

bakery | CMU CS Academy

```

1  ##ap CT:
2  import random
3  app.scenes=0
4  app.canpickedup=False
5  aqua=rgb(0,206,209)
6  bg= Rect(0,0,400,400,fill=rgb(255,192,203))
7  conveyorbelt=Group(
8  Rect(0, 240, 800, 100, fill=rgb(240, 240, 240)),
9  Line(0, 290, 800, 290, fill='gainsboro', lineWidth=100, dashes=(2, 30)))
10 conveyorbelt.visible=False
11 bakestandoval=Oval(200,260,330,210,fill='white',opacity=50,border='gray')
12 bakestand=Group(
13 Rect(60,335,280,65, fill=rgb(72,209,204)),
14 Polygon(40,280,60,335,340,335,360,280,fill=aqua))
15
16 bakeriasign=Group(
17 Rect(40,40,320,50,fill=aqua,opacity=40),
18 Label('bakery',200,63,size=50,font='monospace',fill='white',bold=True)
19 )
20 startsign=Group(
21 Rect(130,105,130,30,fill='white',opacity=50),
22 Label('start',195,120,fill=aqua,size=30,font='monospace',bold=True,opacity
=60)
23 )
24 app.ointimer=240
25 scenel=Group()
26 scenel.add(bakestandoval)
27 scenel.add(bakeriasign)
28 scenel.add(bakestand)
29 scenel.add(startsign)
30 cupcake=Group()
31 scene2=Group()
32 app.frostingcolor=None
33 ##bakescene
34 bakescene=Group(
35 Rect(0,0,400,400,fill='lightblue'),
36 Rect(0,250,400,150,fill='burlywood'),
37 Rect(15,20,370,20,fill='lightgray'),
38 Circle(54,30,8,fill='gray'),
39 Circle(114,30,8,fill='gray'),
40 Rect(50,9,7,80,fill='pink'),
41 Rect(42,77,20,20,fill='hotpink'),
42 Polygon(42,97,62,115,62,97,fill='hotpink'),
43 Rect(89,30,50,60,fill='pink'),
44 Rect(89,30,50,60,fill='pink'),
45 Circle(114,90,25,fill='pink'),
46 Oval(84,62,50,20,fill='pink',rotateAngle=130),
47 Rect(167,136,233,15,fill=rgb(255,242,254)))
48
49 mixer=Group(
50 Oval(205,340,90,120,fill='gainsboro'),

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51 Rect(90,385,400,20,fill='burlywood'),
52 Rect(101,280,200,40,fill='burlywood'),
53 Rect(18,380,250,12,fill='hotpink'),
54 Rect(177,270,60,15,fill='gray'),
55 Rect(50,270,50,120,fill='hotpink'),
56 Rect(20,210,250,60,fill='hotpink'),
57 Line(40, 210, 40, 270, fill='lightpink', lineWidth=20, dashes=(2, 10)),
58 Line(115,224,246,224,fill='lightpink',lineWidth=5)
59 )
60 onbutton= Group(
61 Circle(80,240,15,fill='lightgray',border='gray',borderWidth=3),
62 Label('ON',80,240,fill='gray',font='monospace',size=20,bold=True))
63 mixerhandles=Group(
64 Line(205,285,205,320,fill='lightgray',lineWidth=10),
65 Line(205,300,187,320,fill='lightgray',lineWidth=4),
66 Line(205,300,205,320,fill='lightgray',lineWidth=4),
67 Line(205,300,225,320,fill='lightgray',lineWidth=4)
68 )
69 mixer.add(onbutton)
70 bakescene.add(mixer)
71 bakescene.add(mixerhandles)
72
73 vanillacake = Group(
74 Rect(180,60,70,76,fill='snow',border='linen',borderWidth=5),
75 Label('vanilla',215,72,font='monospace',fill='green',),
76 Line(245,82,192,121,fill='green'),
77 Oval(208,102,20,10,fill='green',rotateAngle=100),
78 Oval(228,107,20,10,fill='green',rotateAngle=190)
79 )
80 chocolatecake= Group(
81 Rect(280,60,70,76,fill='tan',border='saddleBrown'),
82 Label('chocolate',315,72,font='monospace',fill='saddleBrown',bold=True),
83 Rect(296,80,13,40,fill='saddleBrown',border='maroon', rotateAngle=30),
84 Rect(326,80,13,40,fill='saddleBrown',border='maroon', rotateAngle=190)
85 )
86 bakescene.add(vanillacake)
87 bakescene.add(chocolatecake)
88 bakescene.visible=False
89 cookscene=Group()
90 oven=Group(
91 Rect(0,0,400,400,fill='snow'),
92 Rect(50,25,300,60,fill='lightgray'),
93 Circle(80,55,10,fill='gray'),
94 Circle(120,55,10,fill='gray'),
95 Circle(320,55,10,fill='gray'),
96 Circle(280,55,10,fill='gray'),
97 Rect(145,40,110,30,fill=None,border='gray',borderWidth=5),
98 Polygon(50,85,25,180,375,180,350,85,fill='lightgray',border='gray'),
99 Oval(100,110,60,20,fill='gray'),
100 Oval(300,110,60,20,fill='gray'),
101 Oval(100,150,80,30,fill='gray'),
102 Oval(300,150,80,30,fill='gray'),
103 Rect(25,180,350,170,fill='lightgray',border='gray'),

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104 Line(60,210,350,210,fill='gray',lineWidth=15),
105 )
106 ovenrect=Group(
107 Rect(60,230,290,100,fill='lightyellow',opacity=30),
108 Rect(60,230,290,100,fill=None,border='gray',borderWidth=5),
109 )
110 oven.add(ovenrect)
111 oven.visible=False
112 muffin=Group(
113 Circle(140,193,20,fill='black'),
114 Circle(205,195,20,fill='black'),
115 Polygon(100,195,240,195,320,95,190,95,fill='dimgray'),
116 Polygon(110,185,240,185,320,85,190,85,fill='darkgray'))
117 muffincircles=Group(
118 Oval(155,165,40,25,fill=None,border='dimgray'),
119 Oval(215,165,40,25,fill=None,border='dimgray'),
120 Oval(155,165,40,25,fill=None,border='dimgray'),
121 Oval(215,165,40,25,fill=None,border='dimgray'),
122 Oval(180,130,40,25,fill=None,border='dimgray'),
123 Oval(240,130,40,25,fill=None,border='dimgray'),
124 Oval(200,98,40,25,fill=None,border='dimgray'),
125 Oval(260,98,40,25,fill=None,border='dimgray'),
126 )
127 )
128 muffin.add(muffincircles)
129 mittens=Group(
130 Oval(89,112,50,20,fill='pink',rotateAngle=40),
