Documentation of public methods for a class:

Below is the public part of the class QuizQuestion. It tells you how to create and initialize a QuizQuestion object, and how to access and set the information in that object.

// QuizQuestion

// holds the question number, prompt, and answer choices of a quiz question on a test

public class QuizQuestion

{

// QuizQuestion – construct a new QuizQuestion from a number, prompt and answer choices

public QuizQuestion( int qn, String p, String [] ac ) { . . . }

// getQuestionNumber – returns the question number

public int getQuestionNumber() { . . . }

// getPrompt - returns the prompt

public String getPrompt() { . . . }

// getStudentChoice – gets the student’s choice (0 = A, 1 = B, 2 = C, 3 = D, 4 = E)

// note: if the student hasn’t answered this question yet, the result is -1

public int getStudentChoice() { . . . }

// setStudentChoice – sets the student’s choice (0 = A, 1 = B, 2 = C, 3 = D, 4 = E, - 1 = no choice)

public void setStudentChoice( int sc ) { . . . }

// getCorrectChoice – gets the correct answer choice (0 = A, 1 = B, 2 = C, 3 = D, 4 = E)

public int getCorrectChoice() { . . . }

// getChoice( int i ) – gets the text of answer choice i (0 = A, 1 = B, 2 = C, 3 = D, 4 = E)

public String getChoice( int i ) { . . . }

}

From this information, we can determine, for example, that, given a variable, qq, of type QuizQuestion, we could:

1. Get the prompt for the question by using the getPromptMethod. This function takes zero arguments (ie we don’t need to tell the question anything for it to tell us what it’s prompt is), and returns a String (ie the result is going to be of type String, so we use it like a String… print it out, assign it to a String variable, add it to another String to create a longer String etc):

String thePrompt = qq.getPrompt(); // assigns the prompt to thePrompt for use later

System.out.println( qq.getPrompt() ); // prints out the prompt

1. Get one of the choices by using the getChoiceMethod. The getChoiceMethod takes an int as input. From the comments above the getChoiceMethod, we learn that the int, refered to as i, indicates which of the choices will be returned (if we want choice A, use i = 0 etc). The result of getChoice is also a String, so we can assign it to a String variable or print it out etc:

String choiceA = qq.getChoice( 0 ); // assigns choice A to variable choice

System.out.println( qq.getChoice(3) ); // prints out choice B

1. Get which choice the student has selected using getStudentChoice. This function takes no arguments and returns the index of the choice that the student has selected ( 0 = A, 1 = B etc) or -1 if the student hasn’t yet answered the question:

int sc = qq.getStudentChoice(); // sets sc to the index of the choice that the

// student selected

if ( qq.getStudentChoice() == -1 ) // check if the student has answered the

// question

System.out.println( “You haven’t answered this question yet.” );

1. We can get the correct answer choice (similar semantics to getStudentChoice, though, presumably the result will never be -1).

int cc = qq.getCorrectChoice();

if ( qq.getCorrectChoice() == qq.getStudentChoice() )

System.out.println( “You got the correct answer!” );

1. We can get the question number:

int qn = qq.getQuestionNumber();

1. We can set the student’s answer. For example, if the Student decides that (s)he likes choice D, we could set that choice. This method returns void. This indicates that the function does something – ie makes changes - rather than calculating or retrieving information. The result of this function is not a value, so it can’t be assigned to a variable or printed out.

qq.setStudentChoice( 3 ); // selects answer choice D

Notice that you don’t really need to know what goes in the bodies of the methods. None of the code inside the methods is shown, only { . . . }. The only information you need in order to use an instance of QuizQuestion is included in the header of the function – that is:

1. The type of information returned by the function (and its interpretation)
2. The name of the function
3. The input values required by the function (and their interpretations)

In this project, you’ll be writing several of your own functions which consume QuizQuestions (ie the input to your function will be a QuizQuestion) and do various tasks. You’ll need to use the functions shown above to accomplish your tasks, but you do NOT need to implement the functions above since they are already provided for you.

1. printQuizQuestion( QuizQuestion qq )

This function should print a quiz question out. On the first line, you should print the question number followed by a . followed by the prompt for the question. On each of the next 5 lines, you should print a different choice, preceded by the letter (A…E) with a ) for the choice. These lines should be indented 2 spaces from the prompt line. Additionally, if the student has chosen one of the choices, that choice should have a \* to the left (aligned vertically with the question number). For example (the prompt should all be on one line, but my margins are too small here):

If the student hasn’t answered the question yet:

1. What are the initials of the person who said "Ask not what your country can do for you but what you can do for your country"?

A) MLK

B) eec

C) JFK

D) FDR

E) GWB

If the student has answered the question (in this case they answered D – which is incorrect):

1. What are the initials of the person who said "Ask not what your country can do for you but what you can do for your country"?

A) MLK

B) eec

C) JFK

\* D) FDR

E) GWB