Design Document
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November 22, 2013

Call Graph

Function	Calls
main	initializeLevel performAction calcNextScreen drawScreen
calcNextScreen	actorLocs updateChanges
drawScreen	drawLength drawArb
drawArb	endCScreen
actorLocs	performAction actorLocs
performAction	createObject
removeObject	
createObject	

Prototypes

```
void initializeLevel(float curScreen[SCR]);
void performAction(char a, int p);
void calcNextScreen(float curScreen[SCR]);
void drawScreen(float curScreen[SCR]);
void drawLengths(float stickman[SIZE]);
void drawArb(float object[410]);
void actorLocs(float curScreen[SCR]);
void createObject(float curScreen[SCR], int num);
void removeObject(float curScreen[SCR], int num);
```

Psuedocode

```
int main(void){
    set floats xmax and ymax to boundaries of screen;
    gfx_open();
    initialize curScreen[SCR], with SCR being max number of items on screen;
    initializeLevel(curScreen);
    while(1):
       initialize char a;
       if (character entered):
           performAction(a);
```

```
calcNextScreen(curScreen);
drawScreen(curScreen);
pause for animation;
```

General Description

This program will begin by initializing the level. It will read an array of numbers from a file. This array of numbers will describe all the objects on the screen, with each object separated by an indicator. All the other functions change this array. drawScreen reads this array and draws the screen that it describes, then there is a pause for the animation. Different functions will change the velocities, accelerations, or positions of the various objects. There will also be some preset motions that can be called with performAction, so that when the user types 'd' the user will walk right, and when the user type 'a' the user will walk left. calcNextScreen will put all of this together to change the screen for the next stage of animation.