

AP Computer Science Principles

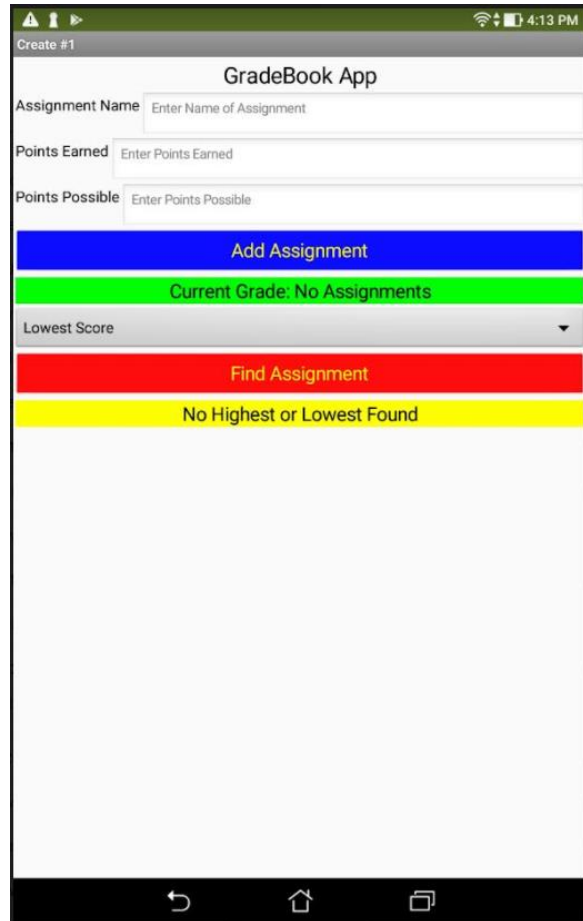
Create #1 – The Gradebook App

Day 3 (Thursday): Add the capability to find the highest or lowest score

1) You should add two elements to the User Interface.

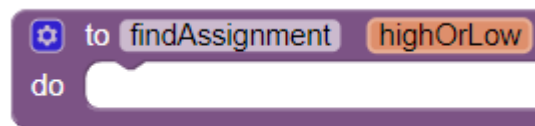
- A Spinner (a selection tool)
- A Button
- A Label to show highest or lowest

It could look like this to the right.

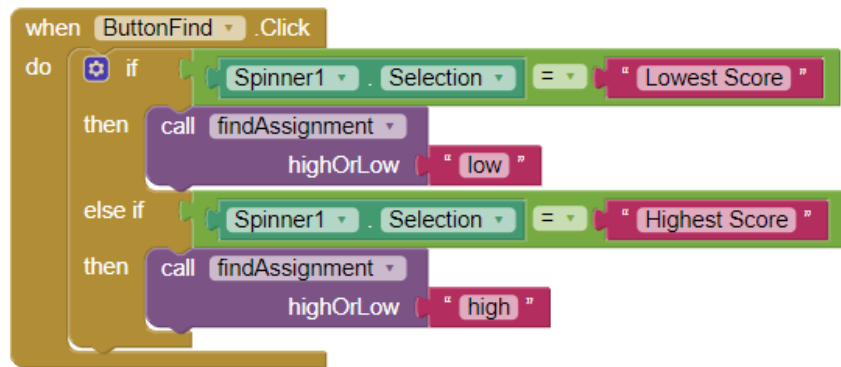


2) Create a procedure with a parameter that will be used to find the highest or lowest assignment.

It could look like this to the right

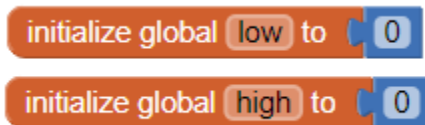


3) Add the event handler on the right for your new Button to Find an Assignment



4) Complete the procedure to find the highest or lowest assignment.

First you need two more variables. You can call them high and low like this below:



Now, we will write part of the procedure as a class.

Here is the pseudocode:

If the parameter is indicating to find the high score

- Set the variable high to earned/possible at index 1 of the lists pointsEarned and PointsPossible
- Traverse through the two Lists at the same time (we cannot use the loop like we did the other day) and calculate the value earned/possible
- If the value is greater than the current high score
 - o Replace the high score with the value just calculated.
- Set the label for HighOrLow to the current high score.

