

# Project requirements

You have been tasked with designing a database system for a company offering various courses and training programs. Initially, the services offered were exclusively provided in-person, but due to the COVID-19 pandemic, the services have been digitized to varying degrees. Currently, the service delivery model is hybrid but highly inconsistent across different services. The offered services are divided into:

- 1) **Webinars:** These are conducted live on one of the popular cloud platforms, then recorded and made available to participants for a period of 30 days.
  - a) Within the database system, we do not store binary data - recordings are stored externally.
  - b) Each webinar may be free or paid. For paid webinars, participants have the option to purchase access to them (also for a period of 30 days). Free webinars are publicly accessible. All webinars are stored indefinitely (but administrators can delete them).
  - c) Access to a webinar requires having an account and payment confirmation (for paid webinars).
- 2) **Courses:** Short forms of education, usually lasting several days, are exclusively paid courses. Passing a course requires passing at least 80% of the modules. Modules can be:
  - a) In-person – conducted synchronously, with an assigned classroom, marked based on attendance.
  - b) Online synchronous – conducted "live" on a webinar platform, attendance is required. Similar to webinars, they are recorded and stored in an external system. Marked based on attendance.
  - c) Online asynchronous – marked based on watching the provided recording (automatic verification).
  - d) Hybrid – combining online and in-person approaches (e.g., 2 recordings and 2 days in-person).
- 3) **Studies:** Long-term (multi-year) forms of education, consisting of online and in-person meetings (same considerations as for courses). Additionally, they require completing internships, which occur twice a year. They conclude with a final exam. The study program (syllabus) must be known before starting, and its content cannot be modified.
  - a) The schedule of meetings must be known before each semester starts, but random changes should be considered.
  - b) Participation in at least 80% of the classes is required. Absences can be made up for by attending other classes or a commercial course on a similar topic. Internships last for 14 days – 100% attendance is required.
  - c) Similar to courses, meetings can be in-person, online, or hybrid.
  - d) However, it's possible to enroll in individual study meetings without participating in the entire program. The price for non-students is different from regular attendees.

**Integration with the payment system:**

1. The payment system is provided by an external company - its implementation should be skipped.
2. Participants can add products to their cart (one or more), then a payment link for each order is generated for the user. At the end of the payment, the integration sends back information about the status (successful/failed).
3. Access to a webinar is possible after prior payment (even shortly before the start).
4. Participation in a course requires paying a deposit upon registration, and the remaining amount must be paid no later than 3 days before the course starts. It's also possible to pay the full amount upfront upon registration.
5. Participation in a study program requires paying an enrollment fee (varies for each program) and paying for each session no later than three days before it starts.
6. Exceptions to rules 3-5 are at the discretion of the School Director each time (e.g., agreement to deferred payment for regular customers).

### **Reporting:**

The system should support generating frequently used reports by defining views.

1. Financial reports - a summary of revenue for each webinar/course/study program.
2. "Debtors" list - individuals who have used services but have not paid fees.
3. General report regarding the number of registered individuals for future events (with information on whether the event is in-person or remote).
4. General report on attendance for completed events.
5. Attendance list for each training session with date, first name, last name, and information on whether the participant was present or absent.
6. Bilocation report: a list of individuals registered for at least two future training sessions that collide temporally.

### **Other information:**

1. All forms of education are conducted by an assigned instructor in a designated language (usually Polish).
2. Some forms of education are live-translated into Polish - information about the translator should be provided in such cases.
3. Webinars and online courses have no seat limit. Hybrid and in-person courses have seat limits, each time different.
4. Study programs also have seat limits (which may be smaller than the limits for session meetings - meaning more external participants can be enrolled for some sessions, fewer for others, or none at all). However, the seat limit for the study program cannot exceed the smallest of the seat limits for individual session meetings.
5. Upon completion of each course and study program, the participant receives a diploma (provided they were present) - it should be sent by Polish Post to the correspondence address provided in the registration.