131 Rect(89,90,50,60,fill='pink'),
132 Circle(114,90,25,fill='pink',rotateAngle=90),
133 )
134 mittens.centerX=150
135 mittens.centerY=185
136 oven.add(muffin)
137 oven.add(mittens)
138 muffin.add(mittens)
139 clock=Group(
140 Circle(200,125,30,fill='white',border='black',borderWidth=2),
141 Rect(190,91,20,5,fill='black'),
142 Rect(187,84,25,8,fill='white',border='black'),
143 )
144 )
145 clockcircles=Group(
146 Circle(200,125,3,fill='black',borderWidth=2),
147 Line(200,125,198,101,fill='black',lineWidth=1),
148 )
149 clock.add(clockcircles)
150 clock.visible=False
151
152
153 cupcakeart=Group()
154 plates=Group()
155 platesall=Group()
156 def createplate(x,y):
157     plates.add(

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158     Oval(x,y,100,50,fill=gradient('white',rgb(235,242,255),start='center')
, border='lightblue',borderWidth=2))
159     cupcakeart.add(
160     Polygon(x-10,y,x+10,y,x+30,y-30,x-30,y-30,fill='black'))
161     cupcakeart.toFront()
162     platesall.add(plates)
163 plates.add(cupcakeart)
164 plates.add(cupcakeart)
165 icing = Group()
166 icing.visible=False
167 icingshelf=Rect(0,23,200,10,fill='lightgray')
168 icingshelf.visible=False
169 pinkfrosting=Group()
170 greenfrosting=Group()
171 purplefrosting=Group()
172 app.frostingpicked=0
173 def createfrostingp(x,y,color):
174     pinkfrosting.add(
175     Polygon(x,y,x+40,y,x+20,y+80,fill=color,border='gray'),
176     Polygon(x,y+2,x+15,y-20,x+25,y-20,x+40,y+2,fill=color),
177     Polygon(x+15,y-20,x,y-40,x+15,y-30,x+30,y-40,x+25,y-20,fill='gray'),
178     Polygon(x+15,y+60,x+23,y+60,x+20,y+80,fill='gray')
179     )
180     icing.add(pinkfrosting)
181 def createfrostingg(x,y,color):
182     greenfrosting.add(
183     Polygon(x,y,x+40,y,x+20,y+80,fill=color,border='gray'),
184     Polygon(x,y+2,x+15,y-20,x+25,y-20,x+40,y+2,fill=color),
185     Polygon(x+15,y-20,x,y-40,x+15,y-30,x+30,y-40,x+25,y-20,fill='gray'),
186     Polygon(x+15,y+60,x+23,y+60,x+20,y+80,fill='gray')
187     )
188     icing.add(greenfrosting)
189 def createfrostingl(x,y,color):
190     purplefrosting.add(
191     Polygon(x,y,x+40,y,x+20,y+80,fill=color,border='gray'),
192     Polygon(x,y+2,x+15,y-20,x+25,y-20,x+40,y+2,fill=color),
193     Polygon(x+15,y-20,x,y-40,x+15,y-30,x+30,y-40,x+25,y-20,fill='gray'),
194     Polygon(x+15,y+60,x+23,y+60,x+20,y+80,fill='gray')
195     )
196     icing.add(purplefrosting)
197 def drawlines(x,y):
198     line1=Line(x,y,x,y+35,fill='white',opacity=40)
199     line2=Line(line1.xl+15,y,line1.xl+15,y+35,fill='white',opacity=40)
200     line3=Line(line2.xl+15,y,line2.xl+15,y+35,fill='white',opacity=40)
201     line4=Line(line3.xl+15,y,line3.xl+15,y+35,fill='white',opacity=40)
202     line5=Line(line4.xl+15,y,line4.xl+15,y+35,fill='white',opacity=40)
203     line6=Line(line5.xl+15,y,line5.xl+15,y+35,fill='white',opacity=40)
204     scenel.add(line1)
205     scenel.add(line2)
206     scenel.add(line3)
207     scenel.add(line4)
208     scenel.add(line5)
209     scenel.add(line6)

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210 ##cupcake
211 cupcake2=Group()
212 miniorder = Group(
213 Rect(310,295,80,105,fill='white'),
214 Rect(310,295,85,105,fill='white',opacity=30),
215 Label('Order:',350,310,font='monospace',size=15,fill='black'))
216 miniorder.visible=False
217 flour=Group()
218 frostingcircle=Group()
219 frostingcircleee=Group()
220 frostingcircle1=Group()
221 frostingcircle11=Group()
222 frostingcircle2=Group()
223 frostingcircle22=Group()
224 frostingcircle3=Group()
225 frostingcircle33=Group()
226 frostingcircle.add(frostingcircle1)
227 frostingcircle.add(frostingcircle2)
228 frostingcircle.add(frostingcircle3)
229 frostingcircleee.add(frostingcircle11)
230 frostingcircleee.add(frostingcircle22)
231 frostingcircleee.add(frostingcircle33)
232 app.fcount=0
233 toppingscene=Group(
234 Rect(0,0,400,400,fill=gradient('lavenderblush','lavender',start='top')),
235 Rect(0,300,800,100,fill=rgb(240,240,240)),
236 Line(0,350,800,350,fill='gainsboro',lineWidth=100,dashes=(2,30)),
237 Rect(190,145,240,25,fill=rgb(240,240,240),border='gainsboro',borderWidth=4),
238 Rect(0,85,120,25,fill=rgb(240,240,240),border='gainsboro',borderWidth=4),
239 Rect(130,15,200,40,fill='white'),
240 Label('toppings!',230,30,font='monospace',fill='pink',size=32,bold=True),
241 )
242 toppingscene.visible=False
243 sprinklescan=Group()
244 sprinklescan.add(
245 Rect(35,25,35,70,fill=gradient('pink','pink','yellow','lightblue','mediumo
rchid',start='left'),border='gainsboro'),
246 Circle(52,56,17,fill='white'),
247 Star(52,56,10,5,fill='pink'),
248 Oval(52,22,44,15,fill='gainsboro'),
249 Circle(42,21,2,fill='darkgray'),
250 Circle(52,24,2,fill='darkgray'),
251 Circle(51,18,2,fill='darkgray'),
252 Circle(61,21,2,fill='darkgray'),
253 )
254 cherriesbowl=Group(
255 Arc(280,100,90,120,180,90,fill='lightgray'),
