

Project 3

GVSU-Prize

(ALL games/projects assigned in CS162 are designed to help students understand basic Java programming and have some fun learning some of these techniques. The project can only be used for entertainment/educational purposes.)

Context:

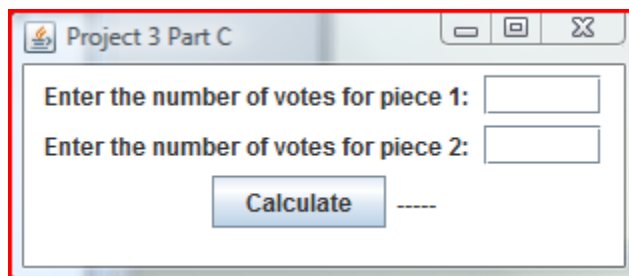
If statements, decisions, are a fundamental part of programs. This project will require the use of if statements.

Programs with Graphical User Interfaces (GUIs) are more user-friendly. Parts B or A for this project will require you to write a simple GUI.

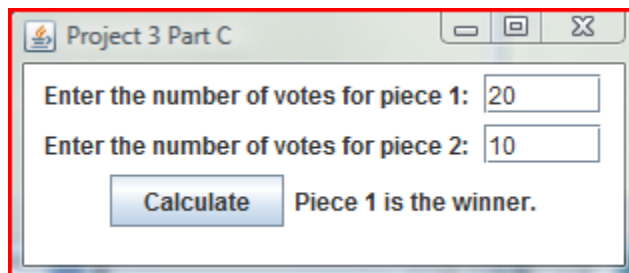
Basic description of the project:

An art contest has been organized at GVSU among the students, staff and faculty. The contest is similar to ArtPrize. Your task it to write a program that will allow a person to enter the number of votes received for works of art. The program will then print out which piece is the winner.

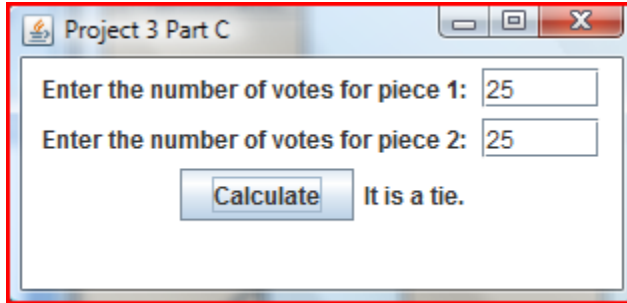
For a grade of “C”, you must create a graphical user interface that looks like this:



Once the user presses the “Calculate” button, your program shall update the window to indicate which piece received more votes:

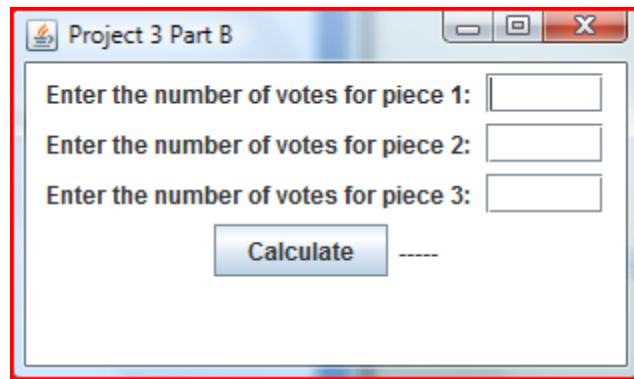


Keep in mind that there might be a tie between the two pieces.

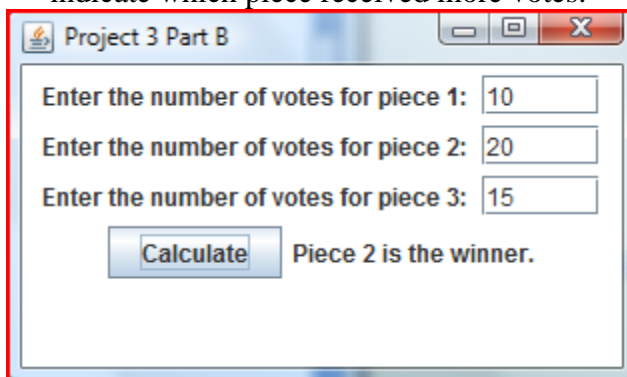


Read the listings 4.10, 4.11, 4.12 and 4.13 in the book. It will help you understand how to create buttons and text fields and how to write action listeners.

