**Week 5 discrete maths**

A fox, a duck and corn on right side of a river bank. Must move all three to other side of the bank.

* Constraints
* Fox cant be left with duck
* Duck cant be left with corn
* Can only carry one thing at a time
* Only two things in boat including farmer
* Only one boat can go across at a time
* Assumed
* Fox can be left with corn
* Things can be taken back and forth
* Solution
* Take duck to left bank
* Take corn to left bank
* Bring back duck to right bank
* Take fox to left bank
* Go back for duck

**Mr tea**

Allow mr tea to make a cup of tea and serve it to the person who asked for it.

* Constraints
* must ask if person wants milk
* must use hot water
* must use tea bag
* must ask if person wants sugar
* must take request
* serve the tea to the person who requested it
* must use a cup
* Implicit
* Has tea bags
* Has sugar
* Has water
* Has cup
* Has milk
* Solution
* Ask person if they want tea
* Ask if they want milk
* Ask if they want sugar
* Boil water
* Get cup
* If requested place sugar in cup
* Place tea bag in cup
* Add boiled water
* Stir
* If request add milk to cup
* Stir
* Serve to person who requested

**What data type that can allow an email**

* Split email into parts
* Left of the @ can be stored as a string+ constraints (account name)
* Same thing can be done with right of the @ (the domain)
* The strings can then be added together using a Tobol

**A bash script that adds 3 ints together**

* Constraints
* Only integers
* Add then together
* Be a bash script

**Add three numbers program**