256 Arc(280,100,90,120,90,180,fill='lightgray'),
257 Oval(280,100,85,20,fill='darkgray'),
258 )
259
260 cherrys=Group()

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261 def drawcherry(x,y):
262     cheryy=Group(
263         Circle(x,y,10,fill=gradient('lightcoral','crimson')),
264         Rect(x,y-20,2,12,fill='darkgreen',rotateAngle=random.randint(10,40)),
265     )
266     cherrys.add(cheryy)
267 drawcherry(267,83,)
268 drawcherry(246,91,)
269 drawcherry(297,79,)
270 drawcherry(283,84,)
271 drawcherry(256,96,)
272 drawcherry(276,98,)
273 drawcherry(293,97,)
274 drawcherry(306,97,)
275 cherriesbowl.add(cherrys)
276 toppingscene.add(cherriesbowl)
277 toppingscene.add(sprinklescan)
278
279 ### functions
280 def frostingdoodle(color,border):
281     fcolor=color
282     fborder=border
283     if (app.fcount==1):
284         frostingcircle1.add(
285             Oval(95,254,10,20,fill=fcolor,border=fborder)
286         )
287     if (app.fcount==2):
288         frostingcircle2.add(
289             Oval(200,254,10,20,fill=fcolor,border=fborder))
290     if (app.fcount==3):
291         frostingcircle3.add(
292             Oval(305,254,10,20,fill=fcolor,border=fborder))
293     if (app.fcount==4):
294         frostingcircle11.add(
295             Oval(90,244,10,20,fill=fcolor,border=fborder))
296     if (app.fcount==5):
297         frostingcircle22.add(
298             Oval(195,244,10,20,fill=fcolor,border=fborder)
299         )
300     if (app.fcount==6):
301         frostingcircle33.add(
302             Oval(300,244,10,20,fill=fcolor,border=fborder)
303         )
304 def drawvanilla():
305     flour.add(
306         Circle(random.randint(159,240),random.randint(272,320),7,fill='snow',o
307         pacity=20))
308 def drawchocolate():
309     flour.add(
310         Circle(random.randint(159,240),random.randint(272,320),7,fill='saddleB
311         rown',opacity=20))
312 def drawcupcake(x,y,color,colorborder,flavor):
313     cupcake.add(

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312 Polygon(x,y,x-10,y-35,x+35,y-35,x+25,y,fill=flavor),
313 Oval(x+12,y-37,55,20,fill=color,border=colorborder),
314 Oval(x+8,y-48,45,20,fill=color,border=colorborder),
315 Line(x+30,y-76,x+19,y-59,fill='green',),
316 Circle(x+19,y-59,10,fill='lightcoral',border='salmon'))
317 sprinkles2=Group()
318 app.sprinklecolors=['hotpink','gold','green','mediumPurple','hotpink','hot
pink','mediumPurple','green','gold','mediumPurple',]
319 def drawcupcake2(x,y,color,colorborder,flavor,cherries,sprinkles1):
320     cupcake2.add(
321         Polygon(x,y,x-10,y-35,x+35,y-35,x+25,y,fill=flavor),
322         Oval(x+12,y-37,55,20,fill=color,border=colorborder),
323         Oval(x+8,y-48,45,20,fill=color,border=colorborder),)
324     if (cherries == 'cherries'):
325         cupcake2.add(
326             Line(x+30,y-76,x+19,y-59,fill='green',),
327             Circle(x+19,y-59,10,fill='lightcoral',border='salmon'))
328
329     if(sprinkles1=='sprinkles'):
330         for index in range(len(app.sprinklecolors)):
331             color = app.sprinklecolors[index]
332             if (index % 2 == 0):
333                 sprinkles2.add(
334                     Circle(random.randint(x,x+30), random.randint(y-50,y-30),
5, fill=color))
335             else:
336                 sprinkles2.add(
337                     Star(random.randint(x,x+30), random.randint(y-50,y-30), 5,
5,fill=color))
338         cupcake2.add(sprinkles2)
339     cupcake3=Group()
340     def drawcupcake3(x,y,color,colorborder,flavor,cherries,sprinkles1):
341         cupcake3.add(
342             Polygon(x,y,x-10,y-35,x+35,y-35,x+25,y,fill=flavor),
343             Oval(x+12,y-37,55,20,fill=color,border=colorborder),
344             Oval(x+8,y-48,45,20,fill=color,border=colorborder),)
345         cupcake3.toFront()
346         if (cherries == 'cherries'):
347             cupcake3.add(
348                 Line(x+30,y-76,x+19,y-59,fill='green',),
349                 Circle(x+19,y-59,10,fill='lightcoral',border='salmon'))
350
351         if(sprinkles1=='sprinkles'):
352             cupcake3.add(
353                 Circle(155, 207, 5, fill='gold'),
354                 Star(190, 225, 8, 5, fill='mediumPurple'),
355                 Circle(220, 209, 5, fill='salmon'),
356                 Star(247, 240, 8, 5, fill='hotpink'),
357                 Circle(175, 245, 5, fill='gold'),
358                 Star(190, 245, 8, 5, fill='green'),
359                 Star(155, 230, 8, 5, fill='hotpink'),
360             )
361

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362 def drawdecorcakes():
363     if (app.frostingpicked==1):
364         if (app.flavorchosen==1):
365             drawcupcake3(94,296,'lightpink','hotpink','papayawhip','none',
366 'none')
367             drawcupcake3(170,296,'lightpink','hotpink','papayawhip','none'
368 , 'none')
369             drawcupcake3(240,296,'lightpink','hotpink','papayawhip','none'
