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CS5200 – Database Management System November 2017, Team 12 Namrata Bilurkar, Baijia Chen, Alex Helderman, Nagasai Vinaykumar Kapalavai

Trainly.io description

1 Trainly.io

This is a management system used for Trainly.io, an App store of training where organizations collaborate with faculty to create and securely post materials (for free!); students can find, enroll and complete any courses that they find to be useful to them and can gain certification upon completion to show it to their employers; and Trainly.io only charges 30% of any course enrollment fees.

2 User management

A user is uniquely identified by their ID, and has a firstname, lastname, picture, email, a few types of phone number, password, address (street, city, postal code, country). Each user can take on one or more roles: student, faculty, and/or administrator. All users are, by default, students and can thus consume courses, which has been specified below. Faculty are the creators of courses, which has been specified in the course section later, and must be validated by an administrator after registration (the identity of the administrator and date/time of this verification is recorded for accreditation purposes). The verification process requests the faculty member's title, affiliation, and work website. Administrators have a variety of enhanced positions within the system, and must thus be granted their role by another administrator – for purposes of security auditing, the date/time and grantor must be recorded.

3 Courses

Each course has a name, description, icon, cost, at least one faculty creator, creation date and is uniquely identified by a course ID. Each course must have at least one primary topic and may have any number of secondary topics. Each topic is identified uniquely using its topic ID and has a name associated with it.

Students have a list of courses in which they are interested. If they so choose, they can enroll in a course (whether or not it was indicated as of interest). It is important to know the date/time of payment for the course, as well as the payment confirmation code supplied via the third-party payment vendor used by Trainly.io.

If a student completes a course, the date/time must be recorded, such that requests for certification can be serviced accurately. Additionally, once a student completes a course, they are asked to provide a rating: 1–5 stars for the material, as well as any comments they might have for improvement/potential students.

4 Course Materials

A course on Trainly.io is really just a list of materials to be completed, in sequence, by a student. Each piece of material is unique to the course (i.e. material cannot be used in multiple courses), and is identified by its order in the sequence of materials.

A piece of course material has a name, and comes in one of three types: a downloadable file, a link, or a post. Downloadable files have a path, size, and type (used to provide MIME information to the client). Links have a URL and are tagged as video or not (videos are actually embedded on-site, to keep students on task!). A post just has a large block of text, possibly marked up via Markdown.

The core of the certification process is to track student completion of materials and so Trainly.io keeps track of the date/time of completion (e.g. viewing a video) of each item. A course is complete when all materials are complete.

5 Course questions

Students that have enrolled in the course can submit questions to the faculty creators. Each question has a rating, visibility, an answer and is uniquely identified using its ID. A question may relate to one or more of the course materials. If any of the creators believes the question will be of use to other students, s/he makes the question visible and supplies an answer. Students can "like" questions they find useful – this rating informs the ranking of questions on the course site. Multiple questions can be answered by a faculty. Each student can like a question only once, but can ask any number of questions.