY CLUSTERED
(
    [TeacherID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[TeachingStaff]  WITH CHECK ADD  CONSTRAINT [FK_TeachingStaff_Employees] FOREIGN
KEY([TeacherID])
REFERENCES [dbo].[Employees] ([EmployeeID])

ALTER TABLE [dbo].[TeachingStaff] CHECK CONSTRAINT [FK_TeachingStaff_Employees]

ALTER TABLE [dbo].[TeachingStaff]  WITH CHECK ADD  CONSTRAINT [CK_TeachingStaff_Degree] CHECK
(([Degree]='professor' OR [Degree]='doctor' OR [Degree]='master' OR [Degree]='bachelor' OR [Degree]='none'))

ALTER TABLE [dbo].[TeachingStaff] CHECK CONSTRAINT [CK_TeachingStaff_Degree]
```

23. Translators:

Tabela zawiera inforamacje o tłumaczach, posiada klucz główny (TranslatorID) oraz informacje o języku z którego tłumaczy (LanguageID).

```
CREATE TABLE [dbo].[Translators](
    [TranslatorID] [int] NOT NULL,
    [LanguageID] [int] NOT NULL,
 CONSTRAINT [PK_Translators] PRIMARY KEY CLUSTERED
(
    [TranslatorID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Translators]  WITH CHECK ADD  CONSTRAINT [FK_Translators_Employees] FOREIGN
KEY([TranslatorID])
REFERENCES [dbo].[Employees] ([EmployeeID])

ALTER TABLE [dbo].[Translators] CHECK CONSTRAINT [FK_Translators_Employees]

ALTER TABLE [dbo].[Translators]  WITH CHECK ADD  CONSTRAINT [FK_Translators_Languages] FOREIGN
KEY([LanguageID])
REFERENCES [dbo].[Languages] ([LanguageID])

ALTER TABLE [dbo].[Translators] CHECK CONSTRAINT [FK_Translators_Languages]
```

24. Administrators:

Tabela zawiera inforamacja o admnistarotach zawiera klucz głowny (AdminID) oraz data otrzymania uprawnień (Add_date).

```
CREATE TABLE [dbo].[Administrators](
    [AdminID] [int] IDENTITY(1,1) NOT NULL,
    [Add_date] [datetime] NOT NULL,
 CONSTRAINT [PK_Administrators_1] PRIMARY KEY CLUSTERED
(
    [AdminID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Administrators]  WITH CHECK ADD  CONSTRAINT [FK_Administrators_Employees] FOREIGN
KEY([AdminID])
REFERENCES [dbo].[Employees] ([EmployeeID])

ALTER TABLE [dbo].[Administrators] CHECK CONSTRAINT [FK_Administrators_Employees]
```

25. Countries:

Tabela zawiera informacje o krajach, posiada klucz główny (CountryID), nazwę kraju i język (CountryName, LanguageID).

```
CREATE TABLE [dbo].[Countries](
    [CountryID] [int] IDENTITY(1,1) NOT NULL,
    [CountryName] [nchar](20) NOT NULL,
    [LanguageID] [int] NOT NULL,
 CONSTRAINT [PK_Countries2] PRIMARY KEY CLUSTERED
(
    [CountryID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Countries]  WITH CHECK ADD  CONSTRAINT [FK_Countries_Languages] FOREIGN KEY([LanguageID])
```

```
REFERENCES [dbo].[Languages] ([LanguageID])

ALTER TABLE [dbo].[Countries] CHECK CONSTRAINT [FK_Countries_Languages]
```

26. Languages:

Tabela zawiera informacje o językach, posiada klucz główny (LanguageID) oraz nazwę języka (LanguageName).

```
CREATE TABLE [dbo].[Languages](
    [LanguageID] [int] IDENTITY(1,1) NOT NULL,
    [LanguageName] [nchar](20) NOT NULL,
 CONSTRAINT [PK_Languages] PRIMARY KEY CLUSTERED
(
    [LanguageID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```

27. Position

Tabela zawiera informacje o stanowiskach, posiada klucz główny (PositionID) oraz nazwę stanowski w postaci znakowej (PositionName).

```
CREATE TABLE [dbo].[Positions](
    [PositionID] [int] IDENTITY(1,1) NOT NULL,
    [PositionName] [nchar](15) NOT NULL,
 CONSTRAINT [PK_Position] PRIMARY KEY CLUSTERED
(
    [PositionID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]

ALTER TABLE [dbo].[Positions]  WITH CHECK ADD  CONSTRAINT [CHK_Positions_PositionName] CHECK
(([PositionName]='director' OR [PositionName]='administrator' OR [PositionName]='educator' OR
[PositionName]='menager'))

ALTER TABLE [dbo].[Positions] CHECK CONSTRAINT [CHK_Positions_PositionName]
```

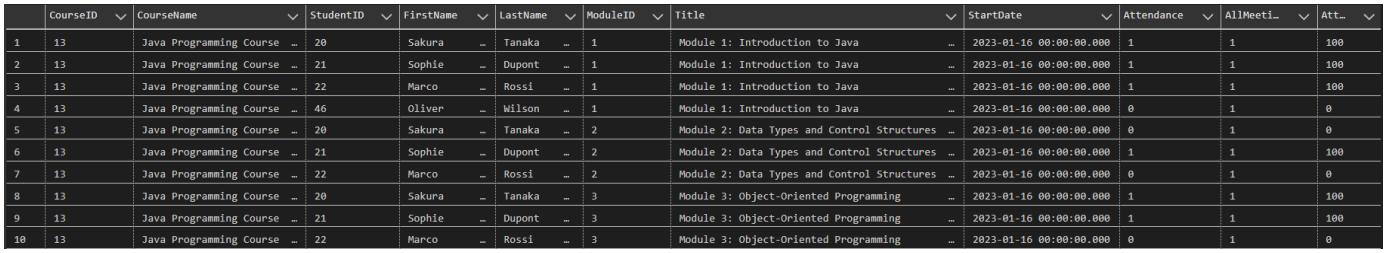
Widoki:

1. AttendanceMeetingView

Widok przedstawiający obecność studentów na spotkaniach. Dla każdego kursu podaje sumę obecności(Attendance), łączną liczbę(AllMeeting) spotkań oraz procentową obecność(AttendancePercentage). Umożliwia analizę uczestnictwa studentów w ramach konkretnych kursów i modułów.

```
CREATE VIEW [dbo].[AttendanceMeetingView] AS
SELECT
    c.CourseID,
    c.CourseName,
    a.StudentID,
    s.FirstName,
    s.LastName,
    m.ModuleID,
    m.Title,
    c.StartDate,
    SUM(CAST(a.Attendance AS INT)) AS Attendance,
    COUNT(CAST(a.Attendance AS INT) * 100) AS AllMeeting,
    AVG(CAST(a.Attendance AS INT) * 100) AS AttendancePercentage
FROM
    dbo.Courses AS c
INNER JOIN
```

```
    dbo.Modules AS m ON m.CourseID = c.CourseID
INNER JOIN
    dbo.Meetings AS me ON me.ModuleID = m.ModuleID
INNER JOIN
    dbo.CourseAttendance AS a ON a.MeetingID = me.MeetingID
INNER JOIN
    dbo.Students AS s ON a.StudentID = s.StudentID
GROUP BY c.CourseID, c.CourseName, a.StudentID, s.FirstName, s.LastName, m.ModuleID, m.Title, c.StartDate
```

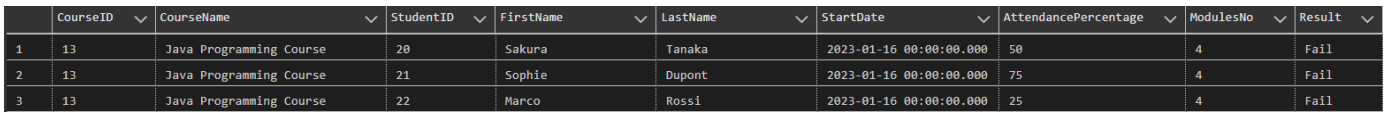


	CourseID	CourseName	StudentID	FirstName	LastName	ModuleID	Title	StartDate	Attendance	AllMeeti…	Att…
1	13	Java Programming Course …	20	Sakura …	Tanaka …	1	Module 1: Introduction to Java …	2023-01-16 00:00:00.000	1	1	100
2	13	Java Programming Course …	21	Sophie …	Dupont …	1	Module 1: Introduction to Java …	2023-01-16 00:00:00.000	1	1	100
3	13	Java Programming Course …	22	Marco …	Rossi …	1	Module 1: Introduction to Java …	2023-01-16 00:00:00.000	1	1	100
4	13	Java Programming Course …	46	Oliver …	Wilson …	1	Module 1: Introduction to Java …	2023-01-16 00:00:00.000	0	1	0
5	13	Java Programming Course …	20	Sakura …	Tanaka …	2	Module 2: Data Types and Control Structures …	2023-01-16 00:00:00.000	0	1	0
6	13	Java Programming Course …	21	Sophie …	Dupont …	2	Module 2: Data Types and Control Structures …	2023-01-16 00:00:00.000	1	1	100
7	13	Java Programming Course …	22	Marco …	Rossi …	2	Module 2: Data Types and Control Structures …	2023-01-16 00:00:00.000	0	1	0
8	13	Java Programming Course …	20	Sakura …	Tanaka …	3	Module 3: Object-Oriented Programming …	2023-01-16 00:00:00.000	1	1	100
9	13	Java Programming Course …	21	Sophie …	Dupont …	3	Module 3: Object-Oriented Programming …	2023-01-16 00:00:00.000	1	1	100
10	13	Java Programming Course …	22	Marco …	Rossi …	3	Module 3: Object-Oriented Programming …	2023-01-16 00:00:00.000	0	1	0

2. CoursesPass

Widok ten identyfikuje, czy studenci zaliczyli kurs na podstawie procentowej obecności w poszczególnych modułach. Dla każdego kursu podaje procentową obecność, łączną liczbę modułów oraz status "Pass" lub "Fail" w zależności od spełnienia warunku procentowej obecności (80% lub więcej). Umożliwia monitorowanie postępów studentów i ocenę ich osiągnięć w kontekście kursów.

```
CREATE VIEW [dbo].[CoursesPass] As
SELECT
    amv.CourseID,
    amv.CourseName,
    amv.StudentID,
    s.FirstName,
    s.LastName,
    c.StartDate,
    COUNT(amv.ModuleID) * 100 / c.ModulesNo AS AttendancePercentage,
    c.ModulesNo,
    CASE WHEN ((COUNT(amv.ModuleID) * 100) / c.ModulesNo)
                >= 80 THEN 'Pass' ELSE 'Fail' END AS Result
FROM
    dbo.AttendanceMeetingView AS amv
INNER JOIN
    dbo.Courses AS c ON amv.CourseID = c.CourseID
INNER JOIN
    dbo.Students AS s ON amv.StudentID = s.StudentID
WHERE
    amv.AttendancePercentage = 100
GROUP BY amv.CourseID, amv.CourseName, amv.StudentID, s.FirstName, s.LastName, c.ModulesNo, c.StartDate
```



	CourseID	CourseName	StudentID	FirstName	LastName	StartDate	AttendancePercentage	ModulesNo	Result
1	13	Java Programming Course	20	Sakura	Tanaka	2023-01-16 00:00:00.000	50	4	Fail
2	13	Java Programming Course	21	Sophie	Dupont	2023-01-16 00:00:00.000	75	4	Fail
3	13	Java Programming Course	22	Marco	Rossi	2023-01-16 00:00:00.000	25	4	Fail

3. ConflictingTranslatorMeetings

Widok ConflictingTranslatorMeetings identyfikuje konfliktowe spotkania tłumaczy, prezentując informacje o dwóch spotkaniach o różnych identyfikatorach (ModuleID1 i ModuleID2), które mają tę samą datę (MeetingDate) oraz dotyczą tego samego tłumacza (PersonID). Dodatkowo, widok dostarcza imię (FirstName) i nazwisko (LastName) tłumacza za pomocą danych pobranych z tabeli pracowników (Employees).

```
CREATE VIEW [dbo].[ConflictingTranslatorMeetings] AS
SELECT
    M1.ModuleID AS ModuleID1,
    M2.ModuleID AS ModuleID2,
    M1.Date AS MeetingDate,
    M1.TranslatorID AS PersonID,
```

```
    T.FirstName,
    T.LastName
FROM
    Meetings M1
JOIN
    Meetings M2 ON M1.TranslatorID = M2.TranslatorID
JOIN
    Employees T ON M1.TranslatorID = T.EmployeeID
WHERE
    M1.MeetingID <> M2.MeetingID
    AND M1.Date = M2.Date
    AND M1.MeetingID < M2.MeetingID
```

	ModuleID1	ModuleID2	MeetingDate	PersonID	FirstName	LastName
1	6	7	2023-04-21	20	Olivia	Williams

4. CourseProfitView

Widok ten zawiera informacje o studentach zapisanych na kursy, prezentując identyfikator studenta (StudentID), imię (FirstName) i nazwisko (LastName) studenta, identyfikator kursu (CourseID), nazwę kursu (CourseName), opis kursu (CourseDescription), miejsce kursu (CoursePlace), oraz datę rozpoczęcia kursu (StartDate).

```
CREATE VIEW [dbo].[CourseProfitView] AS
SELECT
    c.CourseID,
    c.CourseName,
    ISNULL((
        SELECT COUNT(od.OrderDetailsID)
        FROM Order_details od
        WHERE od.OfferID = c.CourseID
    ), 0) AS Students_number,
    ISNULL((
        SELECT SUM(od.Value)
        FROM Order_details od
        WHERE od.OrderID IN (SELECT p.OrderID FROM Payments p)
        AND od.OfferID = c.CourseID
    ), 0) AS Profit,
    c.ModulesNo,
    c.StartDate
FROM
    Courses c
```

