# Introduction to Abstract Data Types

# Concrete data structures & abstract data types

Analogy: A company has a prototype

Company takes it to 3 factories for production

Company does not care if factories use different processes

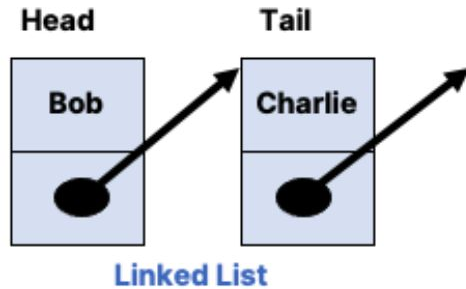Company only cares about end product quality and costs

Concept (prototype) vs implementation (factory processes)

Abstract data types vs data structures that are implemented into a language
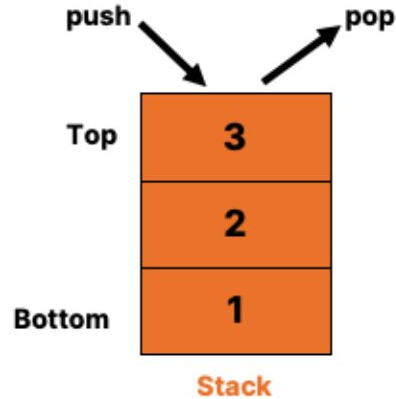
# Abstract data types

## Linked Lists

**Head**

**Bob**

**Tail**

**Charlie**

**Linked List**

## Stack

push

pop

**Top**

**3**

**2**

**Bottom**

**1**

**Stack**

## Queue

**Front**

**Back**

**Remove**

**1**

**2**

**3**

**Add**

**Queue**