370 , 'none')
371             cherrys.toFront()
372             if (app.flavorchosen==2):
373                 drawcupcake3(94,296,'lightpink','hotpink','saddlebrown','none'
374 , 'none')
375                 drawcupcake3(170,296,'lightpink','hotpink','saddlebrown','none'
376 , 'none')
377                 drawcupcake3(240,296,'lightpink','hotpink','saddlebrown','none'
378 , 'none')
379                 cherrys.toFront()
380                 elif (app.frostingpicked==2):
381                     if (app.flavorchosen==1):
382                         drawcupcake3(94,296,'lightgreen','green','papayawhip','none',
383 'none')
384                         drawcupcake3(170,296,'lightgreen','green','papayawhip','none',
385 'none')
386                         drawcupcake3(240,296,'lightgreen','green','papayawhip','none',
387 'none')
388                         cherrys.toFront()
389                         if (app.flavorchosen==2):
390                             drawcupcake3(94,296,'lightgreen','green','saddlebrown','none',
391 'none')
392                             drawcupcake3(170,296,'lightgreen','green','saddlebrown','none',
393 'none')
394                             drawcupcake3(240,296,'lightgreen','green','saddlebrown','none',
395 'none')
396                             cherrys.toFront()
397                             elif (app.frostingpicked==3):
398                                 if (app.flavorchosen==1):
399                                     drawcupcake3(94,296,'lavender','thistle','papayawhip','none',
400 'none')
401                                     drawcupcake3(170,296,'lavender','thistle','papayawhip','none',
402 'none')
403                                     drawcupcake3(240,296,'lavender','thistle','papayawhip','none',
404 'none')
405                                     cherrys.toFront()
406                                     if (app.flavorchosen==2):
407                                         drawcupcake3(94,296,'lavender','thistle','saddlebrown','none',
408 'none')
409                                         drawcupcake3(170,296,'lavender','thistle','saddlebrown','none',
410 'none')
411                                         drawcupcake3(240,296,'lavender','thistle','saddlebrown','none',
412 'none')
413                                         cherrys.toFront()
414 app.sprinkleshape=1
415 app.sprinklesgroup=0
416 def decorsprinkles():

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399     colors=[ 'pink', 'yellow', 'lightblue', 'mediumorchid' ]
400     if (app.sprinkleshape==1):
401         color = random.choice(colors)
402         if (app.sprinklesgroup <= 4):
403             sprinkle=Group(
404                 Circle(random.randint(74,129),random.randint(233,268),5,fill=c
olor))
405                 app.sprinklesgroup+=1
406             if (app.sprinklesgroup >= 4 and app.sprinklesgroup <=8):
407                 color1 = random.choice(colors)
408                 sprinkle=Group(
409                     Circle(random.randint(153,209),random.randint(233,268),5,fill=
color1))
410                     app.sprinklesgroup+=1
411                 if (app.sprinklesgroup >= 8 and app.sprinklesgroup <=12):
412                     color2 = random.choice(colors)
413                     sprinkle=Group(
414                         Circle(random.randint(231,276),random.randint(233,268),5,fill=
color2))
415                         app.sprinklesgroup +=1
416                     app.sprinkleshape=2
417
418             else:
419                 color = random.choice(colors)
420                 if (app.sprinklesgroup < 4):
421                     Star(random.randint(74,129),random.randint(233,268),5,5,fill=c
olor)
422                     app.sprinklesgroup+=1
423                 if (app.sprinklesgroup >= 4 and app.sprinklesgroup <=8):
424                     color3 = random.choice(colors)
425                     Star(random.randint(153,209),random.randint(233,268),5,5,fill=
color3)
426                     app.sprinklesgroup+=1
427                 if (app.sprinklesgroup >= 8 and app.sprinklesgroup <=12):
428                     color4 = random.choice(colors)
429                     Star(random.randint(231,276),random.randint(233,268),5,5,fill=
color4)
430                     app.sprinklesgroup+=1
431                 app.sprinkleshape=1
432     cake1=Group(
433         Rect(200,240,90,40,fill='lavender',border='thistle'),
434         Circle(215,240,10,fill='thistle'),
435         Circle(235,240,10,fill='thistle'),
436         Circle(255,240,10,fill='thistle'),
437         Circle(275,240,10,fill='thistle'),
438         Rect(200,220,90,20,fill=rgb(255,192,203)),
439         Rect(200,220,90,20,fill='white',opacity=50),
440     )
441     scenel.add(cupcake)
442     scenel.add(cake1)
443     ##call to functions
444     drawlines(75,350)
445     drawlines(165,350)