	CourseID	CourseName	Students_number	Profit	ModulesNo	StartDate
1	13	Java Programming Course	2	399.98	4	2023-01-16 00:00:00.000
2	14	Data Science Course	1	399.99	3	2023-02-15 00:00:00.000
3	15	Digital Marketing Course	1	249.99	5	2023-03-20 00:00:00.000
4	16	Web Development Bootcamp	1	499.99	3	2023-04-25 00:00:00.000

5. EnrolledStudentsToCourses

Widok przedstawia informacje o studentach zapisanych na kursy. Zawiera identyfikator studenta (StudentID), imię (FirstName) i nazwisko (LastName) studenta, identyfikator kursu (CourseID), nazwę kursu (Name), opis kursu (Description), miejsce kursu (Place), oraz datę rozpoczęcia kursu (StartDate).

```
CREATE VIEW [dbo].[EnrolledStudentsToCourses] AS
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    O.OfferID AS CourseID,
    O.Name AS Name,
```

```
    O.Description AS Description,
    O.Place AS Place,
    C.StartDate AS StartDate
FROM
    Students AS S
INNER JOIN
    Orders AS Ord ON S.StudentID = Ord.StudentID
INNER JOIN
    Order_details AS Od ON Ord.OrderID = Od.OrderID
INNER JOIN
    Offers AS O ON Od.OfferID = O.OfferID
INNER JOIN
    Courses AS C ON O.OfferID = C.CourseID
WHERE
    O.Type = 'Courses'
```

	StudentID	FirstName	LastName	CourseID	Name	Description	Place	StartDate
1	17	John …	Smith …	13	Java Programming Course	Comprehensive Java programming course	CityM, Boulevard 123	2023-01-16 00:00:00.000
2	20	Sakura …	Tanaka …	15	Digital Marketing Course	Strategies and techniques in digital marketing	CityO, Lane 789	2023-03-20 00:00:00.000
3	21	Sophie …	Dupont …	16	Web Development Bootcamp	Intensive web development training program	CityP, Square 012	2023-04-25 00:00:00.000
4	21	Sophie …	Dupont …	14	Data Science Fundamentals Course	Fundamental concepts of Data Science	CityN, Avenue 456	2023-02-15 00:00:00.000
5	33	Carlos …	Fernandez …	13	Java Programming Course	Comprehensive Java programming course	CityM, Boulevard 123	2023-01-16 00:00:00.000

6. EnrolledStudentsToGatherings

Widok [EnrolledStudentsToGatherings dostarcza informacje o studentach zapisanych na spotkania. Prezentuje identyfikator studenta (StudentID), imię (FirstName) i nazwisko (LastName) studenta, identyfikator spotkania (GatheringID), nazwę spotkania (Name), opis spotkania (Description), miejsce spotkania (Place), oraz datę spotkania (Date).

```
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    O.OfferID AS GatheringID,
    O.Name AS Name,
    O.Description AS Description,
    O.Place AS Palce,
    G.Date AS Date
FROM
    Students AS S
INNER JOIN
    Orders AS Ord ON S.StudentID = Ord.StudentID
INNER JOIN
    Order_details AS Od ON Ord.OrderID = Od.OrderID
INNER JOIN
    Offers AS O ON Od.OfferID = O.OfferID
INNER JOIN
    Gatherings AS G ON O.OfferID = G.GatheringID
WHERE
    O.Type = 'Gathering'
```

	StudentID	FirstName	LastName	GatheringID	Name	Description	Palce	Date
1	22	Marco …	Rossi …	19	Science Fiction Fans Meetup	Discussion and presentations on sci-fi	CityS, Lane 789	2023-05-25 00:00:00.000
2	23	Mei …	Wong …	17	Tech Enthusiasts Gathering	Various tech-related sessions	CityQ, Street 123	2023-03-15 00:00:00.000
3	19	James …	Brown …	11	English for Business Communication	Improving English communication skills	CityK, Lane 789	2023-05-28 00:00:00.000
4	22	Marco …	Rossi …	9	Introduction to Programming	Basic programming concepts	CityI, Street 123	2023-03-18 00:00:00.000
5	23	Mei …	Wong …	12	Introduction to Machine Learning	Basic concepts of machine learning	CityL, Square 012	2023-07-01 00:00:00.000
6	17	John …	Smith …	20	Art and Creativity Symposium	Artistic workshops and discussions	CityT, Square 012	2023-06-30 00:00:00.000
7	30	Juan …	Lopez …	18	Health and Wellness Expo	Wellness sessions and workshops	CityR, Avenue 456	2023-04-20 00:00:00.000
8	21	Sophie …	Dupont …	10	Advanced Data Structures	In-depth study of data structures	CityJ, Avenue 456	2023-04-21 00:00:00.000
9	21	Sophie …	Dupont …	11	English for Business Communication	Improving English communication skills	CityK, Lane 789	2023-05-28 00:00:00.000
10	29	Sophie …	Müller …	19	Science Fiction Fans Meetup	Discussion and presentations on sci-fi	CityS, Lane 789	2023-05-25 00:00:00.000

7. EnrolledStudentsToStudies

Widok dostarcza informacje o studentach zapisanych na studia. Prezentuje identyfikator studenta (StudentID), imię (FirstName) i nazwisko (LastName) studenta, identyfikator studiów (StudiesID), nazwę oferty studiów (Name), opis oferty studiów (Description), miejsce oferty studiów (Place), oraz datę rozpoczęcia studiów (StartDate).

```sql
CREATE VIEW [dbo].[EnrolledStudentsToStudies] AS
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    St.StudiesID,
    O.Name AS Name,
    O.Description AS Description,
    O.Place AS Place,
    MIN(G.Date) AS StartDate
FROM
    Students AS S
LEFT OUTER JOIN
    Orders AS Ord ON S.StudentID = Ord.StudentID
LEFT OUTER JOIN
    Order_details AS Od ON Ord.OrderID = Od.OrderID
LEFT OUTER JOIN
    Offers AS O ON Od.OfferID = O.OfferID
LEFT OUTER JOIN
    Studies AS St ON O.OfferID = St.StudiesID
LEFT OUTER JOIN
    Semesters AS Sem ON St.StudiesID = Sem.StudiesID
LEFT OUTER JOIN
    Gatherings AS G ON Sem.SemesterID = G.SemesterID
WHERE
    O.Type = 'Studies'
GROUP BY
    S.StudentID, S.FirstName, S.LastName, St.StudiesID, O.OfferID, O.Name, O.Description, O.Place
```

	StudentID	FirstNa…	LastName	StudiesID	Name	Description	Place	StartDate
1	19	James …	Brown	5	Computer Science Bachelor Program	Bachelor studies in Computer Science …	CityE, Boulevard 123	2023-03-15 00:00:00.000
2	20	Sakura …	Tanaka	6	Data Analytics Master Program	Master studies in Data Analytics …	CityF, Square 456	NULL
3	20	Sakura …	Tanaka	7	Business Administration PhD Program	PhD studies in Business Administration …	CityG, Avenue 789	NULL
4	21	Sophie …	Dupont	8	Artificial Intelligence Certificate Program	Certificate program in AI …	CityH, Lane 012	NULL
5	22	Marco …	Rossi	5	Computer Science Bachelor Program	Bachelor studies in Computer Science …	CityE, Boulevard 123	2023-03-15 00:00:00.000
6	28	Hiroshi …	Yamamoto	5	Computer Science Bachelor Program	Bachelor studies in Computer Science …	CityE, Boulevard 123	2023-03-15 00:00:00.000

8. EnrolledStudentsToWebinars

Widok dostarcza informacje o studentach zapisanych na webinary. Prezentuje identyfikator studenta (StudentID), imię (FirstName) i nazwisko (LastName) studenta, identyfikator webinaru (WebinarID), nazwę spotkania (Name), opis spotkania (Description), miejsce spotkania (Place), oraz datę webinaru (Date). Zastosowanie tego widoku ułatwia monitorowanie uczestnictwa studentów w webinarach, umożliwiając identyfikację zapisanych osób oraz szczegółowe informacje o danym wydarzeniu edukacyjnym.

```sql
CREATE VIEW [dbo].[EnrolledStudentsToWebinars] AS
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    O.OfferID AS WebinarID,
    O.Name AS WebinarName,
    O.Description AS Descritpion,
    O.Place AS Place,
    W.Date
FROM
    Students AS S
INNER JOIN
    Orders AS Ord ON S.StudentID = Ord.StudentID
INNER JOIN
    Order_details AS Od ON Ord.OrderID = Od.OrderID
INNER JOIN
    Offers AS O ON Od.OfferID = O.OfferID
INNER JOIN
    Webinar AS W ON O.OfferID = W.WebinarID
WHERE
    O.Type = 'Webinar';
```

	StudentID	FirstName	LastName	Webinar…	WebinarName	Descritpion	Place	Date
1	17	John	Smith …	1	Webinar on Data Science Basics	Introduction to Data Science	CityA, Street 123	2023-01-15 00:00:00.000
2	18	Maria	Rodriguez …	2	Webinar: Mastering Python	Explore Python programming	CityB, Avenue 456	2023-02-20 00:00:00.000
3	18	Maria	Rodriguez …	3	Webinar: Machine Learning Fundamentals	Understanding basics of Machine Learning	CityC, Lane 789	2023-03-25 00:00:00.000
4	29	Sophie	Müller …	4	Webinar: Cybersecurity Essentials	Essential tips for Cybersecurity	CityD, Square 012	2023-04-30 00:00:00.000
5	23	Mei	Wong …	1	Webinar on Data Science Basics	Introduction to Data Science	CityA, Street 123	2023-01-15 00:00:00.000
6	30	Juan	Lopez …	2	Webinar: Mastering Python	Explore Python programming	CityB, Avenue 456	2023-02-20 00:00:00.000

9. ListOfDebtors

Widok ListOfDebtors przedstawia szczegółowe informacje o osobach, które wzięły udział w różnych wydarzeniach, ale jeszcze nie uregulowały swoich płatności, pozostając w stanie zadłużenia. Zidentyfikowani dłużnicy są grupowani według identyfikatora studenta (StudentID) oraz oferty (OfferID), a informacje obejmują imię i nazwisko studenta (Student_name), identyfikator oferty (OfferID), nazwę oferty (Name) oraz kwotę zadłużenia (Debt). Widok uwzględnia różne rodzaje wydarzeń, takie jak spotkania (Gatherings), kursy (Courses), webinary (Webinar) oraz studia (Studies).

```
WITH t AS (
    SELECT
        o.OrderID,
        CASE
            WHEN EXISTS (SELECT 1 FROM Payments as p WHERE o.OrderID = p.OrderID AND p.CancelDate IS NULL)
THEN 1
            ELSE 0
        END AS OrderStatus
    FROM
        Orders as o
)

SELECT
    s.StudentID,
    s.FirstName,
    s.LastName,
    o.OfferID,
    o.Name,
    o.Type,
    CAST((d.Value*(1-d.Discount)-P.Value) AS DECIMAL(10,2)) AS Debt
FROM
    Gatherings as g
INNER JOIN
    Offers as o ON g.GatheringID = o.OfferID
INNER JOIN
    Order_details as d ON d.OfferID = o.OfferID
INNER JOIN
    t ON t.OrderID = d.OrderID
INNER JOIN
    Orders as r ON r.OrderID = d.OrderID
INNER JOIN
    Students as s ON s.StudentID = r.StudentID
INNER JOIN
    Payments AS P ON r.OrderID = P.OrderID
WHERE
    t.OrderStatus = 0 AND g.Date < GETDATE()

UNION

SELECT
    s.StudentID,
    s.FirstName,
    s.LastName,
    o.OfferID,
    o.Name,
    o.Type,
    CAST((d.Value*(1-d.Discount)-P.Value) AS DECIMAL(10,2)) AS Debt
FROM
    Courses as c
INNER JOIN
    Offers as o ON c.CourseID = o.OfferID
INNER JOIN
    Order_details as d ON d.OfferID = o.OfferID
```

```
INNER JOIN
    t ON t.OrderID = d.OrderID
INNER JOIN
    Orders as r ON r.OrderID = d.OrderID
INNER JOIN
    Students as s ON s.StudentID = r.StudentID
INNER JOIN
    Payments AS P ON r.OrderID = P.OrderID
WHERE
    t.OrderStatus = 0 AND c.StartDate < GETDATE()

UNION

SELECT
    s.StudentID,
    s.FirstName,
    s.LastName,
    o.OfferID,
    o.Name,
    o.Type,
    CAST((d.Value*(1-d.Discount)-P.Value) AS DECIMAL(10,2)) AS Debt
FROM
    Webinar as w
INNER JOIN
    Offers as o ON w.WebinarID = o.OfferID
INNER JOIN
    Order_details as d ON d.OfferID = o.OfferID
INNER JOIN
    t ON t.OrderID = d.OrderID
INNER JOIN
    Orders as r ON r.OrderID = d.OrderID
INNER JOIN
    Students as s ON s.StudentID = r.StudentID
INNER JOIN
    Payments AS P ON r.OrderID = P.OrderID
WHERE
    t.OrderStatus = 0 AND w.Date < GETDATE()

UNION

SELECT
    s.StudentID,
    s.FirstName,
    s.LastName,
    o.OfferID,
    o.Name,
    o.Type,
    CAST((d.Value*(1-d.Discount)-P.Value) AS DECIMAL(10,2)) AS Debt
FROM
    Studies as sd
INNER JOIN
    Offers as o ON sd.StudiesID = o.OfferID
INNER JOIN
    Order_details as d ON d.OfferID = o.OfferID
INNER JOIN
    t ON t.OrderID = d.OrderID
INNER JOIN
    Orders as r ON r.OrderID = d.OrderID
INNER JOIN
    Students as s ON s.StudentID = r.StudentID
INNER JOIN
    Payments AS P ON r.OrderID = P.OrderID
WHERE
    t.OrderStatus = 0;
```

