

## Lab 1 Assignment

The instructor will assign you to a discussion group of 3 or 4 students.

Consider a cup of hot coffee sitting on a table.

At any given moment, what determines how fast it is cooling down (or warming up)?

Can you come up with a plausible simple differential equation (i.e. an equation with a derivative in it) that relates the rate of cooling (or warming) of a cup of coffee to its instantaneous state.

Feel free to grossly oversimplify!