

Program Assignment #3

1. Write a program that randomly generates an integer between 1 and 12 and displays the English month names January, February, ..., and December for the numbers 1, 2, ..., and 12, accordingly.

(Hint: Use *Math.random()* and *switch* Statements.)

Here is a sample run:

```
Random Number: 3
```

```
Month: March
```

2. Listing 3.5, *ComputeTax.java*, gives the source code to compute taxes for single filers. Complete this program to compute taxes for all filing statuses.
3. Revise Listing 3.8, *Lottery.java*, to generate a lottery of a three-digit integer. The program prompts the user to enter a three-digit integer and determines whether the user wins according to the following rules:
 - 1) If the user input matches the lottery number in the exact order, the award is Rp 100,000,000.
 - 2) If all digits in the user input match all digits in the lottery number, the award is Rp 30,000,000.
 - 3) If one digit in the user input matches a digit in the lottery number, the award is Rp 10,000,000.

(Hint: Try to count all the cases that satisfy each condition.)

Here is a sample run:

Enter your lottery pick (three digits): 843 ↵

The lottery number is 843

Exact match: you win Rp 100,000,000

Enter your lottery pick (three digits): 123 ↵

The lottery number is 132

Match all digits: you win Rp 30,000,000

Enter your lottery pick (three digits): 456 ↵

The lottery number is 104

Match one digit: you win Rp 10,000,000

Enter your lottery pick (three digits): 789 ↵

The lottery number is 503

Sorry: no match