payroll_system

March 4, 2025

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# gavin modica, it payroll system

from time import asctime
from IPython.display import clear_output

def calculatePay():
    ␣
 ↪##########################################################################################
    #Variable declarations

    firstName = str(input("enter first name")) # I enter my first name
    lastName = str(input("enter last name")) # I enter my last name
    payRate = float(input("enter hourly wage")) # I enter my hourly wage
    hours = float(input("enter hours worked this week")) # I enter my hours␣
 ↪worked this week



    fedTaxRate = .101 # 10.1 percent for the feds

    stateTaxRate = .0447 # 4.47% for the state

    socialSecurity = .153 # 15.3% for soc sec, and med care

    insurance = 119.00 # CT Average is $119.00
    ␣
 ↪##########################################################################################
    #If I work greater than 40 hours, I multiply my base pay by 40, subtract␣
 ↪total hours worked by 40,
    #giving me my overtime hours
    #I then take my payrate multiply by 1.5 giving me time and half
    #multiply that time and half by my overtime hours, and then add my pay for␣
 ↪hours worked to overtime pay

    if hours > 40.00:
        basePay = payRate * 40
        overHours = hours - 40
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        overtime = (payRate * 1.5) * overHours
        grossPay = basePay + overtime

        grossPayMessage = "\n\nYour gorss pay for 40 hours, and {:.2f} hours␣
↪overtime is {:.2f}\n".format(overHours, grossPay)
        #2print(grossPayMessage)
    else:
        basePay = 0
        grossPay = payRate * hours
        overHours = 0.0
        overtime = 0
        grossPayMessage = "\n\nYour gorss pay for {:.2f} hours, is {:.2f}\n".
↪format(hours, grossPay)

    # here is where my diductions are
    fedTaxPaid = fedTaxRate * grossPay # I times fed tax rate by gross pay to =␣
↪fed tax paid

    stateTaxPaid = stateTaxRate * grossPay # I also created a state tax paid␣
↪variable where you times fed tax rae and gross pay to get it

    socialSecurityPaid = socialSecurity * grossPay # I times gross pay by ss to␣
↪get to the new variable, to get to ss paid

    totalDeductions = fedTaxPaid + stateTaxPaid + socialSecurityPaid +␣
↪insurance # I added up all of my new variable to get a totalof all of the␣
↪deuctions

    netPay = grossPay - totalDeductions # i minused the total deductions from␣
↪the gross pay to = the net pay
    print(netPay)
        ␣
↪#############################################################################################
        #creating the invoice for the user
    invoicePage = open("{}-{}-invoice.txt".format(lastName, firstName), "w+") #␣
↪open new file for the invoice

    invoicePage.write("\n") # n means new line
    invoicePage.write("Pay for {} {}".format(lastName, firstName))
    invoicePage.write("\n")
    invoicePage.write("payrate: ${:.2f}".format(payRate))
    invoicePage.write("\n")
    invoicePage.write("total hours worked {}".format(hours))
    invoicePage.write("\n")
    invoicePage.write("overtime hours at time and a half: {:.2f}".
↪format(overHours))
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    invoicePage.write("\n")
    invoicePage.write("date/time report was run {}".format(asctime))
    invoicePage.write("\n")
    invoicePage.write(grossPayMessage)
    invoicePage.write("\n")
    invoicePage.write("Deductions\n")
    invoicePage.write("---------------------------------\n")
    invoicePage.write("federal income tax: ${:.2f}\n".format(fedTaxPaid))
    invoicePage.write("\n")
    invoicePage.write("state of CT tax ${:.2f}\n".format(stateTaxPaid))
    invoicePage.write("\n")
    invoicePage.write("social security ${:.2f}\n".format(socialSecurityPaid))
    invoicePage.write("\n")
    invoicePage.write("insurance ${:.2f}\n".format(insurance))
    invoicePage.write("\n")
    invoicePage.write("total deduction ${:.2f}\n".format(totalDeductions))
    invoicePage.write("---------------------------------\n\n")
    invoicePage.write("total pay recived is ${:.2f}\n".format(netPay))
    invoicePage.close()

    invoiceView = open("{}-{}-invoice.txt".format(lastName, firstName), "r")
    viewFile = invoiceView.read()
    print(viewFile)
    invoiceView.close()

    input("press enter to continue")

def menu():
    while True:
        print("Welcome to the payroll calculator")
        print("     What do you want to do?")
        print("1. Calculate Pay")
        print("2. Exit")

        menuChoice = input("Enter 1 or 2")

        if menuChoice == "1":
            calculatePay()
        elif menuChoice == "2":
            print("Have a good day!")
            break
        else:
            print("Invalid choice, choose 1 or 2")
            input("Press Enter")
            clear_output()

if __name__ == "__main__":
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```
    menu()
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```
Welcome to the payroll calculator
     What do you want to do?
1. Calculate Pay
2. Exit

Enter 1 or 2 1
enter first name Edddy
enter last name mma
enter hourly wage 100.75
enter hours worked this week 41.5

2866.21494375

Pay for mma Edddy
payrate: $100.75
total hours worked 41.5
overtime hours at time and a half: 1.50
date/time report was run <built-in function asctime>


Your gorss pay for 40 hours, and 1.50 hours overtime is 4256.69

Deductions
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federal income tax: $429.93

state of CT tax $190.27

social security $651.27

insurance $119.00

total deduction $1390.47
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total pay recived is $2866.21
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