Assignment 6
60-322
Abstract factory pattern

Consider the problem of writing a tax processing program which handles the case of calculating the provincial taxes for Ontario and Quebec. The application is on the web and works as follows:

1) Display an object of the JFrame class as given below. The supplied application gives the actual code I used. You do not need to pay a lot of attention to the code since it is not relevant to the task you have. I have not attempted to deal with other details (such as error handling). Fig 1 shows the initial frame displayed.

2) The user has to fill in all details and press *Enter* after supplying the yearly income. Fig 2 shows a typical frame after the user has entered all details and before the user presses *Enter*.

3) The program calculates the tax payable in that province and displays a letter to be sent to the user. The frame after the user presses *Enter* is shown in Fig 3.

Just to let you know the final frame after entering information about a person from Quebec is shown in Fig 4.

Fig 1: Initial frame displayed by the system.

Fig 2: Frame after the user types all details and before pressing Enter.

Fig 3: Frame after the user presses Enter.
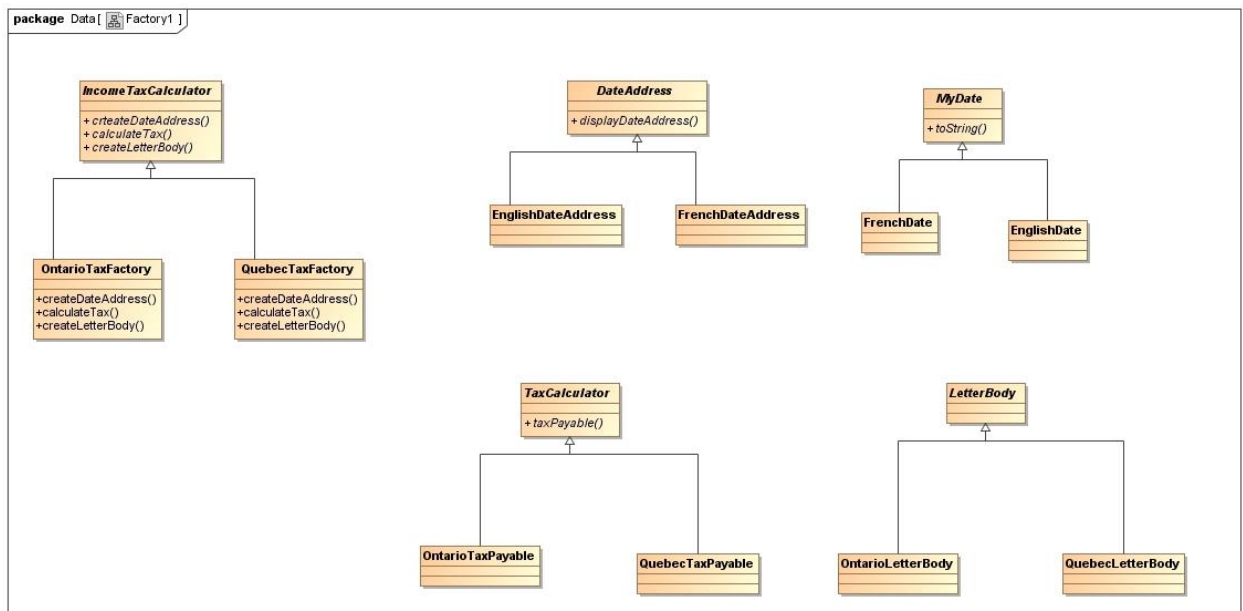
Fig 4: Appearance of frame for a female user from Quebec.

Work to be done:

Using the idea of Abstract factory, show how you can rewrite the application.

Hints: Consider the figure below

We will use this scheme in our solution.