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1 [dshin@acacia classes]$ /home/pl/hw10/tests/colorpoint
2 Welcome to MzScheme v370 [3m], Copyright (c) 2004-2007 PLT Scheme Inc.
3 > % =====
4 % inheritance example: colorpoint. (value=((6 8) (20 40) 87))
5
6 class point extends object
7   field x
8   field y
9   method initialize(initx,inity)
10    begin
11      set x=initx;
12      set y=inity
13    end
14   method move(dx,dy)
15    begin
16      set x+=(x,dx);
17      set y+=(y,dy)
18    end
19   method get-location() list(x,y)
20
21 class colorpoint extends point
22   field color
23   method set-color(c) set color=c
24   method get-color() color
25
26 let p=new point(3,4)
27 cp=new colorpoint(10,20)
28 in begin
29   send p move(3,4);
30   send cp set-color(87);
31   send cp move(10,20);
32   list(send p get-location(),
33        send cp get-location(),
34        send cp get-color())
35 end
36
37 % =====
38 ((6 8) (20 40) 87)
39 >
40 [dshin@acacia classes]$ /home/pl/hw10/tests/dynamic
41 Welcome to MzScheme v370 [3m], Copyright (c) 2004-2007 PLT Scheme Inc.
42 > % =====
43 % dynamic method dispatching. (value=12)
44
45 class interior-node extends object
46   field left
47   field right
48   method initialize(l,r)
49    begin
50      set left=l;
51      set right=r
52    end
53   method sum() +(send left sum(),send right sum())
54
55 class leaf-node extends object
56   field value
57   method initialize(v) set value=v
58   method sum() value
59
60 let ol=new interior-node(
61   new interior-node(
62     new leaf-node(3),
63     new leaf-node(4)),
64   new leaf-node(5))
65 in send ol sum()
66
```

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67 % =====
68 12
69 >
70 [dshin@acacia classes]$ /home/pl/hw10/tests/override
71 Welcome to MzScheme v370 [3m], Copyright (c) 2004-2007 PLT Scheme Inc.
72 > % =====
73 % method overriding and self example. (value=(11 22 22))
74
75 class c1 extends object
76   method initialize() 1
77   method m1() 11
78   method m2() send self m1()
79
80 class c2 extends c1
81   method m1() 22
82
83 let ol=new c1()
84 o2=new c2()
85 in list(send ol m1(),
86        send o2 m1(),
87        send o2 m2())
88
89 % =====
90 (11 22 22)
91 >
92 [dshin@acacia classes]$ /home/pl/hw10/tests/shadow
93 Welcome to MzScheme v370 [3m], Copyright (c) 2004-2007 PLT Scheme Inc.
94 > % =====
95 % field shadowing example. (value=(101 102 101 999))
96
97 class c1 extends object
98   field x
99   field y
100   method initialize() 1
101   method setx1(v) set x=v
102   method sety1(v) set y=v
103   method getx1() x
104   method gety1() y
105
106 class c2 extends c1
107   field y
108   method sety2(v) set y=v
109   method getx2() x
110   method gety2() y
111
112 let o2=new c2()
113 in begin
114   send o2 setx1(101);
115   send o2 sety1(102);
116   send o2 sety2(999);
117   list(send o2 getx1(), send o2 gety1(),
118        send o2 getx2(), send o2 gety2())
119 end
120
121 % =====
122 (101 102 101 999)
123 >
124 [dshin@acacia classes]$ /home/pl/hw10/tests/simple
125 Welcome to MzScheme v370 [3m], Copyright (c) 2004-2007 PLT Scheme Inc.
126 > % =====
127 % a simple object-oriented program. (value=((3 -3) (5 -5)))
128
129 class c1 extends object
130   field i
131   field j
132   method initialize(x)

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133     begin
134         set i=x;
135         set j=- (0,x)
136     end
137     method countup(d)
138     begin
139         set i+=(i,d);
140         set j=- (j,d)
141     end
142     method getstate() list(i,j)
143
144 let t1=0
145     t2=0
146     o1=new c1(3)
147 in begin
148     set t1=send o1 getstate();
149     send o1 countup(2);
150     set t2=send o1 getstate();
151     list(t1,t2)
152 end
153
154 % =====
155 ((3 -3) (5 -5))
156 >
157 [dshin@acacia classes]$ /home/pl/hw10/tests/super
158 Welcome to MzScheme v370 [3m], Copyright (c) 2004-2007 PLT Scheme Inc.
159 > % =====
160 % super example. (value=172)
161
162 class point extends object
163     field x
164     field y
165     method initialize(initx,inity)
166     begin
167         set x=initx;
168         set y=inity
169     end
170     method move(dx,dy)
171     begin
172         set x+=(x,dx);
173         set y+=(y,dy)
174     end
175     method get-location() list(x,y)
176
177 class colorpoint extends point
178     field color
179     method initialize(initx,inity,initcolor)
180     begin
181         super initialize(initx,inity);
182         set color=initcolor
183     end
184     method set-color(c) set color=c
185     method get-color() color
186
187 let o1=new colorpoint(3,4,172)
188 in send o1 get-color()
189
190 % =====
191 172
192 >
193 [dshin@acacia classes]$

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