Bazy Danych: Projekt

Raport

Zespół 5: Furgała Tomasz, 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.

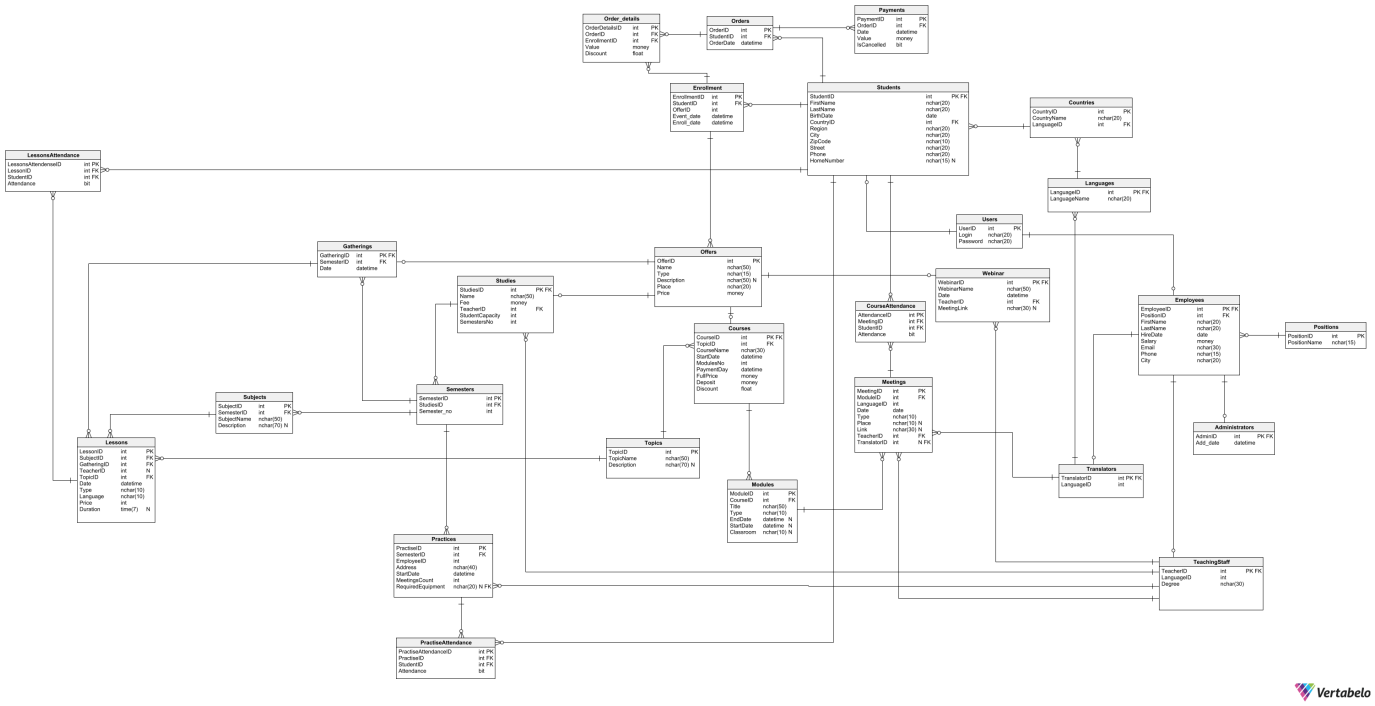
6. Prowadzący/Wykładowca

- 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] 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,
 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]  WITH CHECK ADD  CONSTRAINT [CHK_Name_Length] CHECK  ((len([Name])>=(5)))

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

ALTER TABLE [dbo].[Offers]  WITH CHECK ADD  CONSTRAINT [CHK_Price_NonNegative] CHECK  (([Price]>=(0)))

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

ALTER TABLE [dbo].[Offers]  WITH CHECK ADD  CONSTRAINT [CHK_Type_Values] CHECK  (([Type]='Gathering' OR
[Type]='Lesson' 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]

ALTER TABLE [dbo].[Webinar]  WITH CHECK ADD  CONSTRAINT [CHK_Webinar_WebinarName_Length] CHECK
((len([WebinarName])>(5)))

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

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]S

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]

ALTER TABLE [dbo].[Studies]  WITH CHECK ADD  CONSTRAINT [CHK_StudentCapacity_Minimum] CHECK
(([StudentCapacity]>=(10)))