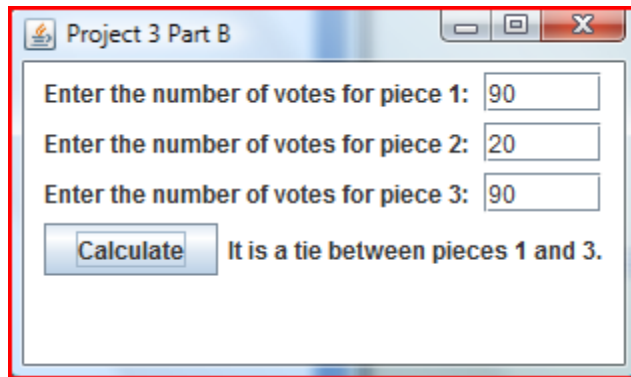
For a grade of “B”, you must create a graphical user interface that looks like this:



Once the user presses the “Calculate” button, your program shall update the window to indicate which piece received more votes:



Remember, again, that there might be ties for the first place between two or three pieces:



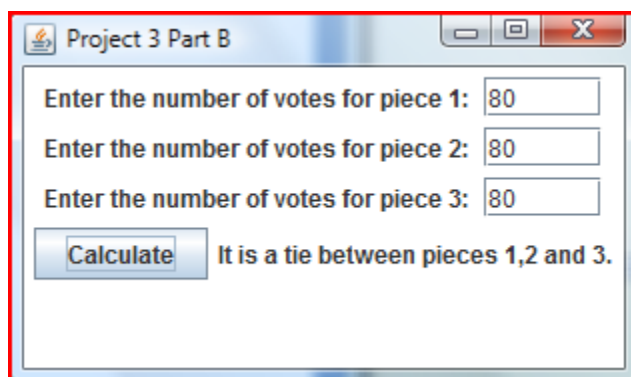
Project 3 Part B

Enter the number of votes for piece 1:

Enter the number of votes for piece 2:

Enter the number of votes for piece 3:

It is a tie between pieces 1 and 3.



Project 3 Part B

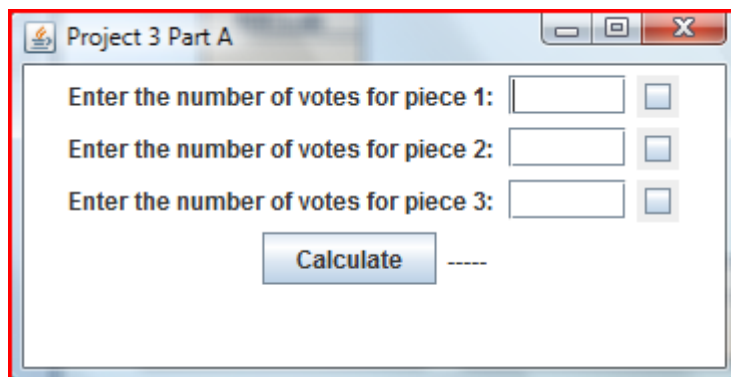
Enter the number of votes for piece 1:

Enter the number of votes for piece 2:

Enter the number of votes for piece 3:

It is a tie between pieces 1,2 and 3.

For a grade of “A”, you must add checkboxes to the GUI. There should be a checkbox for each piece. Those pieces that are winners should have their checkbox marked.



Project 3 Part A

Enter the number of votes for piece 1: ☐

Enter the number of votes for piece 2: ☐

Enter the number of votes for piece 3: ☐

Turn in Requirements (in this order) in lab:

- Hard copy of your source code (output not required) and be ready to demo in lab. Remember to attach this handout as a cover sheet.

Your program will be demonstrated in lab. IMPORTANT: there are a significant number of students in this class, which gives me about 5 minutes per student to check out each person's program. When your name is called for program demonstration, you must be ready to go.

Tentative Rubric:

Program compiles with no syntax errors	25 pts
Program has proper documentation and indentation	25 pts
Part C: GUI as specified, with two pieces of Art. Maximum possible score for part C: 70 points.	20 pts
Part B: GUI as specified, with three pieces of Art. Maximum possible score for part B: 85 points.	15 pts
Part A: GUI as specified, with three pieces of Art. Maximum possible score for part A: 100 points.	15 pts.