446     drawlines(255,350)

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447 drawcupcake(70,280,'lightgreen','green','saddlebrown')
448 drawcupcake(320,280,'lightsalmon','coral','saddlebrown')
449 drawcupcake(140,280,'lavender','thistle','saddlebrown')
450 ###
451 instructions=Group()
452 nextsign1= Group()
453 nextsign1.add(
454 Rect(235,345,160,40,fill='lightcoral',opacity=30),
455 Rect(235,340,150,40,fill='lightcoral'),
456 Label('Next!',310,357,fill='lavender',size=35)
457 )
458 nextsign1.visible=False
459 flavor = ['chocolate','vanilla']
460 frosting = ['purple','green','pink']
461 cherries = ['nocherries','cherries']
462 sprinkles= ['sprinkles','nosprinkles']
463 orderlist= []
464 app.userorder=[]
465 order11=Group(
466 Rect(35,30,160,200,fill='white'),
467 Label("Order",110,50,fill='black',size=30, font='monospace')
468 )
469 order22=Group(
470 Rect(210,30,160,200,fill='white'),
471 Label("Order",290,50,fill='black',size=30, font='monospace')
472 )
473 order=Group()
474 order.add(order11)
475 order.add(order22)
476 order.add(sprinkles2)
477 app.orderflavor= None
478 order11.visible=False
479 order22.visible=False
480 createsign= Group()
481 createsign.add(
482 Rect(13,345,400,40,fill='lightcoral',opacity=20),
483 Rect(13,340,380,40,fill='lightcoral'),
484 Label('Select an randomized order to create!',200,357,fill='lavender',size
=22)
485 )
486 createsign.visible=False
487 timer= Label(60,85, 145, size=30)
488 timer.visible=False
489 nextsign3=Group()
490 nextsign3.add(
491 Rect(22,154,130,40,fill='lightpink',opacity=30),
492 Rect(22,154,130,40,fill='lightpink'),
493 Label('Next!',82,175,fill='saddleBrown',size=35)
494 )
495 nextsign4=Group()
496 nextsign4.add(
497 Rect(22,154,130,40,fill='lightpink',opacity=30),
498 Rect(22,154,130,40,fill='lightpink'),
499 Label('Next!',82,175,fill='saddleBrown',size=35)

```

```

500 )
501 app.flavorchosen=0
502 nextsign3.visible=False
503 nextsign4.visible=False
504 cupcakeready=Label('cupcakes ready!',195,170,size=15,fill='dimgray')
505 cupcakeready.visible=False
506 def userselected(number):
507     if (number==1):
508         app.orderflavor=app.orderflavor1
509         app.orderfrosting=app.orderfrosting1
510         app.ordercherries=app.ordercherries1
511         app.sprinkles=app.sprinkles1
512         app.userorder=[app.orderflavor,app.orderfrosting,app.ordercherries1,app.sprinkles]
513     elif (number==2):
514         app.orderflavor=app.orderflavor2
515         app.orderfrosting=app.orderfrosting2
516         app.ordercherries=app.ordercherries2
517         app.sprinkles=app.sprinkles2
518         app.userorder=[app.orderflavor,app.orderfrosting,app.ordercherries1,app.sprinkles]
519
520 def onorder1():
521     app.orderflavor1= random.choice(flavor)
522     app.orderfrosting1= random.choice(frosting)
523     app.ordercherries1= random.choice(cherries)
524     app.sprinkles1= random.choice(sprinkles)
525     app.userorder1= [app.orderflavor1,app.orderfrosting1,app.ordercherries1,app.sprinkles1]
526     order11.add(
527         Label('flavor: '+app.orderflavor1,110,72, font='monospace',size=12),
528         Label('frosting: '+app.orderfrosting1,110,84, font='monospace',size=12),
529         Label('toppings: '+app.ordercherries1,110,96, font='monospace',size=12),
530         Label('+ '+app.sprinkles1,110,108,font='monospace',size=12))
531     createorder1()
532     order11.add(cupcake2)
533     sprinkles2.toFront()
534 def onorder2():
535     app.orderflavor2= random.choice(flavor)
536     app.orderfrosting2= random.choice(frosting)
537     app.ordercherries2= random.choice(cherries)
538     app.sprinkles2= random.choice(sprinkles)
539     app.userorder2= [app.orderflavor2,app.orderfrosting2,app.ordercherries2,app.sprinkles2]
540     order22.add(
541         Label('flavor: '+app.orderflavor2,290,72, font='monospace',size=12),
542         Label('frosting: '+app.orderfrosting2,290,84, font='monospace',size=12),
543         Label('toppings: '+app.ordercherries2,290,96, font='monospace',size=12),
544         Label('+ '+app.sprinkles2,290,108,font='monospace',size=12))
545     createorder2()

```

```

546     order22.add(cupcake2)
547     sprinkles2.toFront()
548 def createorder():
549     if (app.orderflavor=='chocolate'):
550         flavorcolor='saddlebrown'
551     if (app.orderflavor=='vanilla'):
552         flavorcolor='papayawhip'
553     if (app.orderfrosting=='purple'):
554         frosting1='lavender'
555         frostingborder='thistle'
556     if (app.orderfrosting=='green'):
557         frosting1='lightgreen'
558         frostingborder='green'
559     if (app.orderfrosting=='pink'):
560         frosting1='lightpink'
561         frostingborder='hotpink'
562     drawcupcake2(100,200,frosting1,frostingborder,flavorcolor,app.orderche
rries,app.sprinkles)
563 def createorder1():
564     if (app.orderflavor1=='chocolate'):
