

## Homework for Today!!

1. **Project #1:** Fill out [partner request survey](#) by **Thursday 6pm**
  - Partner Mixer Thursday 12-1 @ CSE2 271
2. **Preliminary Survey:** fill out by **Friday night**
3. **Exercise #1:** **Due SUNDAY at 11:59pm**
4. **Make sure you are on Ed**
5. **Review Java & install IntelliJ**
6. **Reading** (optional) in Weiss (see website)

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## Getting Serious: Terminology

- **Abstract Data Type (ADT)**
  - Mathematical description of a "thing" with set of operations on that "thing"
- **Data Structures**
  - A specific organization of data and family of algorithms for implementing an ADT
- **Implementation** of a data structure
  - The actual code implementation in a specific language
- **Algorithm**
  - A high level, language-independent description of a step-by-step process

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## Terminology Example: Stack and Queue ADT

### Stack ADT

State:

- Set of elements

Operations:

- **push(element)**
- **pop()** – returns the most recent element that was added to the stack

### Queue ADT

State:

- Set of elements

Operations:

- **enqueue(element)**
- **dequeue()** – deletes and returns the element that has been in the queue the longest