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

ALTER TABLE [dbo].[Studies]  WITH CHECK ADD  CONSTRAINT [CHK_Studies_Name_Length] CHECK  ((len([Name])>(5)))
```

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

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] 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_Courses_CourseName_Length] CHECK
((len([CourseName])>(5)))

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

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] 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] 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] 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] 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] 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]

ALTER TABLE [dbo].[Subjects]  WITH CHECK ADD  CONSTRAINT [CHK_Subjects_SubjectName_Length] CHECK
((len([SubjectName])>(5)))

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

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] 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] 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]

ALTER TABLE [dbo].[Topics]  WITH CHECK ADD  CONSTRAINT [CHK_Topics_TopicName_Length] CHECK
((len([TopicName])>(5)))

ALTER TABLE [dbo].[Topics] CHECK CONSTRAINT [CHK_Topics_TopicName_Length]
```

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] 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_Title_Length] CHECK  ((len([Title])>
(5)))

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

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] 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] 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] 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 zamówienie do złożonego zamówienia, który się w nim znajdu (OrderID, EnrollmentID), wartość produktu i zniżke(Value, Discount), zniażka jest wartoscia typu float z zakresu od 0 do 1.

```
CREATE TABLE [dbo].[Order_details](
    [OrderDetailsID] [int] 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] 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] 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_Digit] CHECK  ((patindex('%[0-
9]%',[Password])>(0)))

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

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] 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] 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] 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]

ALTER TABLE [dbo].[Countries]  WITH CHECK ADD  CONSTRAINT [CHK_Countries_CountryName_Length] CHECK
((len([CountryName])>=(3)))

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

26. Languages:

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

```
CREATE TABLE [dbo].[Languages](
    [LanguageID] [int] 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]

ALTER TABLE [dbo].[Languages]  WITH CHECK ADD  CONSTRAINT [CHK_Languages_LanguageName_Length] CHECK
((len([LanguageName])>=(3)))

ALTER TABLE [dbo].[Languages] CHECK CONSTRAINT [CHK_Languages_LanguageName_Length]
```

27. Position

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

```
CREATE TABLE [dbo].[Positions](
    [PositionID] [int] 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, łączną liczbę spotkań oraz procentową obecność. Umożliwia analizę uczestnictwa studentów w ramach konkretnych kursów i modułów.

```
CREATE VIEW [dbo].[AttendanceMeetingView] AS
SELECT
    c.CourseID,
    a.StudentID,
    m.ModuleID,
    SUM(CAST(a.Attendance AS INT)) AS Attendance,
    COUNT(CAST(a.Attendance AS INT) * 100) AS AllMeeting,
    CONCAT(AVG(CAST(a.Attendance AS INT) * 100), '%') AS AttendancePercentage
FROM
    Courses AS c
INNER JOIN
    Modules AS m ON m.CourseID = c.CourseID
INNER JOIN
    Meetings AS me ON me.ModuleID = m.ModuleID
INNER JOIN
    CourseAttendance AS a ON a.MeetingID = me.MeetingID
GROUP BY
    c.CourseID, a.StudentID, m.ModuleID;
```

	CourseID	StudentID	ModuleID	Attendance	AllMeeting	AttendancePercentage
1	13	20	1	1	1	100%
2	13	21	1	1	1	100%
3	13	22	1	1	1	100%
4	13	20	2	0	1	0%
5	13	21	2	1	1	100%
6	13	22	2	0	1	0%
7	13	20	3	1	1	100%
8	13	21	3	1	1	100%
9	13	22	3	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.StudentID,
    CONCAT((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
    AttendanceMeetingView AS amv
INNER JOIN
    Courses AS c ON amv.CourseID = c.CourseID
WHERE
    AttendancePercentage = '100%'
GROUP BY
    amv.CourseID,
    amv.StudentID,
    c.ModulesNo;
```

	CourseID	StudentID	AttendancePercentage	ModulesNo	Result
1	13	20	50%	4	Fail
2	13	21	75%	4	Fail
3	13	22	25%	4	Fail

3. ConflictingTranslatorMeetings

Widok przedstawia tłumaczy, którzy przypisani są do różnych wydarzeń odbywających sie w tym samym czasie.