	StudentID	FirstName	LastName	OfferID	Name	Type	Debt
1	28	Hiroshi	Yamamoto	5	Computer Science Bachelor Program	Studies	3955.00

10. OrdersPaymentsView

WidokOrdersPaymentsView dostarcza kompleksowych informacji na temat płatności związanych z zamówieniami. Prezentuje identyfikator zamówienia (OrderID), łączną wartość zamówienia (Value), opłaconą kwotę (Paid), kwotę do zapłaty (ToPay), datę anulowania płatności (CancelDate), datę zamówienia (OrderDate), identyfikator studenta (StudentID), oraz imię i nazwisko osoby składającej zamówienie (Orderer_name).

```
CREATE VIEW [dbo].[OrdersPaymentsView] AS
SELECT
    Ord.OrderID,
    CAST(SUM(OD.Value*(1-OD.Discount)) AS decimal(10,2)) AS Value,
    CAST(P.Value AS decimal(10,0)) AS Paid,
    CAST(
        IIF(P.CancelDate IS NOT NULL, 0.00, SUM(OD.Value*(1-OD.Discount))-P.Value) AS DECIMAl(10,2)
    ) AS ToPay,
    P.CancelDate,
    OrderDate,
    ord.StudentID,
    FirstName,
    LastName
FROM
    Orders AS Ord
INNER JOIN
    Order_details AS OD ON Ord.OrderID = OD.OrderID
INNER JOIN
    Payments AS P ON Ord.OrderID = P.OrderID
INNER JOIN
    Students AS s ON s.StudentID = ord.StudentID
GROUP BY
    Ord.OrderID, P.CancelDate, P.Value, OrderDate, ord.StudentID, FirstName, LastName
```

	OrderID	Value	Paid	ToPay	CancelDate	OrderDate	StudentID	FirstName	LastName
1	1	350.72	351	0.00	NULL	2022-12-01 00:00:00.000	17	John	Smith
2	2	75.98	76	0.00	NULL	2022-12-02 00:00:00.000	18	Maria	Rodriguez
3	3	4283.99	4284	0.00	NULL	2022-12-03 00:00:00.000	19	James	Brown
4	4	16174.99	16175	0.00	NULL	2022-12-04 00:00:00.000	20	Sakura	Tanaka
5	5	2331.98	2332	0.00	NULL	2022-12-05 00:00:00.000	21	Sophie	Dupont
6	6	5056.98	5057	0.00	NULL	2022-12-06 00:00:00.000	22	Marco	Rossi
7	7	102.47	102	0.00	NULL	2022-11-06 00:00:00.000	23	Mei	Wong
8	8	331.98	332	0.00	NULL	2022-11-07 00:00:00.000	21	Sophie	Dupont
9	9	99.99	12	87.99	NULL	2022-07-09 00:00:00.000	33	Carlos	Fernandez
10	9	99.99	12	0.00	2022-07-16	2022-07-09 00:00:00.000	33	Carlos	Fernandez
11	10	4000.00	45	0.00	2022-11-13	2022-11-07 00:00:00.000	28	Hiroshi	Yamamoto
12	11	65.58	66	0.00	NULL	2022-12-05 00:00:00.000	30	Juan	Lopez
13	12	48.48	48	0.00	NULL	2022-01-07 00:00:00.000	29	Sophie	Müller

11. ProfitInfo

Widok analizuje zamówienia dla ofert, grupując je według identyfikatora oferty (OfferID), typu oferty (Type), daty zamówienia (OrderDate), identyfikatora studenta (StudentID), oraz imienia i nazwiska zamawiającego (Orderer_name). Dla każdej grupy prezentuje liczbę wszystkich zamówień (AllOrders) oraz całkowity zysk (Profit). Dodatkowo pokazuje date dokonania zamówienia i dane osoby je składającej.

```
CREATE VIEW [dbo].[ProfitInfo] AS
SELECT
    Order_details.OfferID,
    Type,
    COUNT(Order_details.OrderID) AS AllOrders,
    SUM(Value) AS Profit,
    OrderDate,
    Orders.StudentID,
    FirstName,
    LastName
FROM Order_details
JOIN
```

```
    Offers ON Offers.OfferID = Order_details.OfferID
JOIN
    Orders ON Orders.OrderID = Order_details.OrderID
JOIN
    Students ON Students.StudentID = Orders.StudentID
GROUP BY
    Order_details.OfferID, Type, OrderDate, Orders.StudentID, FirstName, LastName
```

	OfferID	Type	AllOrders	Profit	OrderDate	StudentID	FirstName	LastName
1	1	Webinar	1	29.99	2022-11-06 00:00:00.000	23	Mei	Wong
2	1	Webinar	1	29.99	2022-12-01 00:00:00.000	17	John	Smith
3	2	Webinar	1	39.99	2022-12-02 00:00:00.000	18	Maria	Rodriguez
4	2	Webinar	1	39.99	2022-12-05 00:00:00.000	30	Juan	Lopez
5	3	Webinar	1	49.99	2022-12-02 00:00:00.000	18	Maria	Rodriguez
6	4	Webinar	1	34.99	2022-01-07 00:00:00.000	29	Sophie	Müller
7	5	Studies	1	5000.00	2022-11-07 00:00:00.000	28	Hiroshi	Yamamoto
8	5	Studies	1	5000.00	2022-12-03 00:00:00.000	19	James	Brown
9	5	Studies	1	5000.00	2022-12-06 00:00:00.000	22	Marco	Rossi
10	6	Studies	1	7000.00	2022-12-04 00:00:00.000	20	Sakura	Tanaka
11	7	Studies	1	10000.00	2022-12-04 00:00:00.000	20	Sakura	Tanaka
12	8	Studies	1	2500.00	2022-12-05 00:00:00.000	21	Sophie	Dupont
13	9	Gathering	1	49.99	2022-12-06 00:00:00.000	22	Marco	Rossi
14	10	Gathering	1	59.99	2022-12-05 00:00:00.000	21	Sophie	Dupont
15	11	Gathering	1	39.99	2022-11-07 00:00:00.000	21	Sophie	Dupont
16	11	Gathering	1	39.99	2022-12-03 00:00:00.000	19	James	Brown
17	12	Gathering	1	69.99	2022-11-06 00:00:00.000	23	Mei	Wong
18	13	Courses	1	99.99	2022-07-09 00:00:00.000	33	Carlos	Fernandez
19	13	Courses	1	299.99	2022-12-01 00:00:00.000	17	John	Smith
20	14	Courses	1	399.99	2022-11-07 00:00:00.000	21	Sophie	Dupont
21	15	Courses	1	249.99	2022-12-04 00:00:00.000	20	Sakura	Tanaka
22	16	Courses	1	499.99	2022-12-05 00:00:00.000	21	Sophie	Dupont
23	17	Gathering	1	19.99	2022-11-06 00:00:00.000	23	Mei	Wong
24	18	Gathering	1	29.99	2022-12-05 00:00:00.000	30	Juan	Lopez
25	19	Gathering	1	14.99	2022-01-07 00:00:00.000	29	Sophie	Müller
26	19	Gathering	1	14.99	2022-12-06 00:00:00.000	22	Marco	Rossi
27	20	Gathering	1	24.99	2022-12-01 00:00:00.000	17	John	Smith

12. StudentPracticesCompletionStatus

Widok analizuje podsumowanie praktyk studenckich, korzystając z tymczasowej tabeli (PracticeCounts), aby określić liczbę wszystkich praktyk dla każdego studenta. Główne zapytanie prezentuje identyfikator studenta, imię, nazwisko, liczbę ukończonych praktyk, łączną liczbę praktyk, wynik (Pass/Fail) w zależności od tego, czy student ukończył wszystkie praktyki, oraz średnią frekwencję.

```
CREATE VIEW [dbo].[StudentPracticesCompletionStatus] AS
WITH PracticeCounts AS (
    SELECT
        in_t.StudentID,
        COUNT(in_t.PractiseID) AS TotalPracticesCount
    FROM
        StudentPracticesSummaryByPractiseID in_t
    GROUP BY
        in_t.StudentID
)

SELECT
    out_t.StudentID,
    out_t.FirstName,
    out_t.LastName,
    COUNT(out_t.PractiseID) AS CompletedPracticesCount,
    PracticeCounts.TotalPracticesCount,
    CASE
        WHEN COUNT(out_t.PractiseID) = PracticeCounts.TotalPracticesCount
            THEN 'Pass'
```

```
        ELSE 'Fail'
    END AS Result,
    CAST(SUM(CAST(out_t.Attendance AS FLOAT)) / PracticeCounts.TotalPracticesCount AS DECIMAL(10, 2)) AS
Attendance
FROM
    StudentPracticesSummaryByPractiseID out_t
JOIN
    PracticeCounts ON out_t.StudentID = PracticeCounts.StudentID
WHERE
    CompletedAllPractices = 'True'
GROUP BY
    out_t.StudentID, out_t.FirstName, out_t.LastName, PracticeCounts.TotalPracticesCount;
```

	StudentID	FirstName	LastName	CompletedPracticesCount	TotalPracticesCount	Result	Attendance
1	19	James	Brown	4	4	Pass	1.00
2	22	Marco	Rossi	1	4	Fail	0.25
3	28	Hiroshi	Yamamoto	3	4	Fail	0.75

13. StudentPracticesSummaryByPractiseID

Zapytanie to generuje raport na temat uczestnictwa studentów w praktykach zawodowych. Dla każdego studenta i praktyki, prezentuje identyfikator studenta, imię, nazwisko, identyfikator praktyki, datę praktyki oraz informację czy student ukończył wszystkie zajęcia praktyczne ('True' lub 'False'), oraz procentowe obliczenie frekwencji studenta w praktyce.

```
CREATE VIEW [dbo].[StudentPracticesSummaryByPractiseID] AS
SELECT
    PA.StudentID,
    S.FirstName,
    S.LastName,
    PA.PractiseID,
    p.StartDate,
    CASE WHEN SUM(CAST(PA.Attendance AS INT)) = COUNT(PA.Attendance)
         THEN 'True'
         ELSE 'False'
    END AS CompletedAllPractices,
    CAST(SUM(CAST(PA.Attendance AS INT)) * 1.0 / NULLIF(COUNT(PA.Attendance), 0) AS DECIMAL(10, 2)) AS
Attendance
FROM
    PractiseAttendance PA
JOIN
    Students S ON PA.StudentID = S.StudentID
JOIN
    Practices p ON p.PractiseID = PA.PractiseID
GROUP BY
    PA.StudentID, PA.PractiseID, S.FirstName, S.LastName, p.StartDate;
```

	StudentID	FirstName	LastName	PractiseID	StartDate	CompletedAllPractices	Attendance
1	19	James	Brown	1	2023-12-30 23:35:25.390	True	1.00
2	22	Marco	Rossi	1	2023-12-30 23:35:25.390	True	1.00
3	28	Hiroshi	Yamamoto	1	2023-12-30 23:35:25.390	False	0.40
4	19	James	Brown	2	2023-12-31 23:35:25.390	True	1.00
5	22	Marco	Rossi	2	2023-12-31 23:35:25.390	False	0.00
6	28	Hiroshi	Yamamoto	2	2023-12-31 23:35:25.390	True	1.00
7	19	James	Brown	3	2024-01-01 23:35:25.390	True	1.00
8	22	Marco	Rossi	3	2024-01-01 23:35:25.390	False	0.00
9	28	Hiroshi	Yamamoto	3	2024-01-01 23:35:25.390	True	1.00
10	19	James	Brown	4	2024-01-02 23:35:25.390	True	1.00
11	22	Marco	Rossi	4	2024-01-02 23:35:25.390	False	0.00
12	28	Hiroshi	Yamamoto	4	2024-01-02 23:35:25.390	True	1.00

14. StudentsEnrolmentInfo

Widok przedstawia informacje o zapisach studentów, uwzględniając identyfikator studenta, imię, nazwisko, liczbę unikalnych wydarzeń, do których się zapisali, oraz numer telefonu.

```
SELECT
    s.StudentID,
    s.FirstName,
    s.LastName,
    COUNT(DISTINCT od.OfferID) AS NumOfEvents,
    s.Phone,
    ISNULL((
        SELECT
            COUNT(StudentID)
        FROM
            EnrolledStudentsToCourses
        WHERE
            StudentID = s.StudentID
            ), 0) AS CoursesNumber,
    ISNULL((
        SELECT
            COUNT(StudentID)
        FROM
            EnrolledStudentsToGatherings
        WHERE
            StudentID = s.StudentID
            ), 0) AS GatheringsNumber,
    ISNULL((
        SELECT
            COUNT(StudentID)
        FROM
            EnrolledStudentsToStudies
        WHERE
            StudentID = s.StudentID
            ), 0) AS StudiesNumber,
    ISNULL((
        SELECT
            COUNT(StudentID)
        FROM
            EnrolledStudentsToWebinars
        WHERE
            StudentID = s.StudentID
            ), 0) AS WebinarNumber

FROM
    Users u
INNER JOIN
    Students s ON u.UserID = s.StudentID
INNER JOIN
    Orders o ON o.StudentID = s.StudentID
INNER JOIN
    Order_details od ON od.OrderID = o.OrderID
GROUP BY s.StudentID, s.FirstName, s.LastName, s.Phone
```

