```
 1: // Angel Zheondre Calcano Ps3a N-Body Simulation
 2: #ifndef _space
 3: #define _space
 4:
 5: #include <SFML/Graphics.hpp>
 6: #include <SFML/System.hpp>
 7: #include <SFML/Window.hpp>
 8: #include <iostream>
 9: #include <string>
10:
11: using namespace std;
12: using namespace sf ;
13: class body : public Drawable {
14:
15:    double xpos, ypos, xvel, yvel, mass, radfromsun ;
16:    double unir, cenx, ceny, winsiz ;
17:    string fname ;
18:    Sprite sprite ;
19:    Texture texture ;
20:
21:  public :
22:    body( double spacer, double winsize );
23:    body():xpos(0), ypos(0),xvel(0), yvel(0), mass(0), fname("") {} ;
24:    void center( double x ) ;
25:    double getposx();
26:    double getposy();
27:    double getxvel();
28:    double getyvel();
29:    double getmass();
30:    double getrad();
31:    string getfname();
32:    void newpos();
33:    void setpos();
34:    void setImage();
35:    friend istream &operator >> (istream &input, body *S) {
36:       input >> S->xpos >> S->ypos >> S->xvel >> S->yvel >> S->mass >> S->fname
;
37:       S->setpos();
38:       S->setImage();
39:       return input;
40:    }
41: private:
42:    virtual void draw( RenderTarget& target, RenderStates states) const{
43:
44:       target.draw( sprite, states) ;
45:    }  ;
46: } ;
47:
48: #endif
```