565         flavorcolor='saddlebrown'
566     if (app.orderflavor1=='vanilla'):
567         flavorcolor='papayawhip'
568     if (app.orderfrosting1=='purple'):
569         frosting1='lavender'
570         frostingborder='thistle'
571     if (app.orderfrosting1=='green'):
572         frosting1='lightgreen'
573         frostingborder='green'
574     if (app.orderfrosting1=='pink'):
575         frosting1='lightpink'
576         frostingborder='hotpink'
577     drawcupcake2(100,200,frosting1,frostingborder,flavorcolor,app.orderche
rries1,app.sprinkles1)
578     #cupcake2.toFront()
579     #cupcake2.centerY=262
580     #cupcake2.centerX=200
581     #sprinkles2.centerY=232
582
583 def createorder2():
584     if (app.orderflavor2=='chocolate'):
585         flavorcolor='saddlebrown'
586     if (app.orderflavor2=='vanilla'):
587         flavorcolor='papayawhip'
588     if (app.orderfrosting2=='purple'):
589         frosting1='lavender'
590         frostingborder='thistle'
591     if (app.orderfrosting2=='green'):
592         frosting1='lightgreen'
593         frostingborder='green'
594     if (app.orderfrosting2=='pink'):
595         frosting1='lightpink'
596         frostingborder='hotpink'
597     drawcupcake2(290,200,frosting1,frostingborder,flavorcolor,app.orderche

```

```

597 rries2,app.sprinkles2)
598     cupcake2.toFront()
599     #cupcake2.centerY=262
600     #cupcake2.centerX=200
601     #sprinkles2.centerY=232
602     #sprinkles2.centerX=200
603 app.checked=0
604 app.createdorderr=[]
605 def checkorder():
606     if (app.frostingpicked==1):
607         app.createdorderr.append('pink')
608     if (app.frostingpicked==2):
609         app.createdorderr.append('green')
610     if (app.frostingpicked==3):
611         app.createdorderr.append('purple')
612     if (app.cherriespicked==1):
613         app.createdorderr.append('cherries')
614     if (app.cherriespicked==0):
615         app.createdorderr.append('nocherries')
616     if (app.sprinklesgroup==0):
617         app.createdorderr.append('nosprinkles')
618     if (app.sprinklesgroup>=1):
619         app.createdorderr.append('sprinkles')
620     if (app.createdorderr[0]==app.userorder[0]):
621         app.checked +=1
622     if (app.createdorderr[1]==app.userorder[1]):
623         app.checked +=1
624     if (app.createdorderr[2]==app.userorder[2]):
625         app.checked +=1
626     if (app.createdorderr[3]==app.userorder[3]):
627         app.checked +=1
628     if (app.checked<4):
629         Rect(30,20,330,340,fill='crimson',opacity=30)
630         Label('baking failed! ',224,57,size=30,font='monospace',bold=True
,fill='white')
631         Label(' didnt follow order ',194,87,size=20,font='monospace',bold=
True,fill='white')
632         Label('play again',194,117,size=30,font='monospace',fill='white',b
old=True)
633     if (app.checked==4):
634         Rect(30,20,330,340,fill=rgb(0,206,209),opacity=30)
635         Label('baking completed!',194,57,size=30,font='monospace',fill='wh
ite',bold=True)
636         Label('good job!',194,87,size=30,font='monospace',fill='white',bol
d=True)
637         Label('play again',194,117,size=30,font='monospace',fill='white',b
old=True)
638 def onMousePress(mouseX,mouseY):
639     if (startsign.hits(mouseX,mouseY)==True and app.scenes==0):
640         scenel.clear()
641         cupcake.clear()
642         cupcake.visible=True
643         drawcupcake(30,400,'lavender','thistle','saddlebrown')

```

```

644     cupcake.height+=30
645     cupcake.width+=30
646     instructions.add(
647         Rect(20,17,360,50,fill='lavender'),
648         Label('instructions!',200,40,fill='salmon',size=40),
649         Label('instructions!',203,40,fill='salmon',size=40,opacity=30),
650         Label('follow the randomly generated order',200,90, size=15,fill='
crimson',font='monospace',bold=True),
651         Label('by picking the correct flavor, frosting, and toppings!',200
,107, size=12,fill='crimson',font='monospace',bold=True),
652         Label('1.drag and drop the cake mix into mixer, press on!',200,135
, size=13,fill='saddlebrown',font='monospace'),
653         Label('2.place muffin pan into oven',200,153, size=15,fill='saddle
brown',font='monospace'),
654         Label('3.once timer is done, begin frosting',200,175, size=15,fill
='saddlebrown',font='monospace'),
655         Label('4. frost by dragging and holding down frosting bag',200,200
, size=13,fill='saddlebrown',font='monospace'),
656         Label('5.once frosting is finished, add chosen toppings',200,225,
size=13,fill='saddlebrown',font='monospace'),
657         Label('6.if you baked the right order, good job! ',200,250, size=1
5,fill='saddlebrown',font='monospace'),
658         Label('7.otherwise try again',200,275, size=15,fill='saddlebrown',
font='monospace'),
659     )
660     nextsign1.visible=True
661     if (nextsign1.hits(mouseX,mouseY)==True and app.scenes==0):