	StudentID	FirstName	LastName	NumOfEvents	Phone	CoursesNumber	GatheringsNumber	StudiesNumber	WebinarNumber
1	17	John	Smith	3	+1 555-123-4567	1	1	0	1
2	18	Maria	Rodriguez	2	+52 55-7890-1234	0	0	0	2
3	19	James	Brown	2	+1 416-555-7890	0	1	1	0
4	20	Sakura	Tanaka	3	+81 90-1234-5678	1	0	2	0
5	21	Sophie	Dupont	5	+33 1 23 45 67 89	2	2	1	0
6	22	Marco	Rossi	3	+39 06 1234 5678	0	2	1	0
7	23	Mei	Wong	3	+86 10 1234 5678	0	2	0	1
8	28	Hiroshi	Yamamoto	1	+81 90-9876-5432	0	0	1	0
9	29	Sophie	Müller	2	+49 89 1234 5678	0	1	0	1
10	30	Juan	Lopez	2	+34 91 987 65 43	0	1	0	1
11	33	Carlos	Fernandez	1	+34 93 987 65 43	1	0	0	0

15. StudiesProfitView

Widok prezentuje kompleksowe informacje o dochodach i zapisanych studentach dla różnych studiów. Obejmuje identyfikator studium, nazwę, liczbę studentów, całkowity dochód, ilość semestrów oraz imię i nazwisko menedżera studium.

```
SELECT
    s.StudiesID,
    s.Name,
    ISNULL((
        SELECT COUNT(od.OrderDetailsID)
        FROM Order_details od
        WHERE od.OfferID = s.StudiesID
    ), 0) AS Students_number,
    ISNULL((
        SELECT SUM(od.Value)
        FROM Order_details od
        WHERE od.OrderID IN (SELECT p.OrderID FROM Payments p)
        AND od.OfferID = s.StudiesID
    ), 0) AS Profit,
    ISNULL((
        SELECT COUNT(sem.SemesterID)
        FROM Semesters sem
        WHERE sem.StudiesID = s.StudiesID
    ), 0) AS Semesters_number,
    e.FirstName,
    e.LastName
FROM
    Studies s
LEFT JOIN TeachingStaff t ON t.TeacherID = s.MenagerID
LEFT JOIN Employees e ON e.EmployeeID = t.TeacherID;
```

	StudiesID	Name	Students_number	Profit	Semesters_number	FirstName	LastName
1	5	Computer Science	3	15000.00	4	Michael	Taylor
2	6	Data Analytics	1	7000.00	0	Emma	Miller
3	7	Business Administration (PhD)	1	10000.00	0	Christopher	Anderson
4	8	Artificial Intelligence Certificate	1	2500.00	0	Olivia	Moore

16. WebinarProfitView

Widok prezentuje szczegółowe informacje o poszczególnych webinarach, uwzględniając identyfikator, nazwę, liczbę uczestników, całkowity dochód oraz datę wydarzenia. Dodatkowo, dostarcza imię i nazwisko prowadzącego.

```
CREATE VIEW [dbo].[WebinarProfitView] AS
SELECT
    w.WebinarID,
    w.WebinarName,
    ISNULL((
        SELECT COUNT(od.OrderDetailsID)
        FROM Order_details od
        WHERE od.OfferID = w.WebinarID
    ), 0) AS Students_number,
    ISNULL((
        SELECT SUM(od.Value)
        FROM Order_details od
        WHERE od.OrderID IN (SELECT p.OrderID FROM Payments p)
        AND od.OfferID = w.WebinarID
    ), 0) AS Profit,
    w.Date,
    e.FirstName,
    e.LastName
FROM
    Webinar w
JOIN TeachingStaff t ON t.TeacherID = w.TeacherID
JOIN Employees e ON e.EmployeeID = t.TeacherID
```

	WebinarID	WebinarName	Students_number	Profit	Date	FirstName	LastName
1	1	Webinar on Data Science Basics	2	59.98	2023-01-15 00:00:00.000	Alice	Johnson
2	2	Mastering Python	2	79.98	2023-02-20 00:00:00.000	Alice	Johnson
3	3	Machine Learning Fundamentals	1	49.99	2023-03-25 00:00:00.000	David	Brown
4	4	Cybersecurity Essentials	1	34.99	2023-04-30 00:00:00.000	Sophia	Williams
5	5	Mastering Python	3	15000.00	2023-02-20 00:00:00.000	Alice	Johnson
6	6	Clean Code	1	7000.00	2023-05-25 00:00:00.000	Jan	Kowalski

17. AllTeacherConflicts

Widok "AllTeacherConflicts" identyfikuje konflikty w harmonogramie nauczycieli, uwzględniając spotkania, webinary i lekcje. Dla każdej pary konfliktujących spotkań/lekcji, widok dostarcza informacje o nauczycielu (PersonID), jego imieniu i nazwisku, typie oferty (Meeting, Webinar lub Lesson), identyfikatorze oferty (ID), dacie rozpoczęcia i zakończenia obu ofert (Date1, Duration1, Date2, Duration2). Konflikty są uwzględniane w przypadku nachodzenia się czasów lub dat.

```
CREATE VIEW [dbo].[AllTeacherConflicts] AS
WITH MergedMeetings AS (
    SELECT
        M1.MeetingID AS ID,
        M1.TeacherID AS PersonID,
        M1.Date AS MeetingDate,
        NULL AS Duration,
        'Meeting' as offerType
    FROM
        Meetings M1

    UNION

    SELECT
        W1.WebinarID AS ID,
        W1.TeacherID AS PersonID,
        W1.Date AS WebinarDate,
        NULL AS Duration,
        'Webinar' as offerType
    FROM
        Webinar W1

    UNION

    SELECT
        L1.LessonID AS OfferID,
        L1.TeacherID AS PersonID,
        L1.Date AS StartTime,
        L1.Duration,
        'Lesson' as offerType
    FROM
        Lessons L1

)
SELECT
    M1.PersonID,
    FirstName,
    LastName,
    M1.offerType AS OfferType1,
    M1.ID AS ID1,
    M2.offerType AS OfferType2,
    M2.ID AS ID2,
    M1.MeetingDate as Date1,
    M1.Duration AS Duration1,
    M2.MeetingDate as Date2,
    M2.Duration AS Duration2
FROM
    MergedMeetings AS M1
JOIN MergedMeetings AS M2 on M1.PersonID = M2.PersonID
JOIN Employees as E on M1.PersonID = E.EmployeeID
WHERE
    M1.ID < M2.ID
    AND (
```

```
            (M1.Duration IS NOT NULL
            AND M2.Duration IS NOT NULL
            AND CONVERT(DATE, M1.MeetingDate) = CONVERT(DATE, M2.MeetingDate)
            AND DATEADD(MINUTE, DATEDIFF(MINUTE, '00:00', M1.MeetingDate), M1.Duration) > CONVERT(TIME,
M2.MeetingDate))
        OR (
            (M1.Duration IS NULL OR M2.Duration IS NULL )
            AND CONVERT(DATE, M1.MeetingDate) = CONVERT(DATE, M2.MeetingDate))
    );
```

	PersonID	FirstName	LastName	OfferType1	ID1	OfferType2	ID2	Date1	Duration1	Date2	Duration2
1	1	John	Smith	Meeting	1	Meeting	2	2023-02-20 00:00:00.000	NULL	2023-02-20 00:00:00.000	NULL
2	2	Alice	Johnson	Webinar	2	Webinar	5	2023-02-20 00:00:00.000	NULL	2023-02-20 00:00:00.000	NULL
3	21	Jan	Kowalski	Webinar	6	Lesson	15	2023-05-25 00:00:00.000	NULL	2023-05-25 11:00:00.000	01:45:00
4	4	Sophia	Williams	Lesson	8	Lesson	24	2023-06-30 08:00:00.000	02:30:00	2023-06-30 10:00:00.000	01:30:00
5	5	Michael	Taylor	Meeting	10	Meeting	11	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	NULL
6	5	Michael	Taylor	Meeting	10	Lesson	27	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	01:00:00
7	5	Michael	Taylor	Meeting	11	Lesson	27	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	01:00:00

18. AllTranslatorsConflicts

Widok "AllTranslatorsConflicts" identyfikuje konflikty w grafiku tłumaczy, zarówno w przypadku spotkań, jak i lekcji. Dla każdej pary konfliktujących spotkań/lekcji, widok dostarcza informacje o tłumaczu (PersonID), jego imieniu i nazwisku, typie oferty (Meeting lub Lesson), identyfikatorze oferty (ID), dacie rozpoczęcia i zakończenia obu ofert (Date1, Duration1, Date2, Duration2). Konflikty są uwzględniane w przypadku nachodzenia się czasów lub dat.

```
CREATE VIEW [dbo].[AllTranslatorsConflicts] AS
WITH MergedMeetings AS (
    SELECT
        MeetingID AS ID,
        TranslatorID AS PersonID,
        Date AS MeetingDate,
        NULL AS Duration,
        'Meeting' AS offerType
    FROM     dbo.Meetings AS M1

    UNION

    SELECT
        LessonID AS OfferID,
        TranslatorID AS PersonID,
        Date AS StartTime, Duration,
        'Lesson' AS offerType
    FROM
        dbo.Lessons AS L1)

SELECT
    M1.PersonID,
    E.FirstName,
    E.LastName,
    M1.offerType AS OfferType1,
    M1.ID AS ID1,
    M2.offerType AS OfferType2,
    M2.ID AS ID2,
    M1.MeetingDate AS
    Date1, M1.Duration AS Duration1,
    M2.MeetingDate AS Date2,
    M2.Duration AS Duration2
FROM
    MergedMeetings AS M1
INNER JOIN
    MergedMeetings AS M2 ON M1.PersonID = M2.PersonID AND M1.ID < M2.ID
INNER JOIN
    dbo.Employees AS E ON M1.PersonID = E.EmployeeID
WHERE
    (M1.ID < M2.ID
    AND (
            (M1.Duration IS NOT NULL
```

```
            AND M2.Duration IS NOT NULL
            AND CONVERT(DATE, M1.MeetingDate) = CONVERT(DATE, M2.MeetingDate)
            AND DATEADD(MINUTE, DATEDIFF(MINUTE, '00:00', M1.MeetingDate), M1.Duration) > CONVERT(TIME,
M2.MeetingDate))
        OR (
            (M1.Duration IS NULL OR M2.Duration IS NULL )
            AND CONVERT(DATE, M1.MeetingDate) = CONVERT(DATE, M2.MeetingDate))
    ));
```

	PersonID	FirstName	LastName	OfferType1	ID1	OfferType2	ID2	Date1	Duration1	Date2	Duration2
1	20	Olivia	Williams	Meeting	10	Meeting	11	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	NULL
2	19	Michael	Johnson	Lesson	8	Lesson	24	2023-06-30 08:00:00.000	02:30:00	2023-06-30 10:00:00.000	01:30:00
3	20	Olivia	Williams	Meeting	10	Lesson	27	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	01:00:00
4	20	Olivia	Williams	Meeting	11	Lesson	27	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	01:00:00

19. ConflictingTranslatorLessons

Widok "ConflictingTranslatorLessons" identyfikuje konfliktujące lekcje tłumaczy, gdzie dwie lekcje prowadzone przez tego samego tłumacza zachodzą na siebie. Zapewnia informacje o lekcjach (LessonID1 i LessonID2), ich dacie, tłumaczu (PersonID), oraz czasach rozpoczęcia i zakończenia obu lekcji.

```
CREATE VIEW [dbo].[ConflictingTranslatorLessons] AS
SELECT
    L1.LessonID AS LessonID1,
    L2.LessonID AS LessonID2,
    L1.Date AS MeetingDate,
    L1.TranslatorID AS PersonID,
    T.FirstName,
    T.LastName,
    L1.Date AS StartTime1, L1.Duration,
    DATEADD(MINUTE, DATEDIFF(MINUTE, '00:00', L1.Date), L1.Duration) AS EndTime1,
    DATEADD(MINUTE, DATEDIFF(MINUTE, '00:00', L2.Date), L2.Duration) AS EndTime2
FROM
    Lessons L1
JOIN
    Lessons L2 ON L1.TranslatorID = L2.TranslatorID
JOIN
    Employees T ON L1.TranslatorID = T.EmployeeID
WHERE
    L1.LessonID <> L2.LessonID
    AND L1.LessonID < L2.LessonID
    AND CONVERT(DATE, L1.Date) = CONVERT(DATE, L2.DATE)
    AND DATEADD(MINUTE, DATEDIFF(MINUTE, '00:00', L1.Date), L1.Duration) > CONVERT(TIME,L2.Date)
```

	LessonID1	LessonID2	MeetingDate	PersonID	FirstName	LastName	StartTime1	Duration	EndTime1	EndTime2
1	8	24	2023-06-30 08:00:00.000	19	Michael	Johnson	2023-06-30 08:00:00.000	02:30:00	10:30:00	11:30:00

20. AllEnrolments

Widok "AllEnrolments" wyświetla wszystkich studentów (StudentID) wraz z wydarzeniami na które się zapisali oraz datą tego zapisania (OrderDate). Dodatkowo wypisujemy imie (FirstName) i nazwisko (LastName) tego studenta.

```
CREATE VIEW [dbo].[AllEnrolments] AS
SELECT DISTINCT
    O.StudentID,
    OD.OfferID,
    S.FirstName,
    S.LastName,
    O.OrderDate,
    offer.Place AS EventPlace,
    offer.Name AS EventName,
    offer.type
FROM
    Order_details OD
JOIN
```

```
    Orders O ON O.OrderID = OD.OrderID
JOIN
    Students S ON S.StudentID = O.StudentID
JOIN
    Offers offer ON offer.OfferID = OD.OfferID
```

