Creative Art Case Study

Creative Art is a design school that offers online web design courses for the general public. Currently, artwork submitted by students must be emailed to the instructors and evaluations are emailed back to the student. When the school first began operation, there were only 2 instructors and approximately 24 students. However, in the last couple of years, business has grown and there are now 11 instructors and 420 students.

With this increase in students, the email load has become overwhelming and a new solution must be introduced. *Creative Art* would like a database system to provide an online interface for both students and teachers to log into to add and view both artwork and evaluations. In addition, they would like to make the artwork available for public display to showcase their students' artwork and provide a marketplace for its sale.

When an instructor is hired, information including name, address, gender, phone number, identity card number, date of birth, expertise and email address is collected and a unique staff number is assigned.

Students, upon registration, are required to include similar information.

The course overviews are available online and include the name of the course, any prerequisites, a description of the course and its assignments, the time frame in which it is offered and the name of the associated instructor.

Once registration is close, the instructor receives the list of students and begins email correspondence. Course material is emailed to the students and lectures are conducted by teleconference. All assignments are scanned (i.e. photographs, drawings) and emailed or otherwise sent electronically (i.e. with the provision of a url). Evaluations are returned to the students. The addition of the new student gallery and market will require a release form from interested students for display and/or sale purposes.

The database will create a centralized system for the instructors, students, artwork, evaluations (for viewing by the instructors and the concerned student only), the courses and the course material.

Data Requirements

Staff

Creative Art has 11 staff members, all of whom are instructors. Two of the staff members are the founders of the school and, in addition to their occasional instruction, they also provide administrative support. The data stored on each member of staff includes staff number, name, identity card number, gender, phone number, date of birth, address, email address, expertise and courses taught. The staff number is uniquely assigned.

Students

Members of the public who register and pay for courses through the *Creative Art* website are considered students. The data stored on each student includes student number, name, identity card number, gender, phone number, date of birth, address, email address, previous courses and experience. Also stored is the date of registration and the courses registered in. The student number is uniquely assigned to each student.

Courses

Creative Art offers a variety of online design courses. The data stored on each course includes the course number, the name of the course, the course description and prerequisites (if any). The course number is a unique number.

Class sections

Each course is made up of several class sections that determine the time and duration of the class. The data stored on each section includes the section number, the course number, the instructor's staff number, the assignments, the semester and the year. The section number is uniquely assigned to each section.

Course Materials

The instructors maintain a variety of course materials for use with the courses. The data stored on each of the course material documents include the document identifier, the title of the document, the topic, the associated course(s), the author, the date created and the date added. In addition, the electronic document itself will be stored in the database. The document identifier is a unique number.

Artwork

All artwork that is submitted as a visual assignment for a course is included in the database. The data stored on artwork includes the name of the artist, the format (i.e.

pdf, html, jpg), the date it was created and submitted, the medium used (i.e. b&w photography, charcoal drawing), the subject matter and the associated course, instructor and assignment. Each piece is assigned a unique code. Also stored is the electronic version of the artwork itself and the use permissions provided by the student.

Evaluations

Instructors are required to submit an evaluation for each assignment received. The data stored on evaluations includes the name of the instructor, the date it was written, the grade assigned, the written evaluation and the associated student, course and assignment. The evaluation is associated with the same unique code attached to the artwork.

Transaction Requirements

Data Entry

(a)   Enter the details of a new instructor.

(b)   Enter the details of a new student.

(c)

(d)

(e)

Data Update / Deletion

(a)   Update / delete the details of an instructor.

(b)   Update / delete the details of a student.

(c)

(d)

(e)

Data Queries

The database should be capable of supporting the following sample queries:

(a)   List the classes assigned to a given instructor.

(b)   Identify the total number of enrolled students.

(c)

(d)

(e)