#4-3

# Write a program that prompts the user for a point

# (x, y) and a y-intercept and then displays the slope

# of the corresponding line. Recall the formula for a

# straight line is y = mx + b, where m is the slope and

#b is the y-intercept

#Step 1 Understand the problem

# The problem is asking me to create a equation for the slope of a line

# Given the Y int, a x cord, and a y cord

#Step 2 Plan your solution

#input('enter x') input('enter y') input('enter y-intercept')

#y=mx+b so m=(y-b)/x? print m

#Step 3

x=int(input('Give the x cordinate '))

y=int(input('Give the y cordinate '))

b=int(input('Give the Y intercept '))

m=(y-b)/x

print(m)

#4-9

#Write a program that prompts the user for the amount of change that should be dispensed to a customer (in cents). Then print the number of quarters, dimes, nickels and pennies needed to give correct change. Your program should dispense as few coins as possible.

#Step 1 Understand the problem

Joshua Pollock

CS 126 Section 2

Class ID 2-159

# The problem is asking me to find the exact change for a given amount of cents

#Given the amount of cents

#Step 2 Plan your solution

# dollars=cents//100

#cents=(dollars\*100)-cents

#etc down the coin amounts.

#Step 3

cents=int(input('How many cents do you have? '))

dollars=cents//100

cents=cents-(dollars\*100)

quarters=cents//25

cents=cents-(quarters\*25)

dimes=cents//10

cents=cents-(dimes\*10)

nickels=cents//5

cents=cents-(nickels\*5)

pennies=cents

print('Dollars: ')

print(dollars)

print('Quarters: ')

print(quarters)

print('Dimes: ')

print(dimes)

print('Nickels: ')

print(nickels)

print('Pennies: ')

print(pennies)

#4-13

#Write a program that prompts the user for an eight digit integer and then prints a long formatted date. you should be able to manage this without using Python’s date module.

#Step 1

#The problem is asking me to take a 8 digit integer and convert it to a long formated date

#I can not use python's date module

#Step 2

#date=int(input('Input a date (yyyymmdd)')

#day=str(date[6:8])

#year=str(date[0:4])

#if date[3:5]==01:

#print('January '+day+', '+year)

#Step 3

date=str(input('Input a date (yyyymmdd)'))

day=str(date[6:8])

year=str(date[0:4])

if date[3:5]== '01':

print('January '+day+', '+year)

if date[3:5]=='02':

print('Febuary '+day+', '+year)

if date[3:5]=='03':

print('March '+day+', '+year)

if date[3:5]=='04':

print('April '+day+', '+year)

if date[3:5]=='05':

print('May '+day+', '+year)

if date[3:5]=='06':

print('June '+day+', '+year)

if date[3:5]=='07':

print('July '+day+', '+year)

if date[3:5]=='08':

print('August '+day+', '+year)

if date[3:5]=='09':

print('September '+day+', '+year)

if date[3:5]=='10':

print('October '+day+', '+year)

if date[3:5]=='11':

print('November '+day+', '+year)

if date[3:5]=='12':

print('December '+day+', '+year)

#4-15

x=2

#Write a program that calculates compounded interest

#Step 1

#I need to create a calculator for an equation that calculates compound intrest.

#It gives 5 variables and the equation.

#A = amount of money accumulated after n years, including interest

#P = principal amount (the initial amount you borrow or deposit)

#r = annual rate of interest (as a decimal)

#n = number of times the interest is compounded per year

#t = number of years the amount is deposited or borrowed for

#Step 2

#This is simple. It is just a bunch of inputs and then some math to print the return result

#ex p=int(input('Input the principal amount'))

#Step 3

p=float(input('Input the principal amount '))

r=float(input('Input the annual rate of intrest as a decimal '))

n=float(input('Input the number of times the intrest is compounded each year '))

t=float(input('Input the time in years that will or has passed '))

x=float(p\*((1+(r/n)\*\*(n\*t))))

x=str(x)

print('Your new amount of money is: '+x)