```
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 przedstawia dochód z poszczególnych kursów.

```
CREATE VIEW [dbo].[CourseProfitView] AS
SELECT
    c.CourseName,
    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
FROM
    Courses c;
```

	CourseName	Profit
1	Java Programming Course	399.98
2	Data Science Course	399.99
3	Digital Marketing Course	249.99
4	Web Development Bootcamp	499.99

5. EnrolledStudentsToCourses

Widok przedstawia informacje dotyczące studentów zapisanych na kursy.

```
CREATE VIEW [dbo].[EnrolledStudentsToCourses] AS
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    O.OfferID As CourseID,
    O.Name AS CourseName,
    O.Description AS CourseDescription,
    O.Place AS CoursePlace
FROM
    Students S
INNER JOIN
    Orders Ord ON S.StudentID = Ord.StudentID
INNER JOIN
    Order_details Od ON Ord.OrderID = Od.OrderID
INNER JOIN
    Offers O ON Od.OfferID = O.OfferID
WHERE
    O.Type = 'Courses';
```

	StudentID	FirstName	LastName	CourseID	CourseName	CourseDescription	CoursePlace
1	17	John	Smith	13	Java Programming Course	Comprehensive Java programming course	CityM, Boulevard 123
2	20	Sakura	Tanaka	15	Digital Marketing Course	Strategies and techniques in digital marketing	CityO, Lane 789
3	21	Sophie	Dupont	16	Web Development Bootcamp	Intensive web development training program	CityP, Square 012
4	21	Sophie	Dupont	14	Data Science Fundamentals Course	Fundamental concepts of Data Science	CityN, Avenue 456
5	33	Carlos	Fernandez	13	Java Programming Course	Comprehensive Java programming course	CityM, Boulevard 123

6. EnrolledStudentsToGatherings

Widok przedstawia informacje dotyczące studentów zapisanych na zjazdy.

```
CREATE VIEW [dbo].[EnrolledStudentsToGatherings] AS
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    O.OfferID As GatheringID,
    O.Name AS GatheringName,
    O.Description AS GatheringDescription,
    O.Place AS GatheringPlace
FROM
    Students S
INNER JOIN
    Orders Ord ON S.StudentID = Ord.StudentID
INNER JOIN
    Order_details Od ON Ord.OrderID = Od.OrderID
INNER JOIN
    Offers O ON Od.OfferID = O.OfferID
WHERE
    O.Type = 'Gathering';
```

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

7. EnrolledStudentsToStudies

Widok przedstawia informacje dotyczące studentów zapisanych na studia.

```
CREATE VIEW [dbo].[EnrolledStudentsToStudies] AS
SELECT
    S.StudentID,
    S.FirstName,
    S.LastName,
    O.OfferID As StudiesID,
    O.Name AS OfferName,
    O.Description AS OfferDescription,
    O.Place AS OfferPlace
FROM
    Students S
INNER JOIN
    Orders Ord ON S.StudentID = Ord.StudentID
INNER JOIN
    Order_details Od ON Ord.OrderID = Od.OrderID
INNER JOIN
    Offers O ON Od.OfferID = O.OfferID
WHERE
    O.Type = 'Studies';
```

	StudentID	FirstName	LastName	StudiesID	OfferName	OfferDescription	OfferPlace
1	19	James	Brown	5	Computer Science Bachelor Program	Bachelor studies in Computer Science	CityE, Boulevard 123
2	20	Sakura	Tanaka	6	Data Analytics Master Program	Master studies in Data Analytics	CityF, Square 456
3	21	Sophie	Dupont	8	Artificial Intelligence Certificate Program	Certificate program in AI	CityH, Lane 012
4	20	Sakura	Tanaka	7	Business Administration PhD Program	PhD studies in Business Administration	CityG, Avenue 789
5	22	Marco	Rossi	5	Computer Science Bachelor Program	Bachelor studies in Computer Science	CityE, Boulevard 123
6	28	Hiroshi	Yamamoto	5	Computer Science Bachelor Program	Bachelor studies in Computer Science	CityE, Boulevard 123

8. EnrolledStudentsToWebinars

Widok przedstawia informacje dotyczące studentów zapisanych na webinary.