	StudentID	OfferID	FirstName	LastName	OrderDate	EventPlace	EventName	type
1	17	1	John	Smith	2022-12-01 00:00:00.000	CityA, Street 123	Webinar on Data Science Basics	Webinar
2	17	13	John	Smith	2022-12-01 00:00:00.000	CityM, Boulevard 123	Java Programming Course	Courses
3	17	20	John	Smith	2022-12-01 00:00:00.000	CityT, Square 012	Art and Creativity Symposium	Gathering
4	18	2	Maria	Rodriguez	2022-12-02 00:00:00.000	CityB, Avenue 456	Webinar: Mastering Python	Webinar
5	18	3	Maria	Rodriguez	2022-12-02 00:00:00.000	CityC, Lane 789	Webinar: Machine Learning Fundamentals	Webinar
6	19	5	James	Brown	2022-12-03 00:00:00.000	CityE, Boulevard 123	Computer Science Bachelor Program	Studies
7	19	11	James	Brown	2022-12-03 00:00:00.000	CityK, Lane 789	English for Business Communication	Gathering
8	20	6	Sakura	Tanaka	2022-12-04 00:00:00.000	CityF, Square 456	Data Analytics Master Program	Studies
9	20	7	Sakura	Tanaka	2022-12-04 00:00:00.000	CityG, Avenue 789	Business Administration PhD Program	Studies
10	20	15	Sakura	Tanaka	2022-12-04 00:00:00.000	CityO, Lane 789	Digital Marketing Course	Courses
11	21	8	Sophie	Dupont	2022-12-05 00:00:00.000	CityH, Lane 012	Artificial Intelligence Certificate Program	Studies
12	21	10	Sophie	Dupont	2022-12-05 00:00:00.000	CityJ, Avenue 456	Advanced Data Structures	Gathering
13	21	11	Sophie	Dupont	2022-11-07 00:00:00.000	CityK, Lane 789	English for Business Communication	Gathering
14	21	14	Sophie	Dupont	2022-11-07 00:00:00.000	CityN, Avenue 456	Data Science Fundamentals Course	Courses
15	21	16	Sophie	Dupont	2022-12-05 00:00:00.000	CityP, Square 012	Web Development Bootcamp	Courses
16	22	5	Marco	Rossi	2022-12-06 00:00:00.000	CityE, Boulevard 123	Computer Science Bachelor Program	Studies
17	22	9	Marco	Rossi	2022-12-06 00:00:00.000	CityI, Street 123	Introduction to Programming	Gathering
18	22	19	Marco	Rossi	2022-12-06 00:00:00.000	CityS, Lane 789	Science Fiction Fans Meetup	Gathering
19	23	1	Mei	Wong	2022-11-06 00:00:00.000	CityA, Street 123	Webinar on Data Science Basics	Webinar
20	23	12	Mei	Wong	2022-11-06 00:00:00.000	CityL, Square 012	Introduction to Machine Learning	Gathering
21	23	17	Mei	Wong	2022-11-06 00:00:00.000	CityQ, Street 123	Tech Enthusiasts Gathering	Gathering

21. StudentsConflicts

Widok "StudentsConflicts" identyfikuje konflikty w grafiku studentów, zarówno w przypadku spotkań, jak i lekcji. Dla każdej pary konfliktujących spotkań/lekcji, widok dostarcza informacje o studencie (StudentID), jego imieniu i nazwisku, typie oferty (Meeting, Lesson, Studies, Gathering), identyfikatorze oferty (ID), dacie rozpoczęcia i zakończenia obu ofert (Date1, Duration1, Date2, Duration2). Konflikty są uwzględniane w przypadku nachodzenia się czasów lub dat.

```
CREATE VIEW StudentsConflicts AS
WITH MergedMeetings AS (
    SELECT
        AE.StudentID StudentID,
        W.WebinarID OfferID,
        O.Type OfferType,
        W.[Date] OfferDate,
        Null Duration
    FROM
        Webinar W
    JOIN Offers O ON W.WebinarID = O.OfferID
    JOIN AllEnrolments AE ON O.OfferID = AE.OfferID

    UNION

    SELECT
        AE.StudentID StudentID,
        Me.MeetingID OfferID,
        O.Type OfferType ,
        Me.[Date] OfferDate,
        Null Duration
    FROM
        Meetings Me
    JOIN Modules Mo ON Me.ModuleID = Mo.ModuleID
    JOIN Courses C ON Mo.CourseID = C.CourseID
    JOIN Offers O ON C.CourseID = O.OfferID
    JOIN AllEnrolments AE ON O.OfferID = AE.OfferID

    UNION

    SELECT
        AE.StudentID StudentID,
        L.LessonID OfferID,
        O.Type OfferType,
```

```
        L.[Date] OfferDate,
        L.Duration Duration
    FROM
        Lessons L
    JOIN Gatherings G ON L.GatheringID = G.GatheringID
    JOIN Semesters Sem ON G.SemesterID = Sem.SemesterID
    JOIN Studies Su ON Sem.StudiesID = Su.StudiesID
    JOIN Offers O ON Su.StudiesID = O.OfferID
    JOIN AllEnrolments AE ON O.OfferID = AE.OfferID)

SELECT
    M1.StudentID,
    E.FirstName,
    E.LastName,
    M1.offerType AS OfferType1,
    M1.OfferID AS ID1,
    M2.offerType AS OfferType2,
    M2.OfferID AS ID2,
    M1.OfferDate AS Date1,
     M1.Duration AS Duration1,
    M2.OfferDate AS Date2,
    M2.Duration AS Duration2
FROM
    MergedMeetings AS M1
INNER JOIN
    MergedMeetings AS M2 ON M1.StudentID = M2.StudentID AND M1.OfferID < M2.OfferID
INNER JOIN
    dbo.Employees AS E ON M1.StudentID = E.EmployeeID
WHERE
        M1.OfferID < M2.OfferID
    AND (
            (M1.Duration IS NOT NULL
            AND M2.Duration IS NOT NULL
            AND CONVERT(DATE, M1.OfferDate) = CONVERT(DATE, M2.OfferDate)
            AND DATEADD(MINUTE, DATEDIFF(MINUTE, '00:00', M1.OfferDate), M1.Duration) > CONVERT(TIME,
M2.OfferDate))
        OR (
            (M1.Duration IS NULL OR M2.Duration IS NULL )
            AND CONVERT(DATE, M1.OfferDate) = CONVERT(DATE, M2.OfferDate))
    );
```

	StudentID	FirstName	LastName	OfferType1	ID1	OfferType2	ID2	Date1	Duration1	Date2	Duration2
1	17	John	Doe	Courses	1	Courses	2	2023-02-20 00:00:00.000	NULL	2023-02-20 00:00:00.000	NULL
2	17	John	Doe	Courses	5	Courses	6	2023-02-22 00:00:00.000	NULL	2023-02-22 00:00:00.000	NULL
3	17	John	Doe	Courses	8	Courses	30	2023-03-15 00:00:00.000	NULL	2023-03-15 00:00:00.000	NULL
4	19	Michael	Johnson	Studies	8	Studies	24	2023-06-30 08:00:00.000	02:30:00	2023-06-30 10:00:00.000	01:30:00
5	19	Michael	Johnson	Studies	16	Studies	24	2023-06-30 11:00:00.000	02:30:00	2023-06-30 10:00:00.000	01:30:00
6	19	Michael	Johnson	Studies	2	Studies	27	2023-04-21 08:00:00.000	02:00:00	2023-04-21 00:00:00.000	01:00:00
7	19	Michael	Johnson	Studies	10	Studies	27	2023-04-21 11:00:00.000	02:00:00	2023-04-21 00:00:00.000	01:00:00
8	19	Michael	Johnson	Studies	18	Studies	27	2023-04-21 15:00:00.000	02:00:00	2023-04-21 00:00:00.000	01:00:00
9	21	Jan	Kowalski	Courses	10	Courses	11	2023-04-21 00:00:00.000	NULL	2023-04-21 00:00:00.000	NULL

Procedury:

1. AddLessonAttendance

Procedura ta pozwala na dodanie konkretnemu użytkownikowi obecności na danej lekcji, przed wykonaniem polecenia dodawania sprawdza także czy lekcja o podanym ID istnieje oraz czy uczeń o podanym ID istnieje oraz czy dany użytkownik jest zapisany na studiom/zjazd, w ramach którego odbywa się dana lekcja.

```
CREATE PROCEDURE [dbo].[AddLessonAttendance]
    @LessonID INT,
    @StudentID INT,
    @IsPresent BIT
AS
BEGIN
    IF EXISTS (SELECT 1 FROM Lessons WHERE LessonID = @LessonID)
    AND EXISTS (SELECT 1 FROM Students WHERE StudentID = @StudentID)
```

```
    AND
    (EXISTS (SELECT * FROM EnrolledStudentsToStudies AS e
        INNER JOIN Semesters AS s ON s.StudiesID=e.StudiesID
        INNER JOIN Subjects AS su ON su.SemesterID = s.SemesterID
        INNER JOIN Lessons AS l ON l.SubjectID = su.SubjectID
        WHERE l.LessonID = @LessonID AND e.StudentID = @StudentID)
    OR EXISTS (SELECT * FROM EnrolledStudentsToGatherings AS e
        INNER JOIN Lessons AS l ON l.GatheringID = e.GatheringID
        WHERE l.LessonID = @LessonID AND e.StudentID = @StudentID))
    BEGIN
        INSERT INTO LessonsAttendance(LessonID, StudentID, Attendance)
        VALUES (@LessonID, @StudentID, @IsPresent);
        PRINT 'Attendance got commited.';
    END
    ELSE
    BEGIN
        PRINT 'Incorrect LessonID or StudentID.';
    END
END;
```

2. AddMeetingAttendance

Procedura ta pozwala na dodanie konkretnemu użytkownikowi obecności na danym spotkaniu, przed wykonaniem polecenia dodawania sprawdza także czy spotkanie o podanym ID istnieje oraz czy uczeń o podanym ID istnieje czy dany użytkownik jest zapisany na kurs, w ramach którego odbywa się dane spotkanie.

```
CREATE PROCEDURE [dbo].[AddMeetingAttendance]
    @MeetingID INT,
    @StudentID INT,
    @IsPresent BIT
AS
BEGIN
    IF EXISTS (SELECT 1 FROM Meetings WHERE MeetingID = @MeetingID)
    AND EXISTS (SELECT 1 FROM Students WHERE StudentID = @StudentID)
    AND EXISTS (SELECT * FROM EnrolledStudentsToCourses AS e
        INNER JOIN Modules AS m ON m.CourseID = e.CourseID
        INNER JOIN Meetings AS me ON me.ModuleID = m.ModuleID
        WHERE me.MeetingID = @MeetingID AND e.StudentID = @StudentID)
    BEGIN
        INSERT INTO CourseAttendance (MeetingID, StudentID, Attendance)
        VALUES (@MeetingID, @StudentID, @IsPresent);
        PRINT 'Attendance got commited.';
    END
    ELSE
    BEGIN
        PRINT 'Incorrect MeetingID or StudentID.';
    END
END;
```

3. AddPractiseAttendance

Procedura ta pozwala na dodanie konkretnemu użytkownikowi obecności na danych praktykach, przed wykonaniem polecenia dodawania sprawdza także czy praktyki o podanym ID istnieją oraz czy uczeń o podanym ID istnieje czy dany użytkownik jest zapisany na studiom, w ramach którego odbywają się dane praktyki.

```
CREATE PROCEDURE [dbo].[AddPractiseAttendance]
    @PractiseID INT,
    @StudentID INT,
    @IsPresent BIT
AS
BEGIN
    IF EXISTS (SELECT 1 FROM Practices WHERE PractiseID = @PractiseID)
    AND EXISTS (SELECT 1 FROM Students WHERE StudentID = @StudentID)
    AND EXISTS (SELECT * FROM EnrolledStudentsToStudies AS e
```

```
        INNER JOIN Semesters AS s ON s.StudiesID = e.StudiesID
        INNER JOIN Practices AS p ON p.SemesterID = s.SemesterID
        WHERE p.PractiseID = @PractiseID AND e.StudentID = @StudentID)
    BEGIN
        INSERT INTO PractiseAttendance(PractiseID, StudentID, Attendance)
        VALUES (@PractiseID, @StudentID, @IsPresent);
        PRINT 'Attendance got commited.';
    END
    ELSE
    BEGIN
        PRINT 'Incorrect PractiseID or StudentID.';
    END
END;
```

4. AddNewOrder

Procedura ta umożliwa dodatnie do tabeli Orders nowego zamówienia dla studenta o podanym ID, jako datę zamówienia wstawia aktualną datę.

```
CREATE PROCEDURE [dbo].[AddNewOrder]
    @StudentID INT
AS
BEGIN
    INSERT INTO Orders (StudentID, OrderDate)
    VALUES (@StudentID, GETDATE());
    PRINT 'Order added.';
END;
```

5. AddOrderDetails

Procedura ta pozwala na dodanie szczegółów do konkretnego zamówienia, przyjmuje argumenty takie jak: numer zamówienia, nummer oferty zamówionego produktu, koszt tego produktu i ewentualną zniżkę, przed dodaniem do tabeli upewnia się czy suma wartości pozostałych kupionych produktów oraz tego wstawianego nie przekracza przypadkiem kwoty która została zapłacona za zamówienia.

```
CREATE PROCEDURE [dbo].[AddOrderDetails]
    @OrderID INT,
    @OfferID INT,
    @Value MONEY,
    @Discount FLOAT
AS
BEGIN
    DECLARE @OrderTotalMoney MONEY;
    DECLARE @PaymentTotalMoney MONEY;

    IF EXISTS (SELECT 1 FROM Orders WHERE OrderID = @OrderID)
    BEGIN

        SELECT @OrderTotalMoney = SUM(Value * (1 - Discount))
        FROM Order_details
        WHERE OrderID = @OrderID;

        SET @OrderTotalMoney = @OrderTotalMoney + (@Value * (1 - @Discount));

        SELECT @PaymentTotalMoney = Value
        FROM Payments
        WHERE OrderID = @OrderID;

        IF @OrderTotalMoney <= @PaymentTotalMoney
        BEGIN
            INSERT INTO Order_details (OrderID, OfferID, Value, Discount)
            VALUES (@OrderID, @OfferID, @Value, @Discount);
            PRINT 'Order details added.';
        END
    END
```

```
    ELSE
    BEGIN
        PRINT 'An error occured.';
    END
END;
```

