HW1
1. Calculating Future Investment Value

Problem Description:

Use Scanner class for console input. Write a program that reads in investment amount, annual interest rate, and number of years, and displays the future investment value using the following formula:

futureInvestmentValue =
investmentAmount * (1 + monthlyInterestRate)^{numberOfYears*12}

For example, if you enter amount 1000, annual interest rate 3.25%, and number of years 1, the future investment value is 1032.98.

Hint: Use the Math.pow(a, b) method to compute a raised to the power of b.

Here is a sample run:

Sample 1:

```
Enter investment amount: 1000
Enter annual interest rate: 4.25
Enter number of years: 1
Accumulated value is 1043.34
```

Coding: (Copy and Paste Source Code here.)

Testing: (Paste the screenshot of your result here. And describe how you test this program)

2. Computing Tax

Problem Description:

The United States federal personal income tax is calculated based on filing status and taxable income. There are four filing statuses: single filers, married filing jointly, married filing separately, and head of household. The tax rates vary every year. Table 1 shows the rates for 2009. If you are, say, single with a taxable income of $10,000, the first $8,350 is taxed at 10% and the other $1,650 is taxed at 15%. So, your tax is $1,082.5.

Table 1

2009 U.S. Federal Personal Tax Rates

Marginal Tax Rate	Single	Married Filing Jointly or Qualified Widow(er)	Married Filing Separately	Head of Household
10%	$0 – $8,350	$0 – $16,700	$0 – $8,350	$0 – $11,950
15%	$8,351– $33,950	$16,701 – $67,900	$8,351 – $33,950	$11,951 – $45,500
25%	$33,951 – $82,250	$67,901 – $137,050	$33,951 – $68,525	$45,501 – $117,450
28%	$82,251 – $171,550	$137,051 – $208,850	$68,526 – $104,425	$117,451 – $190,200
33%	$171,551 – $372,950	$208,851 – $372,950	$104,426 – $186,475	$190,201 - $372,950
35%	$372,951+	$372,951+	$186,476+	$372,951+

You are to write a program to compute personal income tax. Use the Scanner class for console input. Your program should prompt the user to enter the filing status and taxable income and compute the tax. Enter 0 for single filers, 1 for married filing jointly, 2 for married filing separately, and 3 for head of household.

Here are sample runs of the program:

Sample 1:

```
Enter the filing status: 0
Enter the taxable income: 100000
Tax is 21720.0
```

Sample 2:

```
Enter the filing status: 1
Enter the taxable income: 300339
Tax is 76932.87
```

Sample 3:

```
Enter the filing status: 2
Enter the taxable income: 123500
Tax is 29665.5
```

Sample 4:

```
Enter the filing status: 3
Enter the taxable income: 4545402
Tax is 1565250.7
```

Coding: (Copy and Paste Source Code here.)

Testing: (Paste the screenshot of your result here. And describe how you test this program)