

## Exercise 2 – Fall Quarter

### **DATE DUE: Class 6 (NO RESUBMITS)**

DATE ASSIGNED: Class 4

### **Goals:**

To practice using expressions in Houdini.

### **Requirements:**

Create a hip file that creates the display as shown on the class notes.

Specifically:

Print numbers 1 to 100 in columns of 20. If the number is a multiple of 5, print Fall next to it. If the number is a multiple of 13 print Quarter. If the number is a multiple of both, print Fall Quarter. In addition, if the number is a multiple of 7 or 8 color the font magenta (1, 0, 1).

### **Considerations:**

Turn off transform cumulative on the copy SOP – you will need to calculate the translations via expressions.

ifs() returns strings

`` use backticks to get strings

There are no resubmissions for this exercise.

### **Submissions guidelines:**

The project will be submitted to your dropbox in a directory named **F17\_V721\_E2\_LastnameFirstname\_Table/**

This directory should contain the following:

- **F17\_V721\_E2\_LastnameFirstname\_Table.hipnc**
- **F17\_V721\_E2\_LastnameFirstname\_Table.pdf**, a brief description of information you would like to communicate. Please include a general description to a viewer as well as a more technical description to someone looking at your file.

**Important note:** Adherence to these naming and format conventions constitutes 5% of your grade. It is your job to make sure your files are correctly labeled – failure to comply with naming conventions will also affect your professionalism grade.

### **Grading:**

Proper use of expressions and learning Houdini's node-based approach is the emphasis of Exercise 2. The grading of this exercise is structured as follows. Meeting the minimum specifications, 80%. To move your grade above 80% go beyond the specifications, demonstrate exploration and understanding. Extensions/Enhancements to consider would be to allow changes in the maximum number and still have the table display properly. Change the column number, adjust the camera so that it is properly sized to fit the table and so on.

Again, be creative, have fun.

### **Additional Hints:**

When determining the layout, think about how you can figure out which column a given copy is in - take advantage of division, the "int" function and modulus. You can create expressions for translations that do not need if statements.

Think about the first row, what is the common trait if you think about the real copy number. ie. 0, 20, 40, etc. So you want to move over in x when the copy is one of these starting values to a new column. So how would you find these ie. how would you make them move over 0, then 1, then 2?  
Now think about the columns, what does each real copy number have in common ie. 1,2 ...20 is really copy 0...19 and then 20...39 and so on - what is it really moving downward, the first one is moving 0 units down, the second one is moving 1 until down, the third moving 2 units down.

Recall the hint to use int, division and modulus. Don't forget that modulus is what is left over after dividing. These can make the layout work in two expressions but it takes a bit of thinking.