Computer Science 20AP

Second Language Programming 2

Processing

Instructions – Learning Processing: The most efficient way to learn this program is to go online to the Processing.org website. Here you will type in the programs and experiment with the code. After this you can access a very good online textbook that will further your knowledge of Processing. After working through these tutorials, examples and the textbook you will be comfortable with completing the Assignments. Good Luck

1. Go to processing,org website. Complete the beginner and intermediate tutorials
2. Save at least one program from each section of the tutorials
3. Experiment with the sample programs
4. Download the Getting Started with Processing textbook from the Computer Science folder on the server or go to this website: <http://www.petronet.ir/documents/10180/2323248/Getting_Started_with_Processing>
5. Read through the textbook and begin with putting in the code for Robot 1 at the end of Chapter 3 – Modify the Robot (Draw)
6. Chapter 4 – Robot 2 (Variables) – Copy the Code and Modify
7. Chapter 5 – Robot 3 (Response) – Copy the Code and Modify
8. Chapter 6 – Robot 4 (Media) – Copy the Code and Modify
9. Chapter 7 – Robot 5 (Motion) – Copy the Code and Modify
10. Chapter 8 – Robot 6 (Functions) – Copy the Code and Modify

Optional Chapters

1. Chapter 9 – Robot 2 (Objects) – Copy the Code and Modify
2. Chapter 10 – Robot 2 (Arrays) – Copy the Code and Modify

Processing Assignment 1

Save as Processing Assignment 1 to your school account, drive or usb.

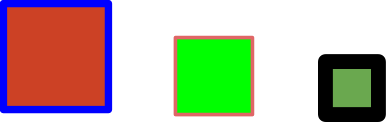
Setup

Size- 600, 800

Background - your choice

Part 1 Choose either 1A or 1B

1A- Stroke, Stroke Weight, Fill, Rect review



* Create a new Processing window with a width of 800 and a height of 600
* Draw 3 squares. Each square must:
* get smaller
* have a difference stroke thickness and a different stroke colour
* have a different fill colour
* Place your squares so they are approximately evenly spaced across the page
* BEST EXAMPLE ON T:DRIVE - ShapesExample\_Measles

1B (includes new stuff) Arcs and Ellipses

* link to the following tutorial and then read about the basic arcs [http://www.processing.org/tutorials/curves/](http://www.google.com/url?q=http%3A%2F%2Fwww.processing.org%2Ftutorials%2Fcurves%2F&sa=D&sntz=1&usg=AFQjCNGCa9yt6PHuGht8QOZrpiSu4PYDdg)
* draw a happy face centred below your squares (3 circles and an arc for the smile) or for a tougher challenge, draw a ghost
* for the smile, try: arc(xlocation, ylocation, 50, 50, 0, PI);

Part 2 Choose either 2A or 2B

2A. Fonts and Text

* Add two distinct looking fonts to your sketch
* Using the 2 different fonts, write two sentences in separate text boxes, one near the left edge, one near the right but evenly spaced vertically. May I suggest:

Student Union Elections is next week. Don’t forget to vote!

* Draw two rectangles each centered nicely around each sentence

2B. Images

* Add two pictures, making them small enough to fit in the remainder of your window. May I suggest adding to the bike-a-thon theme. Remember that you must import your images into your project. To do so: sketch… add file

Part 3: mousex and mousey

* Use mousex to effect the location of anything on your page
* Use mousey to effect something else on your page

Need Help

Key examples on the T: Drive include:

* ShapesExample
* Text Font
* Pictures

Go to: Processing.org/tutorials OR just google it in processing  
Use the textbook: Getting started with Processing

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Processing Final Project

Consider this your final exam for Second Language Programming 2. Your goal is to demonstrate your level of skill in processing by designing and programming a class period project. The theme of your project is entirely up to you.

To Achieve 50-70% in this course, your Project must contain:

* Multiple fonts, pictures and drawings
* Use of keyboard and/or mouse
* At least 5 separate IF statements OR at least 3 that use multipart ELSE IFs

To Achieve 70-90% in this course, your Project must contain:

* all of the above
* On multiple occasions, you must use complex boolean logic in your if statements (&&, ||, etc.)

To Achieve 90+% in Your Project, it must contain:

* all of the above
* You must demonstrate the use of these features in a way that differs significantly from our previous examples and assignments.
* You must have demonstrated an effort to give your program a professional look and feel
* Instructions are clear for the user
* Used comments in your code to make the code easier to read

Project Ideas (brainstormed in class)

Enhance Dice Game  
Slide Show with animations  
Mini-game based on the Sun/Moon animations  
Adventure Game  
Cross the Road Game  
Bouncing Ball Game  
PacMan  
Maze Game