#include<stdio.h>

void main()

{

//James Doonan - G00310428

//Declare Variables

float numOfHours = 0;

float hourlyRate = 0;

float employeeNumber = 0;

float totalSalary;

float aboveHours = 0;

float companySalary = 0;

float largestHours = 0;

float mostHoursEmployee = 0;

//Step 1 Loop - Initialise Loop Control

printf("Please enter your employee number or -1 to terminate\n");

scanf("%f", &employeeNumber);

while (employeeNumber != -1)

{

//Read inputs

printf("Please enter number of hours worked\n");

scanf("%f", &numOfHours);

printf("Please enter your hourly rate\n");

scanf("%f", &hourlyRate);

//debug test

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("Debug %.2f %.2f %.2f\n", employeeNumber, numOfHours, hourlyRate);

//if statement to work out calculations depending on hours entered.

if (numOfHours > 0 && numOfHours < 168)

{

if (numOfHours >= 0 && numOfHours <= 39)

{

totalSalary = numOfHours \* hourlyRate;

//adding this if statement updates the employee number to coinside with the highest hours worked

if (numOfHours >= largestHours)

{

mostHoursEmployee = employeeNumber;

}

}

else if (numOfHours > 39 && numOfHours <= 50)

{

totalSalary = (39 \* hourlyRate) + (((numOfHours - 39) \* (1.5f \* hourlyRate)));

aboveHours += numOfHours - 39;

//adding this if statement updates the employee number to coinside with the highest hours worked

if (numOfHours >= largestHours)

{

mostHoursEmployee = employeeNumber;

}

}

else if (numOfHours > 50 && numOfHours <= 168)

{

totalSalary = (39 \* hourlyRate) + (11 \* 1.5f \* hourlyRate) + ((numOfHours - 50) \* (2 \* hourlyRate));

aboveHours += numOfHours - 39;

//adding this if statement updates the employee number to coinside with the highest hours worked

if (numOfHours >= largestHours)

{

mostHoursEmployee = employeeNumber;

}

}

//prints off the statement each time

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("Employee number is: %.f\n", employeeNumber);

printf("total salary for the week is: %.2f\n", totalSalary);

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

//calculates the total wages for the week

companySalary += totalSalary;

//this gives the largest number of hours that week

if (numOfHours >= largestHours)

{

largestHours = numOfHours;

}

}

else

//an employee cant work less that 0 hours and also more than 168 hours a week becuase thats not possible

{

printf("not a valid number, too few or many hours entered\n");

}

//resets the loop

printf("Please enter your employee number or -1 to terminate\n");

scanf("%f", &employeeNumber);

}

//Display the results

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

printf("The total company wages bill: %.2f\n", companySalary);

printf("Total number of hours worked above the standard 39 hours per week was: %.2f\n", aboveHours);

printf("The largest amout of hours worked was: %.2f and the employee with the most hours worked per week was: %.2f\n", largestHours,mostHoursEmployee);

printf("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

}