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http://www.viski2d.com/
inspiration

- simple animations?? >> 100’s lines of code
- cryptic code
- learn to program in terminal = boring
- learn to program doing animations = fun :)

http://www.viski2d.com/
what’s it for?

- 2d animations
- game development
- simulations
- UI design
- learning

http://www.viski2d.com/
viski compiler architecture
testing

- Unit testing for each feature
- Integration testing for combinations of features, make sure nothing breaks
- System testing – Black box testing for the entire compiler
- 100+ test cases

http://www.viski2d.com/
development environment

ANTLR 2.7.7

Google code for CVS

Eclipse

Java 2D library and Swing

Mac & Windows

http://www.viski2d.com/
syntax

• Declarations

    Image earth's File is "earth.png";
    earth's x is 200;
    earth's y is 350;

• Functions

    add: earth toLayer: 1;

    rotate: earth around: (500,350)
    degrees: 360 direction: "CCW" effect: "linear";

    move: object to: (100,100) effect: "appear";

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syntax cont...

- **Loop**
  
  ```plaintext
  loop forever;  loop 30;
  ...
  endloop;       endloop;
  ```

- **Play**
  
  ```plaintext
  play:
  ...
  endPlay;
  ```

- **Delay**
  
  ```plaintext
  delay 10;
  ...
  endDelay;
  ```

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Image sun's File is "sun.png";
sun's x is 400;
sun's y is 250;
...
Image mars's File is "mars.png";
mars's x is 100;
mars's y is 350;

#start

    add: sun toLayer: 1;
    add: mars toLayer: 1;

...  

play:

    loop forever;
    delay 687/10;
    rotate: mars around: (500,350) degrees: 360
direction: "CCW" effect: "linear";

    endDelay;
    endloop;
    endPlay;

#end

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viski features

• Layers
• Mouse events
• Threads
• Images, text, geometric primitives
• Keyframes

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java implementation

- viski >> viski specific java >> generic java 2d api
- parallelism in viski >> java threads
  - synchronization is done on back-end

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The code looks simple, but what does it look like in action?

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conclusions

- What we learned:
  - Java is a very robust language
  - ANTLR has a steep learning curve, but worth it
- What worked well:
  - Teamwork, focus on tasks according to aptitude

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conclusions

- Would have done differently:
  - Finalized grammar earlier
  - Decide to tackle ANTLR earlier
- Everyone should use VISKI
  - Impressive library of built-in animation functions
  - Complex programming features handled by VISKI compiler and hidden from users
  - English-like construct

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