

Gradiance On-Line Accelerated Learning Guide for Students

Jeffrey D. Ullman
Gradiance Corp.

Abstract

Gradiance On-Line Accelerated Learning (GOAL) is a system for creating and automatically grading homeworks, programming laboratories, and tests. Through the concept of “root questions,” Gradiance encourages students to solve complete problems, even though the homework appears to be in a multiple-choice format. This guide explains how students can make best use of the GOAL system and steps you through the critical operations.

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1 Getting Started With Gradiance

To use the Gradiance system, you will have to have an account. Your instructor will tell you the URL to go to in order to sign up for an account. For the Fall of 2004, there are two available sites:

1. www.gradiance.com/PH for the premium site based on the Garcia/Ullman/Widom database books, and
2. www.gradiance.com/freeDB for the basic version of the service.

1.1 Creating Your Gradiance Account

Go to either www.gradiance.com/PH/register.html to register for a class using the premium site, or www.gradiance.com/freeDB for classes using the basic site. You will be asked to provide:

1. (Only for the premium site) a *Book Token* which you will get from the text you buy for the course.
2. The Gradiance ID for your class. This item is the *Signup Token* that your instructor will generate and tell you. It's purpose, in addition to identifying the class uniquely among all classes at all institutions, is to make sure that only people the instructor expects to be in the class are in fact able to access class assignments.
3. Your first and last names.
4. An email address.
5. A unique ID, which must be at least 6 characters. We'll tell you if your chosen name is already taken, and you'll have to find something that is not yet claimed, just as for other public sites.
6. A password, which must be at least 10 letters and digits, with at least one of each.

Click the button at the bottom, and you are ready to use Gradiance.

1.2 Logging in to Your Gradiance Account

After registering, you log into the site www.gradiance.com/PH or www.gradiance.com/freeDB, whichever you registered for. When you log in, you get a screen with a left menu that covers basic account-management functions, and a body that allows you to access your class or classes. In the left menu you will see options:

1. *Home Page*: You can always get back to this screen by clicking this choice.
2. *Update Password*: An option handled in a standard way.
3. *Update Account*: we should have your first and last names, and a current email address. Please enter them here if they are not already entered.
4. *Log Out*: The effect should be obvious.

At the top of the page body, you will see a "class portfolio." You should find listed there all classes you are taking and that use Gradiance. Clicking on one of them will send you to the home page for that class. From there, you can work your assignments, as described in Section 2.

2 Gradiance Homeworks and Laboratories

Your instructor will assign questions, grouped into “assignments.” Your instructor should tell you when the assignments are available and when they are due. Assignments are accessed from the menu on the left, by choosing either Homeworks or Lab Projects.

2.1 Homeworks

Homeworks are sets of multiple-choice questions. Normally, they will be “root questions,” which means that each time someone opens the assignment, they get the same question, but a different choice from among one correct and three incorrect answers. Normally, both the questions and the choices appear in random order.

While different instructors may employ different policies, normally you will be allowed to open the same assignment as many times as you like, and you may submit it as many times as you like. The instructor may enforce a policy that requires you to submit your answers within a short time, e.g., 60 minutes, of opening the assignment. Your goal is to get a perfect score, eventually. That is, the purpose of Gradiance assignments is not to test you, but to help you learn the material. It doesn’t matter if you don’t get it right at first; you’ll be given help (discussed below).

2.2 Hints for Doing Gradiance Homeworks

Most, if not all, questions you will be given have “choice explanations” for the incorrect choices. Your instructor will probably allow you to see these immediately after submitting a homework. While the nature of the choice explanation varies from question to question, it usually either explains why your answer is wrong or gives you an outline of the problem’s solution. Some students like to answer wrong the first time purposely, to get the hints, and then reopen the assignment and start working “for real.” However, to prevent rapid-fire guessing, your instructor may require a minimum interval between openings of one assignment, e.g., 15 minutes.

We suggest that you think of each Gradiance question as if you were asked to work an ordinary, “long-answer” question. Work that question and keep the answer handy on a piece of paper. The multiple-choice question will typically sample your knowledge of the correct answer. For example, if the question calls for you to identify one tuple in the join of two relations, compute the whole join and leave it in front of you. You’ll then find it easy to identify the one tuple out of four choices that is in the join.

If you have worked the problem correctly, you’ll find the proper choice on the paper. If you have worked the problem incorrectly, you’ll probably make a wrong choice and will get a choice explanation that may help for the next time you try the assignment. Note that if you make no choice, you will not be given a choice explanation, so always try something.

After the due date for your assignment, you will be allowed to view your final submission. Typically (instructor’s option), with each question will appear a solution to the problem as a whole, along with the choice explanation for any wrong choices.

2.3 Laboratories

Lab Projects are different from homeworks. You are asked to write small programs, such as SQL queries. As with homeworks, you are allowed to submit labs as many times as you like. Each time you submit you get a response for each of the queries that you tried to answer. There are three possibilities:

1. *Correct.* You hope for this response; it means you got the query right.
2. *Invalid Query.* There was a syntax error in your query. The message from the database system is passed along to you.
3. *Incorrect.* The query was syntactically correct but gave the wrong answer. You will be offered *Results from Example Database*, which lets you see, on a sample of data, what your query produced and what a correct query would have produced on the same data. Often, studying the difference suggests what you are doing wrong.

2.4 Hints for Doing Gradiance Laboratories

Since these labs normally involve writing a number of independent pieces of code, e.g., SQL queries, we suggest that you work on one part at a time. Create your answers in a file, and copy-and-paste one query into the proper box on the Laboratory screen. Submit it and see if you got it right. Remember that you will be given either a syntax error message or an example of how your query goes astray, if the query is wrong.

Once a query is correct, leave it in the screen and start working on another query, in the same way. You are allowed to keep the project open indefinitely, until the due date. However, if you turn off your machine, experience a crash, or log out from Gradiance, you will not find your correct queries waiting for you when you reopen the lab. That is why we suggest that you keep queries you have written and debugged in a secure place.

2.5 Timing of Submissions

Homeworks and labs behave differently when you try to resubmit. With labs, we know it is important for you to retain your work, edit your queries, and try again. Thus, hitting the “back” button once or twice gets you to your most recent queries, and this page can be submitted as many times as you like. Homeworks, on the other hand, are designed to sample your knowledge of the solution to an underlying problem. You may submit each version you open only once. If you try changing guesses on a page you have submitted and then resubmitting it, you get an error message, and this work will not be accepted. You need to reopen the same assignment again, get different answer choices, and pick from among the new choices.

You should check with your instructor whether you are allowed to open a homework more than once. Your instructor may allow only one chance, or only some limited number of tries. Also, we expect that instructors will place a limit on how frequently you can open an assignment, even if you are allowed unlimited tries. The default is once every 10 minutes, but your instructor may use a different interval or no interval at all. The purpose of this limitation is to prevent rapid-fire guessing without really trying to work the underlying problems.