6. AddPayment

Procedura ta pozwala na dodanie nowego rekordu w tabeli Payments, dla konkretnego zamówieniam daty oraz kwoty oraz dla ewentualnej daty odroczenia płatności. Procedura sprawdza także czy podane ID zamówienia istnieje w tabeli z zamówieniami.

```
CREATE PROCEDURE [dbo].[AddPayment]
    @OrderID INT,
    @Date DATETIME,
    @Value MONEY,
    @CancelDate DATETIME
AS
BEGIN
    IF EXISTS (SELECT 1 FROM Orders WHERE OrderID = @OrderID)
    BEGIN
        INSERT INTO Payments (OrderID, Date, Value, CancelDate)
        VALUES (@OrderID, @Date, @Value, @CancelDate);
        PRINT 'Payment added.';
    END
    ELSE
    BEGIN
        PRINT 'An error occured.';
    END
END;
```

7. GetOrdersPaymentsByStudentID

```
CREATE PROCEDURE [dbo].[GetOrdersPaymentsByStudentID]
    @StudentID INT
AS
BEGIN
    SELECT
        Ord.OrderID,
        SUM(ROUND(OD.Value*(1-OD.Discount),2)) AS Value,
        P.Value AS Paid,
        ROUND(SUM(ROUND(ROUND(OD.Value*(1-OD.Discount),2),2))-P.Value,2) AS ToPay,
        P.CancelDate
    FROM
        Orders AS Ord
    INNER JOIN
        Order_details AS OD ON Ord.OrderID = OD.OrderID
    INNER JOIN
        Payments AS P ON Ord.OrderID = P.OrderID
    WHERE
        Ord.StudentID = @StudentID
    GROUP BY
        Ord.OrderID, P.CancelDate, P.Value;
END;
```

8. GetStudentPracticeCompletionStatus

```
CREATE PROCEDURE [dbo].[GetStudentPracticeCompletionStatus]
    @StudentID INT
AS
BEGIN
    SELECT *
    FROM StudentPracticesCompletionStatus
```

```
    WHERE StudentID = @StudentID;
END;
```

9. GetStudentPracticeSummary

```
CREATE PROCEDURE [dbo].[GetStudentPracticeSummary]
    @StudentID INT
AS
BEGIN
    SELECT
        PA.StudentID,
        S.FirstName,
        S.LastName,
        PA.PractiseID,
        CASE WHEN SUM(CAST(PA.Attendance AS INT)) = COUNT(PA.Attendance)
             THEN 'True'
             ELSE 'False'
        END AS CompletedAllPractices
    FROM
        PractiseAttendance PA
    JOIN
        Students S ON PA.StudentID = S.StudentID
    WHERE
        PA.StudentID = @StudentID
    GROUP BY
        PA.StudentID, PA.PractiseID, S.FirstName, S.LastName;
END;
```

10. MeetingsByTeacher

```
CREATE Procedure [dbo].[MeetingsByTeacher]
    @TeacherID INT
AS
Begin
select * from Meetings as m
where m.TeacherID=@TeacherID
End
```

11. OrdersByStudentID

```
CREATE PROCEDURE [dbo].[OrdersByStudentID]
    @StudentID int
AS
BEGIN
    SELECT O.OfferID, O.Name, O.Type, O.Place, OD.Value*(1-OD.Discount) AS Value, P.Value AS Paid, OD.Value-
P.Value AS ToPay, P.CancelDate FROM Orders AS Ord
    INNER JOIN Order_details AS OD ON Ord.OrderID = OD.OrderID
    INNER JOIN Offers AS O on O.OfferID = OD.OfferID
    INNER JOIN Payments AS P on Ord.OrderID =P.PaymentID
    WHERE Ord.StudentID = @StudentID
END;
```

12. UpdateLessonAttendance

Proceudra ta umożliwia zmianę statusu obecności danego ucznia na danej lekcji, przed wykonaniem polecenia sprawdza czy modyfikowany rekord obecności faktycznie istnieje.

```
CREATE PROCEDURE [dbo].[UpdateLessonAttendance]
    @LessonID INT,
    @StudentID INT,
```

```
    @NewAttendance BIT
AS
BEGIN
    IF EXISTS (SELECT 1 FROM LessonsAttendance WHERE LessonID = @LessonID AND StudentID = @StudentID)
    BEGIN
        UPDATE LessonsAttendance
        SET Attendance = @NewAttendance
        WHERE LessonID = @LessonID AND StudentID = @StudentID;

        PRINT 'Attendance Updated.';
    END
    ELSE
    BEGIN
        PRINT 'Incorrect LessonID or StudentID';
    END
END;
```

13. UpdateMeetingAttendance

Proceudra ta umożliwia zmianę statusu obecności danego ucznia na danym spotkaniu, przed wykonaniem polecenia sprawdza czy modyfikowany rekord obecności faktycznie istnieje.

```
CREATE PROCEDURE [dbo].[UpdateMeetingAttendance]
    @MeetingID INT,
    @StudentID INT,
    @NewAttendance BIT
AS
BEGIN
    IF EXISTS (SELECT 1 FROM CourseAttendance WHERE MeetingID = @MeetingID AND StudentID = @StudentID)
    BEGIN
        UPDATE CourseAttendance
        SET Attendance = @NewAttendance
        WHERE MeetingID = @MeetingID AND StudentID = @StudentID;

        PRINT 'Attendance Updated.';
    END
    ELSE
    BEGIN
        PRINT 'Incorrect MeetingID or StudentID';
    END
END;
```

14. UpdatePractiseAttendance

Proceudra ta umożliwia zmianę statusu obecności danego ucznia na danych praktykach, przed wykonaniem polecenia sprawdza czy modyfikowany rekord obecności faktycznie istnieje.

```
CREATE PROCEDURE [dbo].[UpdatePractiseAttendance]
    @PractiseID INT,
    @StudentID INT,
    @NewAttendance BIT
AS
BEGIN
    IF EXISTS (SELECT 1 FROM PractiseAttendance WHERE PractiseID = @PractiseID AND StudentID = @StudentID)
    BEGIN
        UPDATE PractiseAttendance
        SET Attendance = @NewAttendance
        WHERE PractiseID = @PractiseID AND StudentID = @StudentID;

        PRINT 'Attendance Updated.';
    END
    ELSE
    BEGIN
        PRINT 'Incorrect PractiseID or StudentID';
```

```
    END
END;
```

14. GetProfitInTimeRange

Proceudra przedstawia dochód z poszczególnych kursów w zadanym przedziale czasowym.

```
CREATE PROCEDURE GetProfitInTimeRange
    @From DATE,
    @To DATE
AS
BEGIN
    SELECT
        c.CourseName,
        ISNULL((
            SELECT SUM(od.Value)
            FROM Order_details od
            INNER JOIN Payments p ON od.OrderID = p.OrderID
            WHERE od.OfferID = c.CourseID AND p.[Date] BETWEEN @From AND @To
        ), 0) AS Profit
    FROM Courses c;
END;
```

15. EnrolledStudentsToCoursesInTimeRange

Proceudra przedstawia studentów zapisanych na poszczególne kursy w zadanym przedziale czasowym.

```
CREATE PROCEDURE EnrolledStudentsToCoursesInTimeRange
    @From DATE,
    @To DATE
AS
BEGIN
    SELECT *
    FROM StudentCourseDetailsView
    WHERE StartDate BETWEEN @From AND @To;
END;
```

16.EnrolledStudentsToGatheringsInTimeRange

Proceudra przedstawia studentów zapisanych na poszczególne zjazdy w zadanym przedziale czasowym.

```
CREATE PROCEDURE EnrolledStudentsToGatheringsInTimeRange
    @From DATE,
    @To DATE
AS
BEGIN
    SELECT *
    FROM EnrolledStudentsToGatherings
    WHERE [Date] BETWEEN @From AND @To;
END;
```

17. EnrolledStudentsToStudiesInDateRange

Proceudra przedstawia studentów zapisanych na poszczególne studia w zadanym przedziale czasowym.

```
CREATE PROCEDURE EnrolledStudentsToStudiesInDateRange
    @From DATE,
    @To DATE
AS
BEGIN
```

```
    SELECT *
    FROM dbo.EnrolledStudentsToStudies
    WHERE StartDate BETWEEN @From AND @To;
END;
```

18.EnrolledStudentsToWebinarsInDateRange

Proceudra przedstawia studentów zapisanych na poszczególne webinary w zadanym przedziale czasowym.

```
CREATE PROCEDURE EnrolledStudentsToWebinarsInDateRange
    @From DATE,
    @To DATE
AS
BEGIN
    SELECT *
    FROM dbo.EnrolledStudentsToWebinars
    WHERE [Date] BETWEEN @From AND @To;
END;
```

19. UpdateMeetingDate

Procedura UpdateMeetingDate umożliwia aktualizację daty spotkania o określonym MeetingID na nową datę @NewMeetingDate. Natomiast procedura AddNewOffer pozwala na dodanie nowej oferty do bazy danych, sprawdzając wcześniej, czy oferta o podanej nazwie już istnieje, aby uniknąć konfliktów. Jeśli oferta istnieje, procedura zwraca błąd, w przeciwnym razie dodaje nową ofertę z określonymi parametrami, takimi jak Name, Type, Description, Place, Price i DiscountToStudents.

```
CREATE PROCEDURE [dbo].[UpdateMeetingDate]
    @MeetingID INT,
    @NewMeetingDate DATE
AS
BEGIN
    SET NOCOUNT ON;
    UPDATE Meetings
    SET Date = @NewMeetingDate
    WHERE MeetingID = @MeetingID;
END;
```

20. AddNewOffer

Procedura AddNewOffer dodaje nową ofertę do tabeli Offers, pod warunkiem, że oferty o podanej nazwie (@Name) jeszcze nie istnieją w bazie danych. Procedura przyjmuje parametry takie jak nazwa oferty, typ, opis, miejsce, cena oraz zniżka dla studentów, a następnie wstawia nowy rekord do tabeli, jeśli oferta o danej nazwie jeszcze nie istnieje.

```
CREATE PROCEDURE [dbo].[AddNewOffer]
    @Name NVARCHAR(50),
    @Type NVARCHAR(15),
    @Description NVARCHAR(50),
    @Place NVARCHAR(20),
    @Price money,
    @DiscountToStudents DECIMAL(5, 2)
AS
BEGIN
    SET NOCOUNT ON;

    IF NOT EXISTS (SELECT 1 FROM Offers WHERE Name = @Name)
    BEGIN
        INSERT INTO Offers (Name, Type, Description, Place, Price, DiscountToStudents)
        VALUES (@Name, @Type, @Description, @Place, @Price, @DiscountToStudents);
    END
END;
```

21. AddNewCourse

Procedura AddNewCourse służy do dodawania nowego kursu do bazy danych. Najpierw wywołuje procedurę AddNewOffer, aby dodać nową ofertę typu 'Courses', a następnie pobiera identyfikator nowo dodanej oferty. Następnie dodaje kurs z odpowiednimi parametrami, takimi jak TopicID, CourseName, StartDate, ModulesNo, PaymentDay, FullPrice, Deposit i Discount.

```
CREATE PROCEDURE [dbo].[AddNewCourse]
    @CourseName NVARCHAR(30),
    @TopicID Int,
    @CourseDescription NVARCHAR(50),
    @CoursePlace NVARCHAR(20),
    @Price MONEY,
    @DiscountToStudents DECIMAL(5, 2),
    @StartDate DATE,
    @EndDate DATE,
    @Deposit Money,
    @PaymentDay Date
AS
BEGIN
    SET NOCOUNT ON;

    EXEC AddNewOffer @CourseName, 'Courses', @CourseDescription, @CoursePlace, @Price, @DiscountToStudents;

    DECLARE @NewOfferID INT;
    SELECT @NewOfferID = dbo.GetOfferIDByName(@CourseName);

    IF @NewOfferID IS NOT NULL
    BEGIN
        INSERT INTO Courses (CourseID, TopicID, CourseName, StartDate, ModulesNo, PaymentDay, FullPrice,
Deposit, Discount)
        VALUES (@NewOfferID, @TopicID, @CourseName, @StartDate, 0, @PaymentDay, @Price, @Deposit,
@DiscountToStudents);
    END
    ELSE
    BEGIN
        PRINT 'Błąd: Nie udało się pobrać identyfikatora oferty.';
    END
END;
```

22. AddNewModule

Procedura AddNewModule służy do dodawania nowego modułu związanego z określonym kursem. Przed dodaniem modułu sprawdza istnienie kursu o podanym CourseID, a następnie pobiera datę rozpoczęcia kursu i dodaje nowy moduł z odpowiednimi parametrami, takimi jak Title, Type, EndDate i Classroom.

```
CREATE PROCEDURE [dbo].[AddNewModule]
    @CourseID INT,
    @Title NVARCHAR(50),
    @Type NVARCHAR(10),
    @EndDate DATE,
    @Classroom NVARCHAR(10)
AS
BEGIN
    SET NOCOUNT ON;

    IF NOT EXISTS (SELECT 1 FROM Courses WHERE CourseID = @CourseID)
    BEGIN
        THROW 50000, 'Podane CourseID nie istnieje w Courses.', 1;
        RETURN;
    END

    DECLARE @StartDate DATE;
    SET @StartDate = (SELECT StartDate FROM Courses WHERE CourseID = @CourseID);

    INSERT INTO Modules (CourseID, Title, Type, StartDate, EndDate, Classroom)
```

```
    VALUES (@CourseID, @Title, @Type, @StartDate, @EndDate, @Classroom);
END;
```

