

Income Tax and Investment Calculator

Introduction

Your task is to produce a Java program, which can calculate income tax and investment growth based on the yearly income/salary of an individual. Below the details are described.

Problem description

In Australia, a taxpayer's income is taxed progressively. Progressive taxation means that higher income earners pay more tax than lower income earners. The following tables detail the tax brackets of our progressive tax system for the financial years ending 30 June 2008 and 30 June 2009. Note that the first table is for Australian residents and the next one is for non residents.

Tax rates 2008-09 – residents

<i>Taxable income</i>	<i>Tax on this income</i>
\$0 – \$6,000	Nil
\$6,001 – \$34,000	15c for each \$1 over \$6,000
\$34,001 – \$80,000	\$4,200 plus 30c for each \$1 over \$34,000
\$80,001 – \$180,000	\$18,000 plus 40c for each \$1 over \$80,000
Over \$180,001	\$58,000 plus 45c for each \$1 over \$180,000

Tax rates 2008-09 – non residents

<i>Taxable income</i>	<i>Tax on this income</i>
\$0 – \$34,000	29c for each \$1
\$34,001 – \$80,000	\$9,860 plus 30c for each \$1 over \$34,000
\$80,001 – \$180,000	\$23,660 plus 40c for each \$1 over \$80,000
Over \$180,001	\$63,660 plus 45c for each \$1 over \$180,000

Residents are also required to pay 1.5% of Medicare levy, which is calculated at 1.5% of your taxable income. Non-residents are not required to pay the Medicare levy.

The **first task** of the program is to calculate income tax based on the yearly income/salary of an individual, which is provided to the program.

In order to calculate the total yearly tax, the program should use the information provided in the Tax tables above. The user should provide the program with

- **Name** (the name needs to have at least two names – first name and last name; if not, the
- program will show an error message and ask the user the name again),
- **Salary** (income) for an entire year (the salary needs to be a positive number and different from zero; if not, the program will show an error message and ask the salary again)

- if the user is a resident or not.

The program is then expected to display:

- the net salary of this particular individual per year and per week.
- how much tax this particular person pays per year and per week.
- how much this person pays for the Medicare Levy per year (if pays)

The **second task** of the program is to calculate/display a possible investment. First, the program should ask

- the amount of money that he/she requires (on an average) per week as living expenditure.

On the basis of this information the program should advise the user whether or not the amount he/she is earning each week is sufficient to cover his/her weekly expenses. If the user earns less than the amount that is required to live, you should show a warning message. If not, the program should ask if the user would like to invest some money. If yes, the program should ask

- the amount of money that he/she would like to invest per week (it is necessary to verify if this
- amount is feasible. If not, show an error message and ask again)
- the interest rate of the investment account per annum (the interest needs to be between 1% and
- 100%; if not, the program will show an error message and ask the user the interest rate again)
- number of weeks that the user will invest the money (it needs to be a positive number and
- different from zero; if not, the program will show an error message and ask the salary again)

The program is then expected to display:

- the amount of money in the investment account in the end of each 4 weeks.

Suppose that the interest is applied in the end of each 4 weeks. See the example below.

Example

Suppose a resident with yearly income of \$35,000.00. The Medicare Levy will be \$425.00 and the taxes will be \$4,500.00/year or \$86.54/week. His/her net salary per week will be \$578.37. Suppose the user needs \$556.12 per week as living expenditure. So it is possible to invest \$22.25 per week. Suppose the interest is 13% per year (or 1% each 4 weeks) and the number of weeks the user will invest the money is 18. Then the investment account will be:

Weeks	Money in the end of each 4 weeks
4	\$89.89 = $22.25 \times 4 \times 1.01$
8	\$180.68 = $(89.89 + 22.25 \times 4) \times 1.01$
12	\$272.38 = $(180.68 + 22.25 \times 4) \times 1.01$
16	\$364.99 = $(272.38 + 22.25 \times 4) \times 1.01$
18	\$364.99 (note that is less than 4 weeks)

Program Requirements

Your program should consist of only one class (Invest.java) and only one method (the main method). You will use a **Terminal I/O interface** and your program needs to display all information such that it is easy to read. Your code also must be very well commented. You cannot use arrays.

Additional (very important to Assignment1)

You need to provide the pseudocode of the program. The pseudocode can not have any element of your interface implementation. You should specify the **input** and **output** in your pseudocode.

Due Date

28/Mar/2009

Before 09:00 Pm