Otherwise if the parameter is indicating to find the low score

- Set the variable low to earned/possible at index 1 of the lists pointsEarned and PointsPossible
- Traverse through the two Lists at the same time (we cannot use the loop like we did the other day) and calculate the value earned/possible
- If the value is less than the current low score
 - o Replace the low score with the value just calculated.
- Set the label for HighOrLow to the current high score.

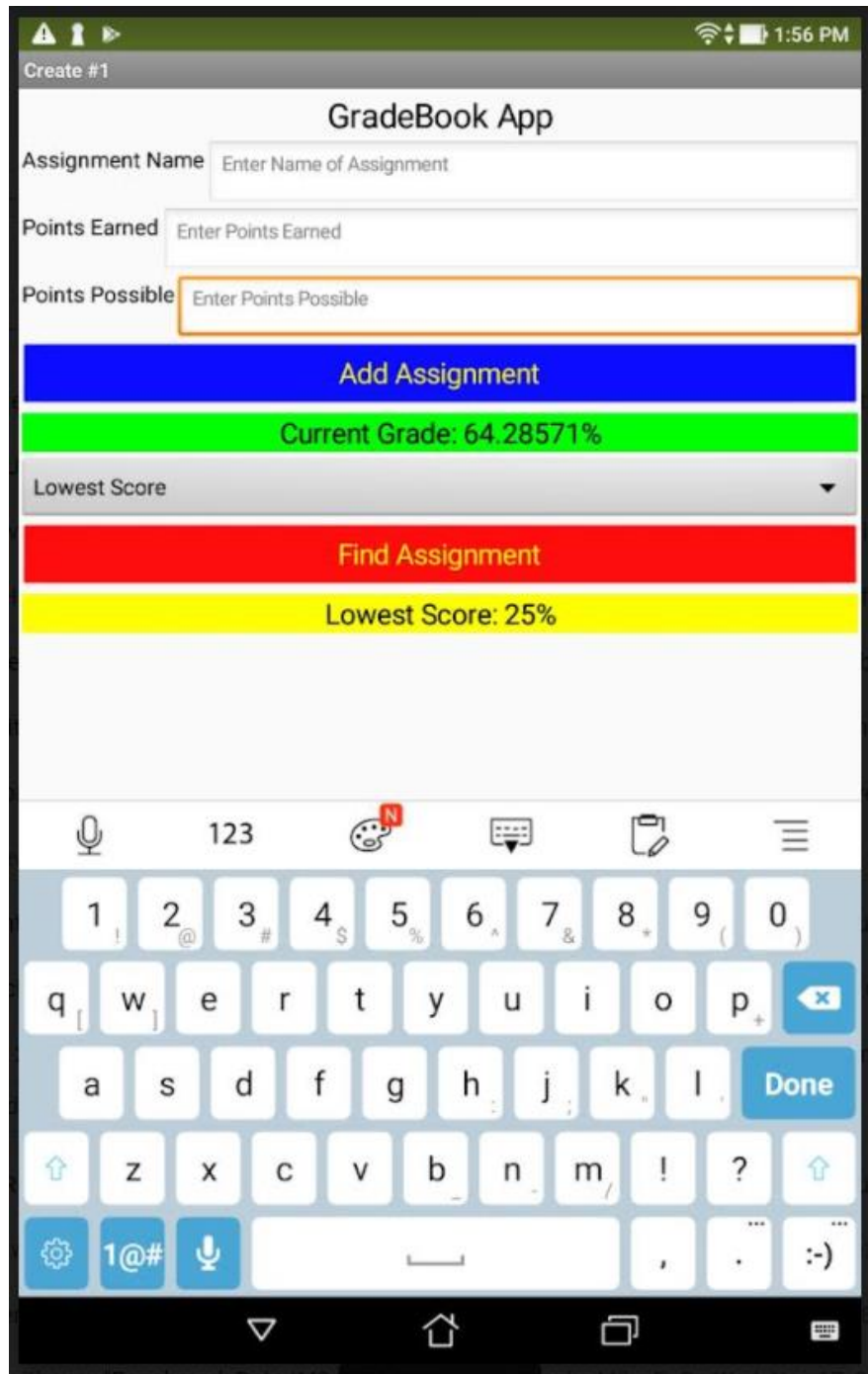
See the next page for what the output might look like

After entering the following scores,

20/25 15/15 3/12 and 16/32

The output would look like this:

Lowest Score



Highest Score

Create #1

GradeBook App

Assignment Name

Points Earned

Points Possible

Add Assignment

Current Grade: 64.28571%

Highest Score ▾

Find Assignment

Highest Score: 100%