23. AddNewMeeting

Ta procedura przechowuje informacje o nowym spotkaniu w bazie danych. Przyjmuje różne parametry, takie jak ModuleID, LanguageID, Date, Type, Place, Link, Title, TeacherID i TranslatorID. Przed dodaniem spotkania sprawdza istnienie modułu, nauczyciela i tłumacza (jeśli podano TranslatorID), a w przypadku braku zapisuje wartość NULL w TranslatorID.

```
CREATE PROCEDURE [dbo].[AddNewMeeting]
    @ModuleID INT,
    @LanguageID INT,
    @Date date,
    @Type NVARCHAR(10),
    @Place NVARCHAR(10),
    @Link NVARCHAR(30),
    @Title NVARCHAR(50),
    @TeacherID INT,
    @TranslatorID INT
AS
BEGIN
    SET NOCOUNT ON;

    IF NOT EXISTS (SELECT 1 FROM Modules WHERE ModuleID = @ModuleID)
    BEGIN
        THROW 50000, 'Moduł o podanym ModuleID nie istnieje.', 1;
        RETURN;
    END

    IF NOT EXISTS (SELECT 1 FROM TeachingStaff WHERE TeacherID = @TeacherID)
    BEGIN
        THROW 50000, 'Nauczyciel o podanym TeacherID nie istnieje.', 1;
        RETURN;
    END

    IF NOT EXISTS (SELECT 1 FROM Translators WHERE TranslatorID = @TranslatorID)
    BEGIN
        SET @TranslatorID = NULL;
    END

    INSERT INTO Meetings (ModuleID, LanguageID, Date, Type, Place, Link, TeacherID, TranslatorID)
    VALUES (@ModuleID, @LanguageID, @Date, @Type, @Place, @Link, @TeacherID, @TranslatorID);

END;
```

24. AddNewWebinar

Procedura AddNewWebinar służy do dodawania nowych webinariów do bazy danych. Najpierw wywołuje procedurę AddNewOffer w celu utworzenia nowej oferty dla webinariów. Następnie pobiera identyfikator oferty za pomocą funkcji dbo.GetOfferIDByName na podstawie nazwy webinariów. Jeśli identyfikator oferty zostanie pomyślnie pobrany, procedura dodaje informacje o webinariach, takie jak nazwa, data, nauczyciel, i link do spotkania online, do tabeli Webinar. W przypadku błędu podczas pobierania identyfikatora oferty, procedura wypisuje komunikat o błędzie.

```
CREATE PROCEDURE [dbo].[AddNewWebinar]
    @WebinarName NVARCHAR(30),
    @Description NVARCHAR(50),
    @Place NVARCHAR(20),
    @Price MONEY,
    @DiscountToStudents DECIMAL(5, 2),
    @Date DATE,
    @Teacher INT,
    @Link NVARCHAR(50)
AS
BEGIN
```

```
    SET NOCOUNT ON;

    EXEC AddNewOffer @WebinarName, 'Webinar', @Description, @Place, @Price, @DiscountToStudents;

    DECLARE @NewOfferID INT;
    SELECT @NewOfferID = dbo.GetOfferIDByName(@WebinarName);

    IF @NewOfferID IS NOT NULL
    BEGIN
        INSERT INTO Webinar (WebinarID, WebinarName, Date, TeacherID, MeetingLink)
        VALUES (@NewOfferID, @WebinarName, @Date, @Teacher, @Link);
    END
    ELSE
    BEGIN
        PRINT 'Błąd: Nie udało się pobrać identyfikatora oferty.';
    END
END;
```

25. AddNewStudies

Procedura AddNewStudies została stworzona w celu dodawania nowych studiów do bazy danych. Początkowo wywołuje procedurę AddNewOffer, aby utworzyć nową ofertę dla studiów. Następnie korzysta z funkcji dbo.GetOfferIDByName, aby pobrać identyfikator oferty na podstawie nazwy studiów. Jeśli identyfikator oferty zostanie pomyślnie pobrany, procedura dodaje informacje o studiach, takie jak nazwa, opis, lokalizacja, opłata, menadżer i pojemność studentów, do tabeli Studies. W przypadku błędu podczas pobierania identyfikatora oferty, procedura wypisuje komunikat o błędzie.

```
CREATE PROCEDURE [dbo].[AddNewStudies]
    @Name NVARCHAR(30),
    @Description NVARCHAR(50),
    @Place NVARCHAR(20),
    @Price MONEY,
    @DiscountToStudents DECIMAL(5, 2),
    @Menager INT,
    @Capacity INT
AS
BEGIN
    SET NOCOUNT ON;

    EXEC AddNewOffer @Name, 'Studies', @Description, @Place, @Price, @DiscountToStudents;

    DECLARE @NewOfferID INT;
    SELECT @NewOfferID = dbo.GetOfferIDByName(@Name);

    IF @NewOfferID IS NOT NULL
    BEGIN
        INSERT INTO Studies (StudiesID, Name, Fee, MenagerID, StudentCapacity)
        VALUES (@NewOfferID, @Name, @Price, @Menager, @Capacity);
    END
    ELSE
    BEGIN
        PRINT 'Błąd: Nie udało się pobrać identyfikatora oferty.';
    END
END;
```

26. AddNewGathering

Procedura AddNewGathering służy do dodawania nowych wydarzeń zgromadzeniowych do bazy danych. Najpierw inicjalizuje nową ofertę dla zgromadzeń, a następnie korzysta z funkcji dbo.GetOfferIDByName, aby uzyskać identyfikator nowo utworzonej oferty na podstawie nazwy wydarzenia zgromadzeniowego. Jeśli operacja pobierania identyfikatora zakończy się powodzeniem, procedura dodaje informacje o zgromadzeniu, takie jak nazwa, opis, lokalizacja, opłata, rabat dla studentów, data i powiązany semestr, do tabeli Gatherings. W przypadku niepowodzenia procedura wypisuje komunikat o błędzie.

```
CREATE PROCEDURE [dbo].[AddNewGathering]
    @Name NVARCHAR(30),
    @Description NVARCHAR(50),
    @Place NVARCHAR(20),
    @Price MONEY,
    @DiscountToStudents DECIMAL(5, 2),
    @Date datetime,
    @SemesterID INT
AS
BEGIN
    SET NOCOUNT ON;

    EXEC AddNewOffer @Name, 'Gathering', @Description, @Place, @Price, @DiscountToStudents;

    DECLARE @NewOfferID INT;
    SELECT @NewOfferID = dbo.GetOfferIDByName(@Name);

    IF @NewOfferID IS NOT NULL
    BEGIN
        INSERT INTO Gatherings (GatheringID, SemesterID, Date)
        VALUES (@NewOfferID, @SemesterID, @Date);
    END
    ELSE
    BEGIN
        PRINT 'Błąd: Nie udało się pobrać identyfikatora oferty.';
    END
END;
```

Funkcje:

1. CourseEnrolmentsNumber

Ta funkcja zwraca ilość użytkowników aktualnie zapisanych na określony kurs o identyfikatorze (CourseID). Wykorzystuje informacje o zapisach, płatnościach i szczegółach zamówienia, filtrując rezultaty dla konkretnego kursu, a także sprawdzając, czy zamówienie nie zostało anulowane.

```
Create FUNCTION [dbo].[CourseEnrolmentsNumber](@CourseID INT)
RETURNS INT
AS
BEGIN

    DECLARE @Enrolments INT;

    select @Enrolments = count(o.StudentID) from Orders as o
    inner join Payments as p on p.OrderID=o.OrderID
    inner join Order_details as d on d.OrderID=p.OrderID
    inner join Offers as f on f.OfferID=d.OfferID
    inner join Courses as c on c.CourseID=f.OfferID
    group by c.CourseID,p.CancelDate
    having p.CancelDate is Null and c.CourseID=@CourseID

    RETURN @Enrolments;
END;
```

2. IsStudyEnrollmentPossible

Ta funkcja sprawdza, czy istnieje możliwość zapisania się na studium o określonym identyfikatorze (StudyID), porównując aktualną liczbę zapisanych studentów (wykorzystując funkcję dbo.StudyEnrollmentsNumber) do pojemności studium. Jeżeli istnieje dostępna przestrzeń, zwraca wartość 1, w przeciwnym razie 0.

```
CREATE FUNCTION [dbo].[IsStudyEnrollmentPossible] (@StudyID INT)
RETURNS BIT
AS
BEGIN
    DECLARE @Capacity INT;
```

```
    SELECT @Capacity = s.StudentCapacity
    FROM Studies as s
    WHERE s.StudiesID = @StudyID;

    IF (dbo.StudyEnrollmentsNumber(@StudyID) < @Capacity)
        RETURN 1;
    RETURN 0;
END;
```

3. StudyEnrollmentsNumber

Ta funkcja zwraca ilość obecnie zapisanych studentów na studium o określonym identyfikatorze (StudyID). Wykorzystuje do tego liczbę zamówień (Orders), płatności (Payments), szczegóły zamówienia (Order_details), oferty (Offers) i samego studium (Studies). Funkcja uwzględnia tylko te zapisy, które nie zostały anulowane (CancelDate is Null) i dotyczą danego studium.

```
CREATE FUNCTION [dbo].[StudyEnrollmentsNumber] (@StudyID INT)
RETURNS INT
AS
BEGIN
    DECLARE @Enrollments INT;

    select @Enrollments = count(o.StudentID) from Orders as o
    inner join Payments as p on p.OrderID=o.OrderID
    inner join Order_details as d on d.OrderID=p.OrderID
    inner join Offers as f on f.OfferID=d.OfferID
    inner join Studies as s on s.StudiesID=f.OfferID
    group by p.CancelDate, s.StudiesID
    having p.CancelDate is Null and s.StudiesID=@StudyID

    RETURN @Enrollments;
END;
```

4. WebinarEnrolmentsNumber

Ta funkcja zwraca liczbę zapisanych studentów na webinar o określonym identyfikatorze (WebinarID). Wykorzystuje do tego liczbę zamówień (Orders), płatności (Payments), szczegóły zamówienia (Order_details), oferty (Offers) i samego webinaru (Webinar). Funkcja uwzględnia tylko te zapisy, które nie zostały anulowane (CancelDate is Null) i dotyczą danego webinaru.

```
CREATE FUNCTION [dbo].[WebinarEnrolmentsNumber](@WebinarID INT)
RETURNS INT
AS
BEGIN

    DECLARE @Enrolments INT;

    select @Enrolments = count(o.StudentID) from Orders as o
    inner join Payments as p on p.OrderID=o.OrderID
    inner join Order_details as d on d.OrderID=p.OrderID
    inner join Offers as f on f.OfferID=d.OfferID
    inner join Webinar as w on w.WebinarID=f.OfferID
    group by w.WebinarID,p.CancelDate
    having p.CancelDate is Null and w.WebinarID=@WebinarID

    RETURN @Enrolments;
END
```

5. GetOfferIDByName

Funkcja GetOfferIDByName zwraca identyfikator oferty (OfferID) na podstawie podanej nazwy oferty (@OfferName).

```
CREATE FUNCTION [dbo].[GetOfferIDByName](@OfferName NVARCHAR(50))
RETURNS INT
AS
BEGIN
    DECLARE @OfferID INT;

    SELECT @OfferID = OfferID
    FROM Offers
    WHERE Name = @OfferName;

    RETURN @OfferID;
END;
```

Triggery:

1. CheckStudentCountOnStudies

Ten trigger sprawdza, czy liczba studentów zapisanych na studium przekracza maksymalną pojemność studium po dodaniu lub aktualizacji zamówienia. Jeśli liczba przekracza pojemność, wyświetla komunikat o błędzie i wykonuje rollback transakcji, uniemożliwiając przekroczenie limitu pojemności studium.

```
CREATE TRIGGER [dbo].[CheckStudentCountOnStudies]
ON [dbo].[Order_details]
AFTER INSERT, UPDATE
AS
BEGIN
    DECLARE @StudiesID INT,
            @NewStudentCount INT,
            @MaxStudentCapacity INT;

    SELECT @StudiesID = o.OfferID
    FROM inserted i
    INNER JOIN Offers o ON i.OfferID = o.OfferID;

    SELECT @NewStudentCount = COUNT(*)
    FROM Order_details od
    WHERE od.OfferID = @StudiesID;

    SELECT @MaxStudentCapacity = s.StudentCapacity
    FROM Studies s
    WHERE s.StudiesID = @StudiesID;

    IF (@NewStudentCount > @MaxStudentCapacity)
    BEGIN
        RAISERROR('Liczba studentów przekracza maksymalną pojemność studium!', 16, 1);
        ROLLBACK;
    END
END;
```

2. UpdateModulesNumber

Ten trigger automatycznie aktualizuje liczbę modułów (ModulesNo) w tabeli Courses po dodaniu nowego modułu. Działa na zasadzie zliczania liczby modułów przypisanych do danego kursu i aktualizuje odpowiedni rekord w tabeli Courses.

```
CREATE TRIGGER [dbo].[UpdateModulesNumber]
ON [dbo].[Modules]
AFTER INSERT
AS
BEGIN
    SET NOCOUNT ON;

    DECLARE @CourseID INT;
```

```
    SELECT @CourseID = CourseID
    FROM inserted;

    UPDATE Courses
    SET ModulesNo = (
        SELECT ISNULL(COUNT(ModuleID), 0)
        FROM Modules
        WHERE CourseID = @CourseID
    )
    WHERE CourseID = @CourseID;
END;

ALTER TABLE [dbo].[Modules] ENABLE TRIGGER [UpdateModulesNumber]
```

