RECOGNIZED. STUDY. GROUPS
STUDY GROUPS.
ARTSCI.
M.TORONTO.CA

- REGULAR
  STUDY TIME
- LLR

KAMP-UP MATERIALS
POSTED

EXERCISE 1 OUT
TODAY

ASSIGNMENT 1.

REMOTE
DESKTOP
SET-UP

WRITING
TYPE
CONTRACTS
- ARE THEY
  FUNCTIONAL?

CSC 148

WRAPPING UP
THE FDR:
PRECONDITIONS

- DOCSTRINGS ARE CONTRACTS
- PRECONDITIONS ARE INSTRUCTIONS FOR THE FUNCTION USERS
- PRECONDITIONS MAKES LIFE OF THE DESIGNER EASIER BY DEFINING THE TYPE OF INPUT WHICH IS EXPECTED

INTRODUCTION TO OOP

EXAMPLE

TWITTER ⟼ A LOT OF DATA

- TWEETS

A MESSAGE (REPRESENTED BY PROGRAMS) BUNDLED WITH META DATA LIKE:

- AUTHOR
- DATE
- COMPRESSION METHOD
- CHARACTER SET
- SIZE

```
>>> message = {
        'charset': 'alphanumeric',
        'author': ...,
        'message': ...,
        'created-at': ...}
```

OBJECTS :: USER-DEFINED CLASSES OF DATA WITH USAGE RULES

INSTANCE OF A CLASS :: DATA WHOSE TYPE IS THE CLASS

INSTANCE ATTRIBUTE :: DATA ASSOCIATED WITH AN INSTANCE

CLASS VS OBJECT

CLASSES SPECIFY THE STRUCTURE OF THE DATA.

~ 'TEMPLATE' ~ 'BLUEPRINT'

⟶ INSTANCE ATTRIBUTES

```
CLASS TWEET:
  """
  A TWEET IS THE MESSAGE CREATED BY THE USER.

  # ELABORATION

  === ATTRIBUTE ===
  @ TYPE CONTEN: STR
    → THE CONTENTS OF THE TWEET
  @ TYPE USER_ID: STR
    → THE ID OF THE USER WHO WROTE THE TWEET.
  @ TYPE CREATED_AT: STR
    → THE DATE THE TWEET WAS WRITTEN
  @ TYPE LIKES: STR
    → RESPECT UNITS
```

```python
def __init__(self, who, what, when):
    """INITIALIZE A NEW TWEET.

    @ TYPE SELF: TWEET
    @ TYPE WHO: STR
    @ TYPE WHAT: STR
    @ TYPE WHEN: -STR
    @ RTYPE: NONE
    """
    self.user_id = who
    self.content = what
    self.created_at = when
    self.likes = 0
```