



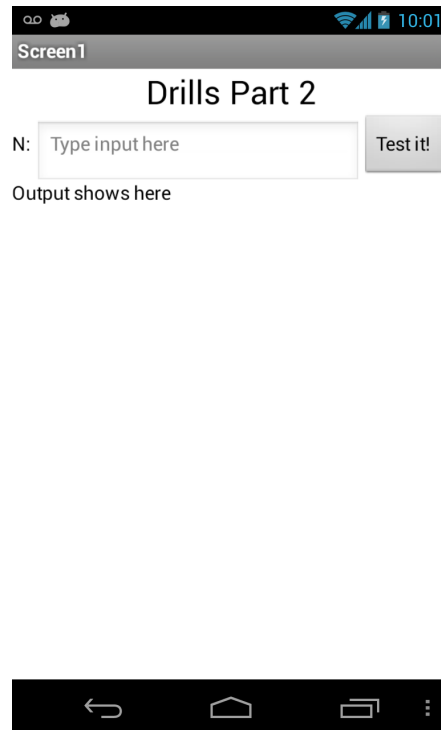
Coding Drills 2

Coding exercises focusing on if-else statements. The UI is given. For these drills, the app will get the user's input from the Textbox ('Type input here'), perform some kind of computation on the input, and display the result in the Label ('Output shows here').

The exercises in this set require that you use various versions of the **if/else** block, which can be found in the Control drawer. You will also need to use some of the Math blocks, including the block for equals (=) and inequalities (<, >, etc.).

CSP Learning Objectives:

- *The student can implement a correct program.*
- *The student can explain how a program implements algorithms.*



Setup Instructions

Open [App Inventor 2](https://trincoll.github.io/appinventor/). Go to *Projects > Import Project (.aia) from a repository > Add a New Template Library URL* and type in <https://templates.appinventor.mit.edu/trincoll/csp/drills/> into the *Templates Url* box then click *OK*. Next choose the *Drills2Template*. Click the 'OK' button. This will open a new project in App Inventor. Use the *Save As* button to rename your project "Drills2" or something like that.

Review

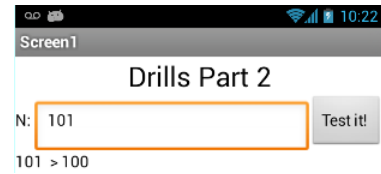
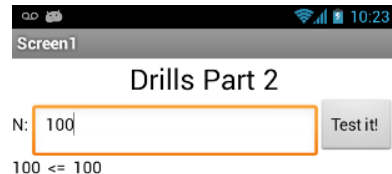
Drills

For each of the following problems, code the solution in the Blocks Editor. Then run and test your solution. Keep running and testing until you are certain that it is correct. If you have trouble or questions, ask someone for help. For each exercise, you might want to do 'SaveAs'

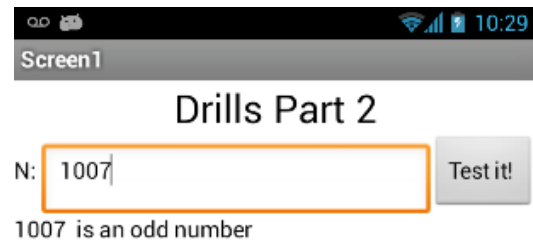
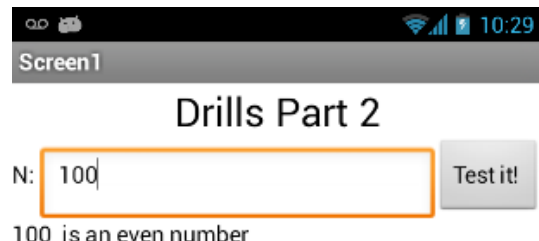


to preserve your individual solutions.

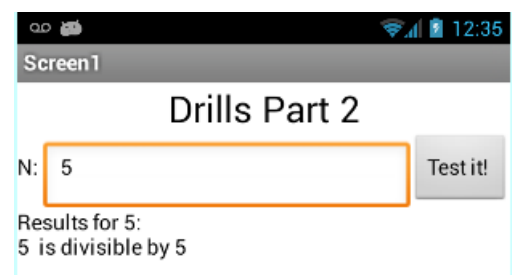
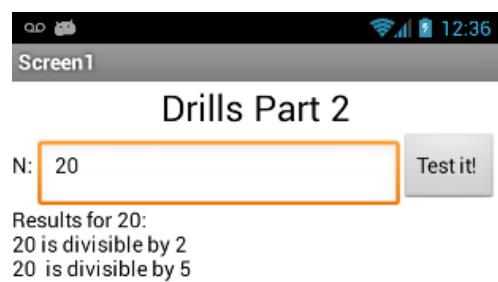
- Greater than 100. Write an app that tests whether the value input by the user is greater than 100 and reports the result as shown here:

	
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- Is it odd. Write an app that tests whether the value input by the user is odd. (HINT: Look for the *modulus/remainder* block in the Math drawer. A number is odd if it is not evenly divisible by 2, or, in other words, if it leaves a remainder of 1 when divided by 2). Report the result as shown here:

	
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- Divisible By. A number N is divisible by M if the remainder of N divided by M is 0. All even numbers are *divisible by 2*. Modify the app to test whether N is divisible by 2, 3, and 5. Some numbers, 30, will be divisible by all three, and some, 17, will be divisible by none. (HINT: To get the output to appear on separate lines, use the '\n' character in your strings.)

	
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Screen1 Drills Part 2 N: 30 Test it! Results for 30: 30 is divisible by 2 30 is divisible by 3 30 is divisible by 5	Screen1 Drills Part 2 N: 17 Test it! Results for 17:
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- Movie Ticket. Suppose that N represents a person's age and we want to categorize the person as a youth, adult, or a senior. A senior is a person who is 65 or older. A youth is anyone younger than 18. Input N and display the decision about the person's category:

Screen1 Drills Part 2 N: 17 Test it! 17 is a youth	Screen1 Drills Part 2 N: 18 Test it! 18 is an adult	Screen1 Drills Part 2 N: 65 Test it! 65 is a senior
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