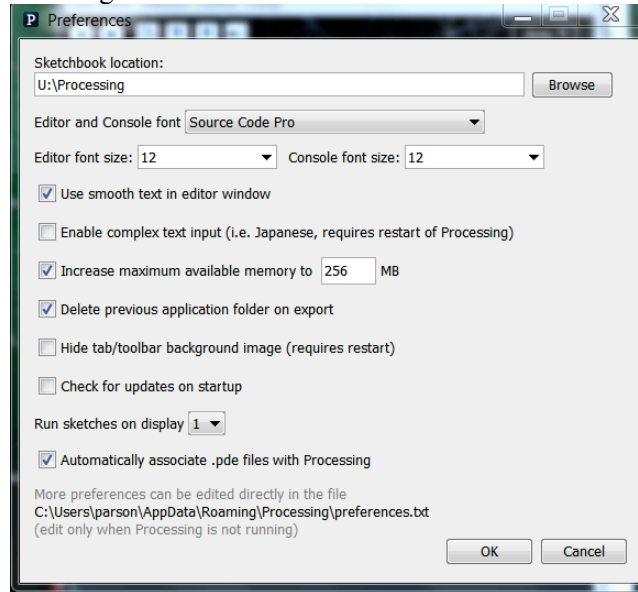


CSC 120 Introduction to Creative Graphical Coding, Spring 2018

Dr. Dale E. Parson, Assignment 5, Writing a plug-in class for display in the planetarium during our final exam period. This assignment is due via **D2L Dropbox Assignment 5 ShapeyFinal** by **11:59 PM on Friday May 4**. When using Processing on the Kutztown campus Windows computers, make sure to start out **every time** by setting your Processing Preferences -> Sketchbook Location to U:\Processing. The U:\ drive is a networked drive that will save your work and make it accessible across campus. If you save it to your desktop or the lab PC you are using, you will lose your work when you log out. You must save it to the U:\ drive. If you do not have a folder called Processing under U:\, you must create one using the Windows Explorer. Processing Preferences is under the File menu on Windows.



You must make certain to use Hue-Saturation-Brightness-Alpha (HSB) colors instead of Red-Green-Blue-Alpha (RGB) in the fill(), stroke(), and tint() function calls. This is a very open-ended assignment. Please do not use JPEG, PNG, SVG, or other image or vector files. You may use Processing shapes and text, and you may use (optional) your own custom .ttf or .otf PFont files¹. Please do something more adventurous with your font and text than my minimal letter “P”. Do something inventive.

20% of this grade will be for attendance at the Kutztown Planetarium during our final exam period in order to see this work on the dome. You must turn in a doctor’s excuse to avoid a 20% deduction for not attending the final exam period session in the KU planetarium. The remaining points are 10% each for the following 8 functions in your class. Make sure to modify only the class named after your email login.

<http://faculty.kutztown.edu/parson/spring2018/PaintDome2018.txt> has the initial code and the detailed instruction. Copy & paste this code into Processing, Save As ShapeyFinal, and **code & test your individual class, which has the same name as your Kutztown login ID & email**. You must copy file <http://faculty.kutztown.edu/parson/fall2017/CenteredClippingCircle.png> into your sketch folder. Please read the comments at the top of the sketch, and interface Shapey, and my example code in class parson, for your primary instructions. We will have some in-class lab sessions as usual.

¹ https://processing.org/reference/createFont_.html These are optional.

```

// configure sets some of your objects data fields to constants or random values.
// Avoid going outside -radius to +radius in x and y!
// Do not go outside 0..360 in hue. We are using the Hue-Saturation-Brightness color model.
// You MUST load and store a PFont and you MAY load a custom PFont file in configure().
void configure();
// display() uses pushMatrix() and translate(x,y) as previous display() functions.
// Its final command should be a paired popMatrix(). See parson.display() for an example.
// display() MUST use a PFont loaded by configure and display some text.
// See the Processing library documentation under Typography2.
// parson.display() is boring. Do something that is not boring.
void display();
// Move adjusts location and speed variables for x, y, hue, and other data fields.
void move();
// setLeftRight is called when the LEFT or RIGHT key is hit while the Shapey is selected.
// Student can decide how to interpret setLeftRight.
void setLeftRight(boolean isRight);
// setUpDown is called when the UP or DOWN key is hit while the Shapey is selected.
// Student can decide how to interpret setUpDown.
void setUpDown(boolean isDown);
// changeSpeed changes some property of the Shapey, where speedType of 'x'
// means x speed, 'y' means y speed, 'h' means hue speed of change, and
// 'w' 'h' 's' mean Shapey width, height, and student-selected property, respectively.
// You need to implement at least 'x' 'y' 'h'.
void changeSpeed(char speedType, int changeAmount);
// select() is called to highlight this Shapey on the display by periodic blinking when
// the user selects it via the mouse.
void select() ;
// getBoundingBoxCorners returns a 4-elemen array with the
// LEFTx, UPPERY, RIGHTx, and LOWERY coordinates of the Shapey object,
// referenced against the 0,0 in the original upper left corner of the display.
int [] getBoundingBoxCorners();

```

Drop ShapeyFinal.pde into D2L Assignment Dropbox Assignment 5 ShapeyFinal by 11:59 PM on Friday May 4.

The final exam period for the 12-1:20 class is Tuesday, 5/08/18 from 8:00 a.m. - 10:00 a.m.

The final exam period for the 1:30-2:50 class is Thursday, 5/10/18 from 11:00 a.m. - 1:00 p.m.

Please plan to attend this demo session in the Planetarium in the Grim Building.

² <https://processing.org/reference/>