



Assignment 8

Due date: Apr. 22, 11:55PM EST.

You may discuss any of the assignments with your classmates and tutors (or anyone else) but **all work for all assignments must be entirely your own**. Any sharing or copying of assignments will be considered cheating.

You should not use any features of Java that have not been covered in class. If you have doubt if you are allowed to use certain structures, just ask your instructor.

Programming with Graphics:

For this assignment you need to write a program using classes provided by the Processing package (specifically PApplet class, but you may use additional classes as well). **Your program has to be interactive and it has to be developed using object oriented programming (i.e. things are represented using classes and objects).**

Option 1:

Create your own project. Send the description of such project to Joanna by email no later than Sunday (Apr. 17). (Hint: your description should be similar in the amount of detail to the description for option 2.)

Call your runnable program: `MyGame.java`. You may pick whatever names you wish for all other classes that you need.

Option 2

Implement a game in which the user has to collect points by clicking on moving disks. Each disk should have its own value associated with it (possible values should be 10, 20, 50, 100). The value of each disk should be displayed inside of the moving disk. Each disk should move at its own rate and direction. (Hint: you should have a `Disk` class.) The disks disappear after some time (you could make disks with the higher value disappear much faster than the disks of the lower values). The user collects points by clicking on disks. Your program should detect if the user successfully clicked on a disk. If the user successfully clicks on the disk, the disk's point value is added to the user's total and the disk should disappear.

The game should last 1 minute. After one minute the total value of points collected should be displayed.

Note:

Make sure that the disks are large enough for a human user (read: your instructor) to click on them.

Make sure that the disks are moving slow enough so that a human user can click them, but also fast enough so that the game is challenging. You can divide the game into levels: in each consecutive level the disks become harder to click on (get smaller or get faster, or some combination of both).

Call your runnable program: `MyGame.java`. You may pick whatever names you wish for all other classes that you need.

What and how to submit?

Add the following `main()` method to the program:

```
public static void main(String args[]) {  
    PApplet.main(new String[] { "MyGame" });  
}
```

This will allow us to run it from the terminal for grading purposes.

You should submit **all source code files** compressed into a single **zip** file to NYU Classes. Do not submit all the files that Eclipse creates, just the source code files that have `.java` extension. **Do not submit the `core.jar` file.**

If you wish to use your (one and only) freebie for this project (one week extension, no questions asked), then complete the form at <http://goo.gl/forms/fpUJrF64b5>

before the due date for the assignment. All freebies are due seven days after the original due date and should be submitted to NYU Classes.



Questions

Post any questions you have regarding this assignment to NYU Classes Forums under the Assignments topic.