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// Filename Fread_Program3.c
// Written by Justin Fread
// Written on 9/22/18

#include <stdio.h>
#define TAX 0.03625
#define COMMISSION 0.057
#define COMMISSION_BASE 250

void benefits(int empID);
void salary(double sal_pen_deductions, int empID);
double tax(double gross);

int main(void) {

    int anotherEmp;
    int employeeNum;

    anotherEmp = 0;
    while (anotherEmp != -1) {

        printf("Enter the employee ID number: ");
        scanf_s("%d", &employeeNum);

        benefits(employeeNum);

        printf("Enter a 1 to continue or a -1 to quit. ");
        scanf_s("%d", &anotherEmp);

    }

    system("pause");
}

void benefits(int empID) {

    double pension;
    double insurance;
    double totalDeduction;
    int choice;

    printf("Enter the percentage of pension contributions for this employee.\n");
    printf("From 5 - 10 percent: ");
    scanf_s("%lf", &pension);
    pension *= 0.01;

    printf("Enter the employee's insurance plan.\n");
    printf("1 = Employee only, 2 = Employee + Spouse, 3 = Family: ");
    scanf_s("%d", &choice);

    switch (choice) {
    case 1:
        insurance = 50;
        break;
    case 2:
        insurance = 100;
        break;
    case 3:
        insurance = 200;
        break;
    default:
        while (choice < 1 || choice > 3) {
            printf("Invalid entry. 1 = Employee only, 2 = Employee + Spouse, 3 = Family: ");
            scanf_s("%d", &choice);
        }
    }

    totalDeduction = pension + insurance;
    salary(totalDeduction, empID);
}

void salary(double sal_pen_deductions, int empID) {

    double grossPay;
    double salary;
    double hourlyWage;
    double hoursWorked;
    double grossSales;
    double pricePerPiece;
    int numOfPieces;

    int choice;

    printf("Enter the type of employee\n");
    printf("1 = Manager, 2 = Hourly Worker, 3 = Commission, 4 = Piece Worker: ");
    scanf_s("%d", &choice);

    switch (choice) {
    case 1: // manager
        printf("Enter this Manager's weekly salary: $");
        scanf_s("%lf", &salary);
        grossPay = salary * 2;
        tax(grossPay);
        break;
    case 2: // hourly worker
        printf("Enter the hourly rate of this employee: $");
        scanf_s("%lf", &hourlyWage);

        printf("Enter the number of hours worked for the two week pay period: ");
        scanf_s("%lf", &hoursWorked);

        if (hoursWorked > 80) {
            double overtime;
            overtime = hoursWorked - 80;
            grossPay = (hourlyWage * 80) + (overtime * (hourlyWage * 1.5));
        }
        else {
            grossPay = hourlyWage * hoursWorked;
        }
        tax(grossPay);
        break;
    case 3: // commission worker
        printf("Enter the gross sales for the two week period: ");
        scanf_s("%lf", &grossSales);
        grossPay = (COMMISSION_BASE + (grossSales * COMMISSION));
        tax(grossPay);
        break;
    case 4: // piece worker
        printf("Enter the number of pieces for the two week period: ");
        scanf_s("%d", &numOfPieces);
        printf("Enter the price per piece: ");
        scanf_s("%lf", &pricePerPiece);
        grossPay = numOfPieces * pricePerPiece;
        tax(grossPay);
        break;
    default:
        while (choice < 1 || choice > 4) {
            printf("Invalid entry.");
            printf("1 = Manager, 2 = Hourly Worker, 3 = Commission, 4 = Piece Worker: ");
            scanf_s("%d", &choice);
        }
    }

    // display the employee's ID number, gross pay, and net pay
    // after benefit deductions and taxes
    printf("\n\nEmployee ID# %d\n", empID);
    printf("Gross pay   $%.2f\n", grossPay);
    printf("Net Pay      $%.2f\n\n", tax(grossPay) - sal_pen_deductions);
}

double tax(double gross) {

    double netPay;

    netPay = gross - (gross * TAX);

    return netPay;
}

```