import math

class Locality:

def \_\_init\_\_(self, name, locality\_coefficient):

self.name = name

self.locality\_coefficient = locality\_coefficient

class Property:

def \_\_init\_\_ (self, locality):

self.locality = locality

class Estate (Property):

def \_\_init\_\_ (self, locality, estate\_type, area):

self.locality = locality

self.estate\_type = estate\_type

self.area = area

def \_\_str\_\_(self):

return f"Pozemek v lokalitě {self.locality.name} s koeficientem {self.locality.locality\_coefficient} má plochu {self.area} metrů čtverečních. Daň z této nemovitosti je {self.calculate\_tax()} Kč."

def calculate\_tax(self):

if self.estate\_type == "land":

return math.ceil(self.area \* 0.85 \* self.locality.locality\_coefficient)

elif self.estate\_type == "building site":

return math.ceil(self.area \* 0.9 \* self.locality.locality\_coefficient)

elif self.estate\_type == "forrest":

return math.ceil(self.area \* 0.35 \* self.locality.locality\_coefficient)

elif self.estate\_type == "garden":

return math.ceil(self.area \* 2 \* self.locality.locality\_coefficient)

class Residence (Property): def **init**(self, locality, area, commercial=False):

self.locality = locality

self.area = area

self.commercial = commercial

def **str**(self):

return f"Pozemek v lokalitě {self.locality.name} s koeficientem {self.locality.locality\_coefficient} má plochu {self.area} metrů čtverečních. Daň z této nemovitosti je {self.calculate\_tax()} Kč."

def calculate\_tax(self):

if self.commercial == False:

return math.ceil(self.area \* self.locality.locality\_coefficient\*15)

else:

return math.ceil(self.area \* self.locality.locality\_coefficient \* 2 \* 15)

zemedelsky\_pozemek = Locality("Manětín", 0.8) pozemek\_1 = Estate (zemedelsky\_pozemek, "land", 900) dum = Locality ("Manětín", 0.8) pozemek\_2 = Residence (dum, 120, False) kancelar = Locality ("Brno", 3) pozemek\_3 = Residence (kancelar, 90, True)

print (pozemek\_1) print (pozemek\_2) print (pozemek\_3)