3. CheckAndUpdateModuleDates

Ten trigger sprawdza i aktualizuje daty modułów (StartDate i EndDate) w tabeli Modules po zmianie daty spotkania (MeetingDate) w tabeli Meetings. Jeśli spotkanie już się odbyło, trigger zwraca błąd i blokuje transakcję, w przeciwnym razie aktualizuje odpowiednie daty modułów.

```
CREATE TRIGGER [dbo].[CheckAndUpdateModuleDates]
ON [dbo].[Meetings]
AFTER UPDATE
AS
BEGIN
    SET NOCOUNT ON;

    DECLARE @ModuleID INT;
    DECLARE @NewMeetingDate DATE;
    DECLARE @StartDate DATE;
    DECLARE @EndDate DATE;
    DECLARE @OldMeetingDate DATE;

    SELECT
        @ModuleID = m.ModuleID,
        @NewMeetingDate = i.Date,
        @OldMeetingDate = m.Date,
        @StartDate = mo.StartDate,
        @EndDate = mo.EndDate
    FROM
        inserted i
        INNER JOIN Modules mo ON i.ModuleID = mo.ModuleID
        INNER JOIN Meetings m ON i.ModuleID = m.ModuleID;

    IF @OldMeetingDate > GETDATE()
        BEGIN
            THROW 50000, 'Nie można zmienić daty spotkania, ponieważ wydarzenie się już odbyło.', 1;
            ROLLBACK;
        END
    ELSE
        BEGIN
            IF @NewMeetingDate < @StartDate
            BEGIN
                UPDATE Modules
                SET StartDate = @NewMeetingDate
                WHERE ModuleID = @ModuleID;
            END;

            IF @NewMeetingDate > @EndDate
            BEGIN
                UPDATE Modules
                SET EndDate = @NewMeetingDate
                WHERE ModuleID = @ModuleID;
            END;
        END;
END;

ALTER TABLE [dbo].[Meetings] ENABLE TRIGGER [CheckAndUpdateModuleDates]
```

4. UpdateCourseStartDate

Trigger sprawdza i aktualizuje datę rozpoczęcia kursu (StartDate) w tabeli Courses po zmianie daty rozpoczęcia modułu (NewStartDate) w tabeli Modules. Jeśli nowa data rozpoczęcia modułu jest późniejsza niż data zakończenia kursu, trigger zwraca błąd i blokuje transakcję, w przeciwnym razie aktualizuje datę rozpoczęcia kursu.

```
CREATE TRIGGER [dbo].[UpdateCourseStartDate]
ON [dbo].[Modules]
AFTER UPDATE
AS
BEGIN
    SET NOCOUNT ON;

    DECLARE @CourseID INT;
    DECLARE @NewStartDate DATE;
    DECLARE @EndDate DATE;

    SELECT
        @CourseID = i.CourseID,
        @NewStartDate = i.StartDate,
        @EndDate = i.EndDate
    FROM
        inserted i

    IF @NewStartDate > @EndDate
    BEGIN
        THROW 50000, 'Nowa data rozpoczęcia modułu nie może być późniejsza niż data zakończenia kursu.', 1;
        ROLLBACK;
    END
    ELSE
    BEGIN
        UPDATE Courses
        SET StartDate = @NewStartDate
        WHERE CourseID = @CourseID;
    END;
END;

ALTER TABLE [dbo].[Modules] ENABLE TRIGGER [UpdateCourseStartDate]
```

5. CheckStudentAlreadyEnrolled

Triger [CheckStudentAlreadyEnrolled] dla tabeli [Order_details] wykonuje sprawdzenia, uniemożliwiając wstawianie wielu wierszy jednocześnie oraz kontrolując, czy osoba nie jest już zapisana na dane wydarzenie w tabeli [Orders]. Działa po operacji wstawiania, zgłaszając błąd i anulując transakcję w przypadku naruszenia warunków.

```
CREATE TRIGGER [dbo].[CheckStudentAlreadyEnrolled]
ON [dbo].[Order_details]
AFTER INSERT
AS
BEGIN
    IF (SELECT COUNT(*) FROM inserted) > 1
    BEGIN
        RAISERROR('Wstawianie wielu wierszy jednocześnie nie jest obsługiwane.', 16, 1);
        ROLLBACK;
        RETURN;
    END

    DECLARE @StudentID INT, @OfferID INT;

    SELECT TOP 1 @OfferID = offerID
    FROM inserted;

    SELECT TOP 1 @StudentID = StudentID
```

```
    FROM Orders o
    WHERE o.OrderID IN (SELECT OrderID FROM inserted);

    IF EXISTS (
        SELECT 1
        FROM Orders o
        JOIN Order_details od ON od.OrderID = o.OrderID
        WHERE o.StudentID = @StudentID AND o.OrderDate = @OfferID
    )
    BEGIN
        RAISERROR('Osoba jest już zapisana na to wydarzenie.', 16, 1);
        ROLLBACK;
    END
END;

ALTER TABLE [dbo].[Order_details] ENABLE TRIGGER [CheckStudentAlreadyEnrolled]
```

6. BlockEnrollmentForPastEvents

Trigger [BlockEnrollmentForPastEvents] dla tabeli [Order_details] działa po operacji wstawiania, sprawdzając daty z ofert kursów, spotkań, webinarów oraz studiów, aby uniemożliwić zapisywanie się na już odbyte wydarzenia. W przypadku stwierdzenia, że data wydarzenia jest wcześniejsza niż obecna data, generowany jest błąd, a transakcja zostaje anulowana, zabezpieczając przed zapisem na przeszłe wydarzenia.

```
CREATE TRIGGER [dbo].[BlockEnrollmentForPastEvents]
ON [dbo].[Order_details]
AFTER INSERT
AS
BEGIN
    DECLARE @EventDate DATE;

    SELECT TOP 1 @EventDate =
        CASE
            WHEN i.OfferID IS NOT NULL AND c.StartDate IS NOT NULL THEN c.StartDate
            WHEN i.OfferID IS NOT NULL AND g.Date IS NOT NULL THEN g.Date
            WHEN i.OfferID IS NOT NULL AND w.Date IS NOT NULL THEN w.Date
            WHEN i.OfferID IS NOT NULL THEN NULL
        END
    FROM inserted i
    LEFT JOIN Courses c ON i.OfferID = c.CourseID
    LEFT JOIN Gatherings g ON i.OfferID = g.GatheringID
    LEFT JOIN Webinar w ON i.OfferID = w.WebinarID
    LEFT JOIN Studies s ON i.OfferID = s.StudiesID;

    IF (@EventDate IS NOT NULL AND @EventDate < GETDATE())
    BEGIN
        RAISERROR('Nie można zapisywać się na już odbyte wydarzenia.', 16, 1);
        ROLLBACK;
    END
END;

ALTER TABLE [dbo].[Order_details] ENABLE TRIGGER [BlockEnrollmentForPastEvents]
```

Indeksy

1. CourseOrderIndex

```
CREATE NONCLUSTERED INDEX [CourseOrderIndex] ON [dbo].[Courses]
(
    [StartDate] ASC,
    [TopicID] ASC,
    [CourseName] ASC,
    [CourseID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
```

2. EmployessOrderIndex

```
CREATE NONCLUSTERED INDEX [EmployessOrderIndex] ON [dbo].[Employees]
(
    [HireDate] ASC,
    [Salary] ASC,
    [EmployeeID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
```

3. EnrollmentsOrderIndex

```
CREATE NONCLUSTERED INDEX [EnrollmentsOrderIndex] ON [dbo].[Enrollment]
(
    [Enroll_date] ASC,
    [StudentID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
```

4. GatheringsOrderIndex

```
CREATE NONCLUSTERED INDEX [GatheringsOrderIndex] ON [dbo].[Gatherings]
(
    [Date] ASC,
    [SemesterID] ASC,
    [GatheringID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
```

5. LessonsOrderIndex

```
CREATE NONCLUSTERED INDEX [LessonsOrderIndex] ON [dbo].[Lessons]
(
    [Date] ASC,
    [TopicID] ASC,
    [TeacherID] ASC,
    [LessonID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
```

6. LessonsAttendanceOrderIndex

```
CREATE NONCLUSTERED INDEX [LessonsAttendanceOrderIndex] ON [dbo].[LessonsAttendance]
(
    [LessonID] ASC,
    [StudentID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

7. MeetingsOrderIndex

```
CREATE NONCLUSTERED INDEX [MeetingsOrderIndex] ON [dbo].[Meetings]
(
    [Date] ASC,
    [ModuleID] ASC,
```

```
    [TeacherID] ASC,
    [MeetingID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

8. ModulesOrderIndex

```
CREATE NONCLUSTERED INDEX [ModulesOrderIndex] ON [dbo].[Modules]
(
    [CourseID] ASC,
    [StartDate] ASC,
    [EndDate] ASC,
    [Title] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

9. OffersOrderIndex

```
CREATE NONCLUSTERED INDEX [OffersOrderIndex] ON [dbo].[Offers]
(
    [Name] ASC,
    [Price] ASC,
    [Type] ASC,
    [OfferID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

10. OrderDetailsOrderIndex

```
CREATE NONCLUSTERED INDEX [OrderDetailsOrderIndex] ON [dbo].[Order_details]
(
    [OrderID] ASC,
    [OfferID] ASC,
    [Value] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

11. OrdersOrderIndex

```
CREATE NONCLUSTERED INDEX [OrdersOrderIndex] ON [dbo].[Orders]
(
    [OrderDate] ASC,
    [StudentID] ASC,
    [OrderID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

12. PaymentsOrderIndex

```
CREATE NONCLUSTERED INDEX [PaymentsOrderIndex] ON [dbo].[Payments]
(
    [Date] ASC,
    [OrderID] ASC,
```

```
    [Value] ASC,
    [CancelDate] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

13. PracticesOrderIndex

```
CREATE NONCLUSTERED INDEX [PracticesOrderIndex] ON [dbo].[Practices]
(
    [StartDate] ASC,
    [SemesterID] ASC,
    [MeetingsCount] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

14. PractiseAttendanceOrderIndex

```
CREATE NONCLUSTERED INDEX [PractiseAttendanceOrderIndex] ON [dbo].[PractiseAttendance]
(
    [PractiseID] ASC,
    [StudentID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

15. SemestersOrderIndex

```
CREATE NONCLUSTERED INDEX [SemestersOrderIndex] ON [dbo].[Semesters]
(
    [StudiesID] ASC,
    [Semester_no] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

16. StudentsOrderIndex

```
CREATE NONCLUSTERED INDEX [StudentsOrderIndex] ON [dbo].[Students]
(
    [LastName] ASC,
    [FirstName] ASC,
    [CountryID] ASC,
    [BirthDate] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

17. StudiesOrderIndex

```
CREATE NONCLUSTERED INDEX [StudiesOrderIndex] ON [dbo].[Studies]
(
    [Name] ASC,
    [Fee] ASC,
    [StudentCapacity] ASC,
    [StudiesID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
```

```
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

18. SubjectsOrderIndex

```
CREATE NONCLUSTERED INDEX [SubjectsOrderIndex] ON [dbo].[Subjects]
(
    [SemesterID] ASC,
    [SubjectName] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

19. TeachingStaffOrderIndex

```
CREATE NONCLUSTERED INDEX [TeachingStaffOrderIndex] ON [dbo].[TeachingStaff]
(
    [LanguageID] ASC,
    [TeacherID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

20. TopicsOrderIndex

```
CREATE NONCLUSTERED INDEX [TopicsOrderIndex] ON [dbo].[Topics]
(
    [TopicName] ASC,
    [TopicID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

21. UsersOrderIndex

```
CREATE NONCLUSTERED INDEX [UsersOrderIndex] ON [dbo].[Users]
(
    [UserID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

22. WebinarOrderIndex

```
CREATE NONCLUSTERED INDEX [WebinarOrderIndex] ON [dbo].[Webinar]
(
    [Date] ASC,
    [WebinarName] ASC,
    [TeacherID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, SORT_IN_TEMPDB = OFF, DROP_EXISTING = OFF, ONLINE =
OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
GO
```

Uprawnienia

- **Admin** - całkowity dostęp do bazy,
- **Moderator** - zarządza bazą, moderuje tworzone wydarzenia, dostęp do procedur i widoków,

- **Worker** - tworzenie nowych wydarzeń, zarządzanie wydarzeniami, dostęp do procedur i widoków związanych z obsługą wydarzeń,
- **Client** - zapis na wydarzenia, dokonywanie płatności, wprowadzanie danych związanych z klientem, dostęp do widoków związanych z informacjami dla klientów.

Role

W systemie proponujemy zdefiniowanie następujących ról:

- **Admin** - dostęp do wszystkich tabel, procedur oraz widoków
- **Moderator** dostęp do wszystkich procedur oraz widoków
- **Worker** - *posiada dostęp do następujących procedur:*
    - AddLessonAttendance,
    - AddMeetingAttendance,
    - AddPractiseAttendance,
    - UpdateLessonAttendance,
    - UpdatePractiseAttendance,
    - UpdateMeetingAttendance,
    - GetStudentPracticeCompletionStatus,
    - GetStudentPracticeSummary,
    - MeetingsByTeacher *oraz nasepujące widoki:*
    - AttendanceMeetingView,
    - CoursesPass,
    - ConflictingTranslatorMeetings,
    - EnrolledStudentsToCourses,
    - EnrolledStudentsToGatherings,
    - EnrolledStudentsToStudies,
    - EnrolledStudentsToWebinars,
    - StudentPracticesCompletionStatus,
    - StudentPracticesSummaryByPractiseID,
    - WebinarProfitView,
    - StudentsEnrolmentInfo,
    - AllTeacherConflicts,
    - AllTranslatorsConflicts,
    - ConflictingTranslatorLessons
- **Client** *dostęp do następujących procedur:*
    - AddNewOrder,
    - AddOrderDetails,
    - AddPayment *oraz nasepujące widoki:*
    - AttendanceMeetingView,
    - CoursesPass,
    - EnrolledStudentsToCourses,
    - EnrolledStudentsToGatherings,
    - EnrolledStudentsToStudies,
    - EnrolledStudentsToWebinars,
    - StudentPracticesCompletionStatus,
    - StudentPracticesSummaryByPractiseID,
    - WebinarProfitView,
    - StudentsEnrolmentInfo,
    - AllEnrolments

Generator danych Wygenerowaliśmy podstawowe dane do testowania działania tebel, widoków i procedur.