Write a C program that determines the **gross pay** and **net pay** for each of up to 20 employees, then prints out a payroll summary report. For each employee, your program should prompt for the **number of hours worked** and the **hourly rate** of the worker. Once this information is entered, your program should calculate the gross pay, federal tax paid, and net pay for that employee based on the criteria below. The company pays "straight-time" for the first 40 hours worked by each employee, and pays "time-and-a-half" for all hours worked in excess of 40 hours.
Use the following struct to store your data:

struct employee
{
        char emp_name[30];
        float emp_hrs;
        float emp_rate;
        float emp_gross;
        float emp_net;
        float emp_tax;
}
Your program should include the following **functions(appropriately named)**:

- Function1 which is called to get the Company Name up to 30 characters. No input* just output.
- Function2 which is called to get the number of employees to process. No input* just output. Let's set a maximum of 20 employees.
- Function3 which is called to determine the <u>overtime pay</u>. It would require 2 parameters passed to it (hourly rate, and hours worked), both of which are data type float. It would return the calculated overtime pay (as shown below), which is of data type float. (overtime is only when the number of hours worked is **more than 40**).
- Function4 which is called to calculate <u>gross pay</u>. It would require three parameters: hours worked, hourly rate, overtime pay, if any.
- Function5 which should be called to calculate the <u>federal tax</u>. It requires 1 parameter passed to it (gross pay), and should return the federal tax paid, both of which should be data type float. Assume that federal tax is 15% of gross pay up to $800 and then 20% for any amounts over $800. (e.g. 900 would be 800 at .15 and 100 at .20)
- Function6 will be called to calculate the <u>net pay</u>. It requires 2 parameters, the gross pay and the federal tax.

The dialog with the user must be as follows: (the welcome message can be designed of your own choosing)

Welcome to the Sears Payroll Analysis

Enter the Company Name: Acme House Painting

Enter the number of employees(1-20): 3

Enter the name for employee 1: John Smith

Enter the number of hours employee 1 worked: 36
Enter the hourly rate of employee 1: 30.00

Enter the name for employee 2: Jane Doe
Enter the number of hours employee 2 worked: 41
Enter the hourly rate of employee 2: 20.00

Enter the name for employee 3: Dick Sally
Enter the number of hours employee 3 worked: 30
Enter the hourly rate of employee 3: 15.20

<div align="center">

Payroll Report
Acme House Painting

</div>

John Smith
Gross Pay: $ 1080.00
Federal Tax: $ 176.00
Net Pay: $ 904.00

Jane Doe
Gross Pay: $ 830.00
Federal Tax: $ 126.00
Net Pay: $ 704.00

Dick Sally
Gross Pay: $ 456.00
Federal Tax: $ 68.40
Net Pay: $ 387.60

<div align="center">

Report Totals

</div>

Gross Pay: $ 2366.00
Federal Tax: $ 370.40
Net Pay: $ 1995.60

Note: The **bold black** text represents the "output" from your program what the user types in is indicated by the **blue** text above. It may not appear so, but I want the decimal places to be aligned for the Payroll Report.

Hints/Requirements:
- Error checking is <u>required</u> on **all** numerical input for this program.
  (1 <= employees <= 20; rate > 0, hours > 0)
- Also, arrays and structs are <u>required</u> in this program.
- Use the Sample data above to test the calculations are correct

Good luck!   (*The Good, The Bad, and The Ugly* theme plays in the background)