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

	StudentID	FirstName	LastName	WebinarID	WebinarName	WebinarDescription	WebinarPlace
1	17	John	Smith	1	Webinar on Data Science Basics	Introduction to Data Science	CityA, Street 123
2	18	Maria	Rodriguez	2	Webinar: Mastering Python	Explore Python programming	CityB, Avenue 456
3	18	Maria	Rodriguez	3	Webinar: Machine Learning Fundamentals	Understanding basics of Machine Learning	CityC, Lane 789
4	29	Sophie	Müller	4	Webinar: Cybersecurity Essentials	Essential tips for Cybersecurity	CityD, Square 012
5	23	Mei	Wong	1	Webinar on Data Science Basics	Introduction to Data Science	CityA, Street 123
6	30	Juan	Lopez	2	Webinar: Mastering Python	Explore Python programming	CityB, Avenue 456

9. ListOfDebtors

Widok przedstawia listę dłużników, czyli osób, które wzięły udział w wydarzeniu, za które jeszcze nie zapłaciły, dzięki temu wiadomo którym użytkownikom należy wysyłać maile z przypomnieniem o nieopłaconym zamówieniu.

```
CREATE VIEW [dbo].[ListOfDebtors] AS
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
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
WHERE t.OrderStatus = 0 AND g.Date < GETDATE()

UNION

SELECT s.StudentID,s.FirstName,s.LastName
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
WHERE t.OrderStatus = 0 AND c.StartDate < GETDATE()

UNION

SELECT s.StudentID,s.FirstName,s.LastName
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
WHERE t.OrderStatus = 0 AND w.Date < GETDATE()

UNION

SELECT s.StudentID,s.FirstName,s.LastName
FROM Studies as sd
INNER JOIN Offers as o ON sd.StudiesID = o.OfferID
INNER JOIN Semesters as se ON se.StudiesID=sd.StudiesID
INNER JOIN Gatherings as g ON g.SemesterID = se.SemesterID
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
```

```
GROUP BY s.StudentID,s.FirstName,s.LastName, t.OrderStatus
HAVING min(g.Date) < GETDATE() AND t.OrderStatus = 0;
```

	StudentID	FirstName	LastName
1	28	Hiroshi	Yamamoto

10. OrdersPaymentsView

Widok przedstawia inforamacje dotyczące płatności dla każdego zamówienia.

```
CREATE VIEW [dbo].[OrdersPaymentsView]
AS
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
GROUP BY
    Ord.OrderID, P.CancelDate, P.Value;
```

	OrderID	Value	Paid	ToPay	CancelDate
1	1	350.72	350.72	0	NULL
2	2	75.98	75.98	0	NULL
3	3	4283.99	4283.99	0	NULL
4	4	16174.99	16174.99	0	NULL
5	5	2331.9799999999996	2331.98	0	NULL
6	6	5056.98	5056.98	0	NULL
7	7	102.47	102.47	0	NULL
8	8	331.98	331.98	0	NULL
9	9	99.99	12.00	87.99	NULL
10	9	99.99	12.00	87.99	2022-07-16
11	10	800	45.00	755	2022-11-13
12	11	65.58	65.58	0	NULL
13	12	48.480000000000004	48.48	0	NULL

11. ProfitInfo

Widok przedstawia liczbę wydarzń na jakie dokonano zapisu w zamówieniu oraz łączny dochód dla każdego z zamówień.

```
CREATE VIEW [dbo].[OrdersPaymentsView]
AS
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
GROUP BY
    Ord.OrderID, P.CancelDate, P.Value;
```

	OfferID	AllOrders	Profit
1	1	2	59.98
2	2	2	79.98
3	3	1	49.99
4	4	1	34.99
5	5	3	11000.00
6	6	1	7000.00
7	7	1	10000.00
8	8	1	2500.00
9	9	1	49.99
10	10	1	59.99
11	11	2	79.98
12	12	1	69.99
13	13	2	399.98
14	14	1	399.99
15	15	1	249.99
16	16	1	499.99
17	17	1	19.99
18	18	1	29.99
19	19	2	29.98
20	20	1	24.99

12. StudentPracticesCompletionStatus

Widok przedstawia status inforamacje dotyczące ukończenia praktyk.

```
CREATE VIEW [dbo].[StudentPracticesCompletionStatus] AS
SELECT
    out_t.StudentID,
    out_t.FirstName,
    out_t.LastName,
    COUNT(out_t.PractiseID) AS CompletedPracticesCount,
    (SELECT COUNT(in_t.PractiseID)
     FROM StudentPracticesSummaryByPractiseID as in_t
     WHERE in_t.StudentID = out_t.StudentID
     GROUP BY StudentID) AS TotalPracticesCount,
    CASE
        WHEN COUNT(out_t.PractiseID) = (SELECT COUNT(in_t.PractiseID)
            FROM StudentPracticesSummaryByPractiseID as in_t
            WHERE in_t.StudentID = out_t.StudentID
            GROUP BY StudentID) THEN 'Pass'
        ELSE 'Fail'
    END AS Result
FROM
    StudentPracticesSummaryByPractiseID as out_t
WHERE
    CompletedAllPractices = 'True'
```

```
GROUP BY
    out_t.StudentID, out_t.FirstName, out_t.LastName;
```

