1. Write a program to compute an employee’s weekly pay and produce a pay slip showing name, gross pay, deductions, and net pay. The program should first prompt the user for:

1. family name
2. given name
3. hourly rate of pay
4. number of hours worked that week (Any hours over 40 are paid at double the normal hourly rate.)
5. a letter indicating the employee’s tax category

A: no tax deduction

B: tax is 10% of gross pay

C: tax is 20 % of gross pay

D: tax is 29% of gross pay

E: tax is 35% of gross pay

1. either a Y or an N to indicate whether or not the employee wants $20 deducted from the weekly pay as a contribution to the United Way Charity

2. Write a program that makes change for amounts less than one dollar. Input to the program should be a positive integer less than 100, representing an amount of money in cents. Output should be the original amount of money together with a set of coins (quarters, dimes, nickels, cents) that could make up that amount. The program should produce change containing the minimum number of coins required for the given amount. The output should be in a natural, non stilted form. For example, input of 58 cents should produce output something like:

58 cents: 2 quarters, 1 nickel, and 3 cents.

Rather than

58 cents: 2 quarters, 0 dimes, 1 nickels, 3 cents

3. The government of Simpleton has devised what it thinks is an easy income tax system, but its citizens still need help. They have commissioned you to write a program to ask a citizen a few simple questions and computer the tax that is payable or the refund that is due. You must write your program as clearly as possible so that the government can verify it easily. Your program should first ask a citizen for his/her income (income), housing cost (houseCost), number of children (totalChildren), and number of children that are in school (schoolchildren). It should then compute and print the tax payable or refund due. The tax rules are as follows. The Simpleton tax rate is 18% but citizens are not taxed on the first $10 000 of income unless they more than $8 000 for housing. For every child, a Simpleton citizen gets a $500 tax reduction, or $1 000 if the child is in school. This reduction never results in citizens getting refunds unless their housing costs are less than $6 000 and they have more than two children, at least one of whom is in school. Finally, if the tax payable is more than $2 000, then it is increased by an additional 15% surtax.

4. In the nine-digit Social Insurance Number (SIN) given to each person having a job or filling an income tax return in Canada, the ninth digit is a check digit that is used to test the validity of the other digits in the SIN. The ninth digit is determined by the following procedure.

1. Double the 2nd, 4th, 6th, and 8th digits.
2. Add the digits of the numbers found in step (a)
3. Add the 1st, 3rd, 5th, and 7th digits.
4. Add the numbers found in steps (b) and (c).
5. Subtract the units digit of the result of step (d) from 10 and note the units digit of the result. For the SIN to be valid, its ninth digit must have this value.

Write a program that repeatedly reads the nine-digit numbers and determines whether or not each number is a valid SIN. The program should stop when it reads the value 999999999.