662         instructions.clear()
663         cupcake.clear()
664         nextsign1.visible=False
665         app.scenes =1
666         onorder1()
667         onorder2()
668         cupcake2.height+=30
669         cupcake2.width+=40
670     if (order11.hits(mouseX,mouseY)==True and app.scenes==1):
671         userselected(1)
672         app.scenes=2
673     if (order22.hits(mouseX,mouseY)==True and app.scenes==1):
674         userselected(2)
675         app.scenes=2
676     if ( app.scenes==2):
677         bg.fill='lightblue'
678         order11.clear()
679         order22.clear()
680         cupcake2.clear()
681         sprinkles2.clear()
682         miniorder.visible=True
683         createorder()
684         cupcake2.visible=True
685         cupcake2.width=70
686         cupcake2.height =80
687         cupcake2.centerX = 350
688         cupcake2.bottom=400
689         cupcake2.toFront()

```

```

690     sprinkles2.visible=True
691     sprinkles2.centerX=350
692     sprinkles2.centerY=348
693     sprinkles2.toFront()
694     createsign.clear()
695     app.scenes =3
696 if (onbutton.hits(mouseX,mouseY)==True and app.scenes==4):
697     app.scenes=5
698 if (nextsign3.hits(mouseX,mouseY)==True and app.scenes==6):
699     bakescene.visible=False
700     nextsign3.visible=False
701     oven.visible=True
702     app.scenes=7
703     muffin.centerX=185
704     muffin.centerY=90
705 for frostingbags in icing.children:
706     if (frostingbags.hits(mouseX,mouseY)==True):
707         Circle(200,200,20,fill=app.frostingcolor)
708 if (app.scenes==10):
709     if (pinkfrosting.hitsShape(plates)==True):
710         app.frostingpicked=1
711
712         frostingdoodle('lightpink','hotpink')
713         if (frostingcircle1.width >=50 and app.fcount==1):
714             app.fcount=2
715             frostingdoodle('lightpink','hotpink')
716         if (greenfrosting.hitsShape(plates)==True):
717             app.frostingpicked=2
718
719             frostingdoodle('lightgreen','green')
720             if (frostingcircle1.width >=50 and app.fcount==1):
721                 app.fcount=2
722                 frostingdoodle('lightgreen','green')
723
724         if (purplefrosting.hitsShape(plates)==True):
725             app.frostingpicked=3
726
727             frostingdoodle('lavender','thistle')
728             if (frostingcircle1.width >=50 and app.fcount==1):
729                 app.fcount=2
730                 frostingdoodle('lavender','thistle')
731 if (nextsign4.hits(mouseX,mouseY)==True and app.scenes==11):
732     app.group.clear()
733     toppingscene.visible=True
734     drawdecorcakes()
735     cupcake3.toFront()
736     toppingscene.add(cupcake3)
737     cupcake3.width +=10
738     cupcake3.height +=10
739     toppingscene.add(miniorder)
740     miniorder.toFront()
741     createorder()
742     toppingscene.add(cupcake2)

```



```

743     cupcake2.toFront()
744     cupcake2.centerX=480
745     cupcake2.centerY=455
746     sprinkles2.visible=True
747     sprinkles2.centerX=480
748     sprinkles2.centerY=455
749     toppingscene.add(sprinkles2)
750     sprinkles2.toFront()
751     app.scenes=12
752 if (app.scenes==12):
753     if (sprinklescan.hits(mouseX,mouseY)==True):
754         app.canpickedup=True
755     else:
756         app.canpickedup=False
757     if (donesign.hits(mouseX,mouseY)==True):
758         app.scenes==13
759         checkorder()
760
761 def onStep():
762     if (app.scenes==1):
763         app.stepspersecond=0.5
764         order11.visible=True
765         order22.visible=True
766         createsign.visible=True
767
768     if (app.scenes==3):
769         bakescene.visible=True
770     if (app.scenes==5):
771         app.stepspersecond=0.5
772         timer.value -= 0.5
773         if (timer.value>=-0):
774             if (mixerhandles.centerX>=200):
775                 mixerhandles.centerX -=1
776                 flour.visible=False
777             else:
778                 mixerhandles.centerX +=5
779         else:
780             nextsign3.visible=True
781             app.scenes=6
782     if (vanillacake.hitsShape(mixer)==True and app.scenes==3):
783         if (vanillacake.rotateAngle<=90):
784             app.stepspersecond=1
785             drawvanilla()
786             vanillacake.rotateAngle+=1
787         if (vanillacake.rotateAngle>=90):
788             app.scenes=4
789             vanillacake.visible=False
790             app.flavorchosen=1
791             app.createdorderr.append('vanilla')
792     if (chocolatecake.hitsShape(mixer)==True and app.scenes==3):
793         if (chocolatecake.rotateAngle<=90):
794             app.stepspersecond=1
795             drawchocolate()

```

```

796         chocolatecake.rotateAngle+=1
797     if (chocolatecake.rotateAngle>=90):
798         app.scenes=4
799         chocolatecake.visible=False
800         app.flavorchosen=2