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

13. StudentPracticesSummaryByPractiseID

Widok przedstawia całą listę obecności na praktykch dla wszystkich studentów.

```
CREATE VIEW [dbo].[StudentPracticesSummaryByPractiseID] AS
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
GROUP BY
    PA.StudentID, PA.PractiseID, S.FirstName, S.LastName;
```

	StudentID	FirstName	LastName	PractiseID	CompletedAllPractices
1	19	James	Brown	1	True
2	22	Marco	Rossi	1	True
3	28	Hiroshi	Yamamoto	1	False
4	19	James	Brown	2	True
5	22	Marco	Rossi	2	False
6	28	Hiroshi	Yamamoto	2	True
7	19	James	Brown	3	True
8	22	Marco	Rossi	3	False
9	28	Hiroshi	Yamamoto	3	True
10	19	James	Brown	4	True
11	22	Marco	Rossi	4	False
12	28	Hiroshi	Yamamoto	4	True

14. StudentsEnrolmentInfo

Widok przedstawia inforamacje dotyczące wszystkich studentów oraz liczbę wydarzeń na jaką jest zapisany.

```
CREATE VIEW [dbo].[StudentsEnrolmentInfo] AS
SELECT
    dbo.Students.StudentID,
    dbo.Students.FirstName,
    dbo.Students.LastName,
    COUNT(DISTINCT dbo.Order_details.OfferID) AS Num_of_events,
    dbo.Students.Phone
FROM
    dbo.Users
INNER JOIN
```

```
    dbo.Students ON dbo.Users.UserID = dbo.Students.StudentID
INNER JOIN
    dbo.Orders ON dbo.Orders.StudentID = dbo.Students.StudentID
INNER JOIN
    dbo.Order_details ON dbo.Order_details.OrderID = dbo.Orders.OrderID
GROUP BY
    dbo.Students.StudentID,
    dbo.Students.FirstName,
    dbo.Students.LastName,
    dbo.Students.Phone
```

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

15. StudiesProfitView

Widok przedstawia dochód z poszczególnych studiów.

```
CREATE VIEW [dbo].[StudiesProfitView] AS
SELECT
    s.Name,
    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
FROM
    Studies s;
```

	Name	Profit
1	Computer Science	11000.00
2	Data Analytics	7000.00
3	Business Administration (PhD)	10000.00
4	Artificial Intelligence Certificate	2500.00

16. WebinarProfitView

Widok przedstawia dochód z poszczególnych webinarów.

```
CREATE VIEW [dbo].[WebinarProfitView] AS
SELECT
    w.WebinarName,
    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
FROM
    Webinar w;
```

	WebinarName	Profit
1	Webinar on Data Science Basics	59.98
2	Mastering Python	79.98
3	Machine Learning Fundamentals	49.99
4	Cybersecurity Essentials	34.99

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.

```
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)
    BEGIN
        INSERT INTO LessonsAttendance(LessonID, StudentID, Attendance)
        VALUES (@LessonID, @StudentID, @IsPresent);
    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.

```
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)
    BEGIN
        INSERT INTO CourseAttendance (MeetingID, StudentID, Attendance)
        VALUES (@MeetingID, @StudentID, @IsPresent);
    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.

```
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)
    BEGIN
        INSERT INTO PractiseAttendance(PractiseID, StudentID, Attendance)
        VALUES (@PractiseID, @StudentID, @IsPresent);
    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());

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);
        END
    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);

    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;
```

```
    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;
    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;
    END
END;
```

Funkcje:

1. CourseEnrolmentsNumber

Funkcja ta podaje ilość zapisanych użytkowników na podany kurs.

```
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

Funkcja ta przyjmuje jako argument ID oferty jakiegoś kierunku studiów a następnie zwraca wartość True/False w zależnośći czy na danym studium jest jeszcze miejsce do zapisania się.

```
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

Funkcja ta zwraca ilość użytkowników aktualnie zapisanych na podane 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

Funkcja ta zwraca ilość użytkowników aktualnie zapisanych na podany webinar.

```
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
```

Triggery:

1. CheckStudentCountOnStudies

Trigger sprawdza w momencie zapisu na wydarzenie czy wydarzenie osiągnęło już limit studentów. Jeżeli nie ma już miejsc to anuluje próbę zapisu na to wydarzenie.

```
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;
```