```
 1: # Integration of text and image examples, rendering to PDF
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 3: # Begun 2021-09-22
 4:
 5: # https://zetcode.com/gfx/pycairo/backends/
 6: # https://zetcode.com/gfx/pycairo/images/
 7: # https://zetcode.com/gfx/pycairo/shapesfills/
 8: # https://zetcode.com/gfx/pycairo/transparency/
 9: # https://pycairo.readthedocs.io/en/latest/reference/surfaces.html
10:
11: from PIL import Image
12: import cairo, traceback, socDb
13:
14: def name2image(name):
15:    lowerName = name.lower()
16:    name2     = lowerName.replace(' ', '_')
17:    result    = "images/soc/%s.png" % name2
18:    return result
19:
20: def main():
21:    soc = socDb.socDb()
22:    divisions = soc.getDivisions()
23:
24:    xImg = 10; xTxt =  315
25:    rankMap = {'asst':'Asst. Prof.', 'assoc':'Assoc. Prof.', 'full':'Professor',
26:               'lecturer':'Lecturer', 'slecturer':'Senior Lecturer',
27:               'pop':'Prof. of Practice'}
28:
29:    divisionMap = {'CS':'computer science','HCC':'human-centered computing',
30:                   'VC':'visual computing','FOI':'faculty of instruction'}
31:
32:    ps = cairo.PDFSurface("exSoCFaculty12.pdf", 2700, 800)
33:    cr = cairo.Context(ps)
34:    s = .38
35:    cr.scale(s,s)
36:    #cr.select_font_face("Georgia", cairo.FONT_SLANT_NORMAL,
37:    cr.select_font_face("Arial", cairo.FONT_SLANT_NORMAL,
38:                                  cairo.FONT_WEIGHT_BOLD)
39:    cr.set_font_size(256)
40:    cr.move_to(10,200)
41:    cr.set_source_rgb(.6, .4, 0)
42:    cr.show_text('clemson university :: school of computing')
43:
44:    for division in divisions:
45:
46:      yTxtOrig = yTxt  = 400; dyTxt = 325
47:      yImgOrig = yImg  = 680; dyImg = 325
48:
49:      cr.set_font_size(80)
50:      cr.move_to(xTxt-300, yTxt-80)
51:      cr.set_source_rgb(.5, .3, 0)
52:      divName = divisionMap[division]
53:      cr.show_text(divName)
54:
55:      cr.set_font_size(40)
56:      divFaculty = soc.getFacultyRankExtraByDivision(division)
57:
58:      print("divFaculty:", str(division), str(divFaculty))
59:
60:      idx = 0;
61:      for faculty in divFaculty:
62:        if idx != 0 and idx % 5 == 0:  yTxt = yTxtOrig; xTxt += 600
63:
64:        name, rank, extraRole = faculty
65:        if idx % 1 == 0: cr.set_source_rgba(0.8, 0.6, 0, .1)
66:        else:            cr.set_source_rgba(0.8, 0.6, 0, .95)
67:        cr.rectangle(xTxt-295, yTxt-50, xTxt+350, yTxt-50+dyImg)
68:        cr.fill()
69:
70:        lastNameSpace = name.rfind(' ') #consider "Brian C. Dean"
71:        lastName  = name[lastNameSpace+1:]
72:        firstName = name[0:lastNameSpace]
73:
74:        cr.move_to(xTxt, yTxt)
75:        g1 = .3; cr.set_source_rgb(g1,g1,g1)
76:        cr.show_text(firstName)
77:
78:        cr.move_to(xTxt, yTxt+40)
79:        g1 = 0; cr.set_source_rgb(g1,g1,g1)
80:        cr.show_text(lastName)
81:
82:        if rank in rankMap:
83:          cr.move_to(xTxt, yTxt+100)
84:          g3 = .55; cr.set_source_rgb(g3,g3,g3)
85:          cr.show_text(rankMap[rank])
86:
87:        if extraRole != None:
88:          cr.move_to(xTxt, yTxt+160)
89:          cr.set_source_rgb(.4, .2, 0)
90:          cr.show_text(extraRole)
91:
92:        yTxt += dyTxt;     idx += 1
93:
94:      idx = 0
95:      for faculty in divFaculty:
96:        if idx != 0 and idx % 5 == 0: yImg = yImgOrig; xImg += 600
97:        name, rank, extra = faculty
98:        imageFn = name2image(name)
99:        try:
100:          imgSurf  = cairo.ImageSurface.create_from_png(imageFn)
101:          cr.set_source_surface(imgSurf, xImg, yImg - dyImg)
102:          cr.paint()
103:        except: print("ignoring image:", imageFn); traceback.print_exc()
104:
105:        idx += 1; yImg += dyImg
106:
107:
108:      xImg += 600; xTxt +=  600
109:
110:    cr.show_page()
111:
112: if __name__ == "__main__":
113:    main()
114:
115: ### end ###
```