801         app.createdorderr.append('chocolate')
802     if (app.flavorchosen ==1):
803         muffincircles.fill='papayawhip'
804         cupcakeart.fill='papayawhip'
805     if (app.flavorchosen ==2):
806         muffincircles.fill='saddleBrown'
807         cupcakeart.fill='saddleBrown'
808     if (app.scenes==8 ):
809         clock.visible=True
810         if (app.oventimer>=-80):
811             app.oventimer-=1
812         if (app.oventimer>=0):
813             clockcircles.rotateAngle +=1
814             clockcircles.centerX=200
815         if (app.oventimer<=0 and app.scenes==8):
816             cupcakeready.visible=True
817         if (app.oventimer<=-80 and app.scenes==8):
818             oven.visible=False
819             cupcakeready.visible=False
820             clock.visible=False
821             oven.clear()
822             bakescene.clear()
823             createfrostingp(25,60,'lightpink')
824             createfrostingg(85,60,'lightgreen')
825             createfrostingl(135,60,'lavender')
826             app.scenes=9
827             createplate(75,290)
828             createplate(180,290)
829             createplate(285,290)
830     if (app.scenes==9):
831         icing.visible=True
832         plates.centerX +=1
833         icingsshelf.visible=True
834         conveyorbelt.visible=True
835         if(conveyorbelt.centerX<=400):
836             conveyorbelt.centerX +=1
837         if(conveyorbelt.centerX>=400):
838             conveyorbelt.centerX=0
839         if (plates.right >400):
840             plates.right=0
841     if (app.scenes==10):
842         for frostingcircles in frostingcircle.children:
843             if (frostingcircles.width <=50):
844                 frostingcircles.width +=0.5
845         for frostingcircles in frostingcirclee.children:
846             if (app.fcount>=4):
847                 if (frostingcircles.width <=40):
848                     frostingcircles.width +=0.5

```

```

849         if (frostingcircle1.width>=40 and app.fcount==1):
850             app.fcount=2
851         if (frostingcircle2.width>=50 and app.fcount==2):
852             app.fcount=3
853         if (frostingcircle3.width>=50 and app.fcount==3):
854             app.fcount=4
855         if (frostingcircle11.width>=40 and app.fcount==4):
856             app.fcount=5
857         if (frostingcircle22.width>=40 and app.fcount==5):
858             app.fcount=6
859         if (frostingcircle33.width>=40 and app.fcount==6):
860             app.fcount=7
861             app.scenes=11
862             nextsign4.visible=True
863
864     donesign=Group(
865     Rect(14,335,120,30,fill=rgb(0,206,209)),
866     Label('Done!',70,348,fill='white',size=30,font='monospace')
867     )
868     donesign.visible=False
869     app.cherriespicked=0
870     def onMouseDrag(mouseX,mouseY):
871         if (vanillacake.hits(mouseX,mouseY)==True and app.scenes==3):
872             vanillacake.centerX=mouseX
873             vanillacake.centerY=mouseY
874         if (chocolatecake.hits(mouseX,mouseY)==True and app.scenes==3):
875             chocolatecake.centerX=mouseX
876             chocolatecake.centerY=mouseY
877         if (muffin.hits(mouseX,mouseY)==True and app.scenes==7):
878             muffin.centerX=mouseX
879             muffin.centerY=mouseY
880         if(ovenrect.hitsShape(muffin)==True and app.scenes ==7 and muffin.cent
881 erY>290 and muffin.centerX>170):
882             mittens.visible=False
883             muffin.visible=False
884             app.scenes=8
885         if(app.scenes==9 or app.scenes==10):
886             for frostingbags in icing.children:
887                 if (frostingbags.hits(mouseX,mouseY)==True):
888                     frostingbags.centerX=mouseX
889                     frostingbags.centerY=mouseY
890                 if (frostingbags.hitsShape(plates)==True):
891                     app.scenes=10
892                     plates.centerX=200
893                     app.fcount=1
894         if (app.scenes==11 or app.scenes==12):
895             donesign.visible=True
896             for cheryy in cherrys.children:
897                 if (cheryy.hits(mouseX,mouseY)==True):
898                     cheryy.centerX=mouseX
899                     cheryy.centerY=mouseY
900                 if (cheryy.hitsShape(cupcake3)==True and cheryy.centerY>=2
901 33):

```

```
900             cupcake3.add(cherry)
901             cherry.toFront()
902             app.cherriespicked=1
903         if (sprinklescan.hits(mouseX,mouseY)==True):
904             sprinklescan.centerX=mouseX
905             sprinklescan.centerY=mouseY
906     def onMouseMove(mouseX,mouseY):
907         if (sprinklescan.hits(mouseX,mouseY)==True and app.canpickedup==True):
908             sprinklescan.centerX=mouseX
909             sprinklescan.centerY=mouseY
910             decorsprinkles()
911             cherrys.toFront()
```