

## Sandbox | CMU CS Academy

```
1 # Sign in page
2 app.background= 'navy'
3 signInScreen = Group(
4     Polygon(250,145,390,135,390,265,250,255,fill='lightBlue',opacity=80),
5     Line(250,200,390,200,fill='navy',lineWidth=10),
6     Line(315,140,315,260,fill='navy',lineWidth=10),
7     Circle(150,125,50,fill='grey'),
8     Circle(150,110,17,fill=None,border='white',borderWidth=4),
9     Circle(150,150,25,fill=None,border='white',borderWidth=4),
10    Oval(150,160,52,30,fill='grey'),
11    Rect(125,150,50,10,fill='grey'),
12    Label('CMU',150,200,fill='white',size=35))
13 passBox = Rect(70,230,165,30,fill='black',border='lightGrey',opacity=40)
14 signInScreen.add(passBox)
15 password = Label('Password',102,245,fill='white',size=12,opacity=80)
16 cursor = Label('|',80,243,size=15,visible=False)
17
18 desktop = Group(
19     Rect(0,370,400,30),
20     Rect(30,370,200,30,fill='white'),
21     Label('Search currently broken :( ',35,385, align='left'),
22     Label('7/4/2019',356,393, align='left',fill='white',size = 10),
23     Label('9:00 AM',357,380, align='left',fill='white',size = 10))
24
25
26 bsodIcon = Group(
27     Rect(15,10,30,45,fill='white',border='grey',borderWidth = 1),
28     Line(35,10,35,20,fill='grey',lineWidth = 1),
29     Line(34,20,45,20,fill='grey',lineWidth = 1),
30     Polygon(35,10,45,20,45,10,fill='darkRed'),
31     Label('DO NOT',31,63,size = 10,fill = 'white'),
32     Label('TOUCH',30,73,size = 10, fill = 'white')
33 )
34
35 desktop.add(bsodIcon)
36
37 msPaint = Group(
38     Circle(340,35,20,fill='skyBlue'),
39     Label('Paint',340,63,size = 10,fill = 'white')
40 )
41 msPaintWindow = Group(
42     Rect(0,0,400,30,fill=rgb(222,225,230)),
43     Rect(0,30,400,340,fill='white')
44 )
45
46 back = Label('X',385,15, size = 12)
47 xBox = Rect(370,0,30,30,fill='red')
48 clear = Group(
49     Rect(0,0,40,30,fill='red'),
50     Label('Clear',20,15,fill='white')
51 )
52 msPaintWindow.add(xBox)
53 msPaintWindow.add(back)
54 msPaintWindow.add(clear)
55 msPaintWindow.visible = False
56
57 desktop.add(msPaint)
58
59 desktop.visible=False
60 signInScreen.add(passBox)
61 signInScreen.add(cursor)
62
63 doodle = Group()
64
65 # To type periods as the password (elements added later)
66 drawPassword = Group()
67
68 def onMousePress(mouseX,mouseY):
69     # Type in the password box
70     # Tests to make sure you are still on the sign in screen
71     if(passBox.visible==True):
72         if(passBox.contains(mouseX,mouseY)==True):
73             cursor.visible=True
```

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74     passBox.fill='white'
75     passBox.opacity=100
76     password.visible=False
77     if(msPaintWindow.visible == False):
78         if(bsodIcon.contains(mouseX,mouseY)==True):
79             desktop.visible = False
80             msPaint.visible = False
81             bsodIcon.visible = False
82             app.background = rgb(1,0,128)
83             Label('A problem has been detected and Windows has',0,10,
84                 fill='white',font = 'monospace',size = 15,align = 'left')
85             Label('been shut down to prevent damage to your',0,25,fill='white',
86                 font = 'monospace',size = 15,align = 'left')
87             Label('computer.',0,40,fill='white',font = 'monospace',size = 15,
88                 align = 'left')
89             Label('The problem seems to be caused by the',0,70,fill='white',
90                 font = 'monospace',size = 15,align = 'left')
91             Label('following file: DONOTTOUCH.exe ',0,85,fill='white',
92                 font = 'monospace',size = 15,align = 'left')
93             Label('SHOULD_HAVE_LISTENED',0,115,fill='white',font = 'monospace',
94                 size = 15,align = 'left')
95             Label('If this is the first time you have seen this',0,145,
96                 fill='white',font = 'monospace',size = 15,align = 'left')
97             Label('stop error screen, restart your computer.',0,160,
98                 font = 'monospace',size = 15,align = 'left',fill = 'white')
99             Label('If this screen appears again, follow these',0,175,
100                font = 'monospace',size = 15,align = 'left',fill = 'white')
101            Label('steps:',0,190,font = 'monospace',size = 15,align = 'left',
102                fill = 'white')
103            Label('Listen to the machine. It knows best.',0,220,
104                font = 'monospace',size = 15,align = 'left',fill = 'white')
105            Label('Technical Information:',0,250,font = 'monospace',size = 15,
106                align = 'left',fill = 'white')
107            Label('*** 4c6973746556e5f4e6578745f54696d65 ',0,280,
108                font = 'monospace',size = 15,align = 'left',fill = 'white')
109            Label('*** 486f70655f796f755f655e6a6f7921',0,310,font = 'monospace',
110                size = 15,align = 'left',fill = 'white')
111            if(msPaint.contains(mouseX,mouseY)==True):
112                msPaintWindow.visible = True
113                msPaint.visible = False
114                bsodIcon.visible = False
115                xBox.visible = False
116            if(msPaintWindow.visible == True):
117                if(xBox.contains(mouseX,mouseY)==True):
118                    msPaintWindow.visible = False
119                    bsodIcon.visible = True
120                    msPaint.visible = True
121                    doodle.clear()
122                if(clear.contains(mouseX,mouseY)==True):
123                    doodle.clear()
124
125            def onMouseMove(mouseX,mouseY):
126                if(msPaintWindow.visible == True):
127                    if(xBox.contains(mouseX,mouseY)==True):
128                        xBox.visible=True
129                        back.fill='white'
130                    else:
131                        xBox.visible=False
132                        back.fill='black'
133
134            def onMouseDrag(mouseX,mouseY):
135                if(msPaintWindow.visible == True):
136                    if(msPaintWindow.contains(mouseX,mouseY) and (mouseY > 30)):
137                        doodle.add(Circle(mouseX,mouseY,8))
138
139            def onKeyPress(key):
140                # Type in the password box
141                # Tests to make sure you clicked in the password box
142                if(passBox.fill=='white'):
143                    if(key!='enter'):
144                        if(cursor.centerX < 227):
145                            drawPassword.add(Label('.',cursor.centerX,245,fill='black',
146                                size=30))
147                            cursor.centerX+=7
148                else:
149                    signInScreen.visible=False

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```
150         cursor.visible=False
151         drawPassword.clear()
152         desktop.visible = True
153
154     def onStep():
155         # Checks to see if you made it to the desktop
156         if(desktop.visible == True):
157             app.background = ('darkRed')
158         if(msPaintWindow.visible == True):
159             msPaint.visible = False
160             bsodIcon.visible = False
161
162     def clearScreen(group):
163         group.clear()
```