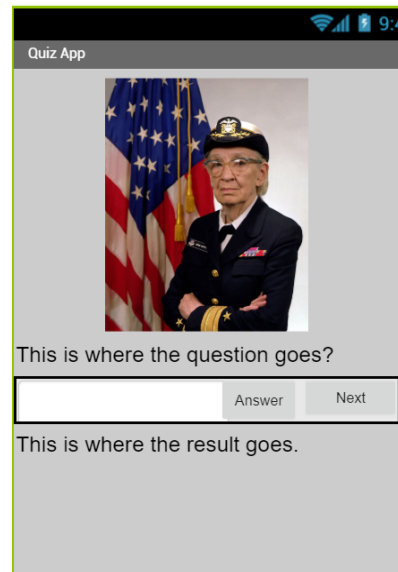




Quiz App Tutorial Short Handout

Getting Started

Open App Inventor with the [Quiz App Template](#). The template has the User Interface already built for you.



Coding the App

Data Abstraction: List Variables	Values
questionList	Make a List of 3 Text strings: - Which computer science pioneer broke the German Enigma Code during World War II? - Which NASA engineer was the first black female engineer at NASA and a human computer featured in the movie Hidden Figures? - Which Navy admiral helped create COBOL, one of the first high level programming languages?
answerList	Make a list of 3 Text strings: - Alan Turing - Mary Jackson - Grace Hopper
pictureList	Make a list of 3 Text strings: - AlanTuring.jpg - MaryJackson.jpg - GraceHopper.jpg
index (variable)	Set to value 1



Event Handlers	Algorithms
Screen1.Initialize	Show the first picture and question: Set Image1.Picture to "Select list item" where: - list = get global pictureList - index = get global index Set QuestionLabel.Text to "block to "select list item" - list = get global questionList - index = get global index Set CorrectLabel.Text to a blank text (" ") block.
NextButton.Click	Set index to index + 1. If index is > length of the questionList, set index back to 1. Set image.Picture to the select list item from pictureList at index. Set QuestionLabel.Text to the select list item from questionList at index. Set CorrectLabel.Text to a blank Text block ("").
AnswerButton.Click	If AnswerTextBox.Text = answer (select list item from answerList at the index), then set the CorrectLabel to Correct; else set it to "Sorry, that is incorrect".

Testing the App

Inputs	Expected Outputs	Actual Outputs
Start the program	The image should display Alan Turing and show the first question.	?
Type "a wrong answer" into the AnswerTextBox and click the "Answer" button.	The app will display that the answer given is incorrect.	?
Type "Alan Turing" into the AnswerTextBox for the first question and click the "Answer" button.	The app will display that the answer given is correct.	?
Try "alan turing"	It's incorrect! The extension will accept the answer typed with any case.	?

Iterative Design: Enhancements

Here are some programming problems that will let you enhance and extend the Quiz App.

- As you might have noticed, if the answer is "Alan Turing" and the user types in "alan turing", the answer will be marked incorrect. That's not very nice for the user. To remedy this problem you will want to convert both the user's answer and the stored answer to upper case "ALAN TURING". (HINT: use the **upcase** block in the *Text* drawer to convert both strings.)
- When the user gets an incorrect answer, instead of just reporting "incorrect", use a join block to also display the correct answer. "Sorry, that is incorrect. The correct answer is



Grace Hopper.”

3. **Random Question.** Add *RandomButton* to the app that when clicked will display a random question from the quiz. (HINT: You could use some new blocks from the List drawer such as a pick a random item block fed into a index in list thing block to set the index randomly.)
4. Add a fourth question (and answer and picture) to the quiz. If you like, you can research “famous computer scientists” on the Web to discover a fourth person. Or, if you wish, you can create a question about Hal Abelson, the creator of our App Inventor programming language, pictured on the right. (HINT: You should only have to modify the 3 lists and upload an image file. The code should work with any number of questions as long as you used the ***length of list*** block instead of hard coding in the number 3 for the number of questions.)

