

**Math 3618 · Turn-in Assignment #3**  
**Due: Tuesday, December 3, 2019**

This assignment is to be turned in by one member of your group. The assignment will be partially online; make sure that the name of the group's main GitHub account is clearly legible!

**3.1.** On your master account “3618 projects” projects, place an R code file or R markdown file with a script that creates a bond amortization table, according to the following specifications:

- Start the file by writing comments explaining what you do in the script.
- Set the following values in your workspace:  $n = 10$ ,  $C = 10000$ ,  $r = 0.06$ ,  $i = 0.04$
- Treat  $i$  as a nominal annual rate, convertible semiannually, treat  $r$  as the annual coupon rate, treat  $n$  as the number of years until redemption for your bond, and treat  $C$  as both the par and redemption value for your bond. Make sure that your script will still work if these values are changed!
- Calculate the coupon size of your bond and give it a descriptive name like `coupon_size`.
- Either call upon or otherwise reuse your loan amortization code to create a bond amortization table.
- After the loop is done, label the rows and columns of the matrix appropriately.
- Perform a check to make sure that the book value of your bond is  $C$  just after the final coupon.