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CS 172-1

Project Specifications

The design of our project is to help educators with grading multiple choice tests using a console application. The problem we are trying to solve is to write a program that enables instructors to easily use the code and input the correct answers for the program to write. In addition, the application contains constructors that allows teachers to designate one correct answer. This allows teachers to save time on grading and computing averages of all tests in a course as well as the student average score for each individual test. By writing this code, we are trying to accomplish correct calculations for test scores and averages. It provides the contingency for educators to track students’ progress, and class improvements.

The requirements for this project are implement four different classes using templates and vectors. In this, we have a class specifically for questions, test, students taking the test, and a class that computes the averages of students and tests. The question class will have one attribute called answers this attribute will be private. The operators are CorrectAnswer(char) which takes a character, and couts the correct answer. CorrectAnswer(int,char) returns the positions of the character. The last operator is Options() w`hich will be a template that make different type of questions. The test class has one attribute called NumberofQuestions it will be private. The operator is AnswerKey() which checks to see if an answer is correct. The student class has three attributes called IDNumber, Name, and NumberCorrect. These attributes will all be private. The first operator is answers(char) which takes a character, and checks the individual answers. The AverageGrade(float) takes a float and figures our the students average grade for each test. The next operator is ComparetoKey(bool) which returns true if the answer is correct. The GradeforIndvTest() operator outputs the grade for each test the student takes. The last operator is the NumberofTest(int) which counts the number of tests the student took. The class average class attributes are AnswerKey, Average, NumberofTests, and NumberofStudents. All of these attrubtes will be private. The operations are ComputesAverage(double) which computes the average of all the all tests for all of the students. The IndivdualAverage(float) operator take the average for each individual test of all the students. The very last operator is SumofTests(int) which counts the number of tests that have been taken.

