

Methods and Problem Decomposition

1/28/2009

Opening Discussion

- Minute Essay responses
 - How do we make an actor not just walk around the edge of the world?
 - How does Greenfoot know what words like int and direction mean?
 - Do people eventually memorize the API? Do I still use the API?
 - What does void mean?
 - I use square brackets to signify that some things are optional. Argument lists can have zero or more comma separated elements.

More comments

- When can you put in spaces?
- Can we set the speed of the person walking across the world?
- When will we have to type public Type name?
- Color coding in Greenfoot.
- How does Greenfoot know the meaning of getX and getY?
- Could the city become a video game?
- Interclass problems and getting code into this room.

Writing New Methods

- Last time we filled in some code in the methods that were already part of the CityScape scenario.
- Today we want to write some of our own methods. What type of functionality should we add to our person or our buildings?

Problem Decomposition

- One of the main reasons for having methods is that they allow us to break a big problem up into little pieces.
- Computer Science is often about controlling complexity. Big problems are complex and therefore hard to solve.
- You should always take a big problem and break it into pieces such that each piece is easy. Never solve a hard problem.

Design Approaches

- Top-down vs. bottom-up

Minute Essay

- What do you think we should do with CityScape over the next few class meetings?
- Remember that you will be showing off your interclass problems on Friday. If you have to miss class you should e-mail it to me.