Pre-Class Preparation & Materials Needed (Instructor):

Send in an email to students:

- Confirmation of room and zoom link
- Remind students to bring their computers
- Make sure you know if everyone has R and instlled; level of R fluency
- Snacks
- Copies of the syllabus
- Copy of Course Roster
- Flip charts and markers
- Dry write markers
- Tent cards for student names

Objectives and Competencies for this session:

- Describe and implement conventions for proper naming of files
- Explain the difference between proprietary and open formats
- Learn how to efficiently organize their research data files
- Learn the preferred format for storing and archiving different types of data files
- Become familiar with different options for cloud data storage and backup
- Develop and implement a plan for short- and long-term data storage, back-up, and archiving
- Learn rules and policies for data security
- Become familiar with tools for such tasks as batch renaming of files, cloud data storage, and automated data backup.
- Explain options for a long-term sustainable preservation strategy/policy for your data (e.g., discipline specific, institutional, departmental, individual).
- Address the need for conversion to standard formats needed for re-use
- Perform basic archival processes: checksum, auditing, format migration, etc.
- Understand costs & time lines for data storage, management tools and services

Pre-class Preparation (Students):

- **Readings:**

    1. Jan Čurn. 2014. How a bug in Dropbox permanently deleted my 8000 photos. [read online] [download pdf]
    2. PSA: Scrivener, Data Integrity and You. Or, How To Avoid Data Loss Heartbreak. [read online] [download pdf]
    3. Hart EM et al. (2016) Ten Simple Rules for Digital Data Storage. PLoS Comput Biol 12(10): e1005097. [read online] [download pdf].
    4. Panzarino, M. 2012. How Pixar's Toy Story 2 was deleted twice, once by technology and again for its own good. TNW. [read online] [[download pdf]]

- **Online Lectures:**

1. Video on Project Organization
2. Video on File Names
3. Video on Storage and Backup

Class Outline

1. **Block 1: (20 min):**
    a. Address any questions from last week
    b. Overview of today's activities.
2. **Block 2: File Format Competition (35 min)**
3. **Block 3: Breakout 1 (25+10 min):**
    a. Discussion of Data Security and Backup in the field + snack break
4. **Block 4: Breakout 1 return results (30 min)**
    a. Key message - assume the worst case scenario. become paranoid. embrace neurosis. then relax because the plan is in place and all possibilities have been acounted for.
5. **Block 5: Breakout 2 (60 min)**
    a. Interview Breakout, collect answers on google doc or word doc and submit with Assignment 2
    b. Remainder of time is to work on Assignment 2. Instructor regularly checking in on students

After class:

- Be sure you complete and submit the assignment by 9 am Monday
- Prepare for next session (assigned reading, videos, etc).

Alternative Questions:

1. How might you organize a time series of photos from several remote cameras? Possibility 1: images from each camera are in different folders. These are, in turn, collected in a folder named "images". Each folder would be named with the identifier for the camera. The file names for images might reflect the time the image was taken.