Parser Output

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Opening Discussion

- Minute essay comments:
  - What does asInstanceOf[] do?
  - Parser usage.

Default Parser Output

- Strings match themselves.
- RegEx and tokens give strings.
- P~Q gives back ~(p,q), where p and q are the matches of P and Q.
- P | Q gives either p or q.
- rep(P) or repsep(P,seperator) give a list of p values.
- opt(P) gives an Option, either Some(p) or None.

Specifying Output

- You can override the default of P by using P ^^ f. The f is a function (or partial function) that takes the normal output of P.
- The output you get is f(p).
- Example uses:
  - floatingPointNumber ^^ (_.toDouble)
  - “true” ^^ (x=>true)
  - “(“~ident~”,”~ident~”)” ^^ { case “(“~i1~”,”~i2~”)” => (i1,i2) }

Ignoring Parts of the Parse

- In something like the last example shown, there are strings that are part of the parse that really don't impact the result.
- When you have this type of situation you can use ~> or <~ instead of just ~. The aprse result will only include what the arrow points to.
  - “(“~>ident~”,”~ident<~”)” ^^ { case i1~”,”~i2 => (i1,i2) }

Our Code

- Let's work on putting this type of functionality in our formula code.
- We had the parser, but we want to parse to a tree similar to what we produced with the recursive parser we wrote ourselves.
- With that we can make this alternate code functional.

Minute Essay

- What questions do you have about parsers, regex, or grammars?
- Next class we do spatial trees.
- IcP #7 is next class.
- Spring classes and Web Apps.