**USING METHODS PROGRAMMING EXERCISES**

1. Modify the **FrenchRoulette** application so that, before spinning the wheel, it reads from the user which number he or she is betting on. Add an output message indicating whether or not the user won.

2. Modify your solution from exercise 1 so that, in addition to the betting number, it reads from the user the amount of money he or she is betting. If the user wins, print how much money he or she wins.

3. The Pennsylvania Daily Number is a lottery game that pays 500 to 1 if you play it “straight.” Here’s how. You pay $1 for a ticket and choose a three-digit number (i.e. 000 up to 999). If the lottery chooses your number then you win $500.

   Write a complete Java application that builds one **Spinner** object that can choose a number from 0 to 999. Use it to choose the straight Daily Number and print it.

4. Modify your solution from exercise 3 so that, before spinning the wheel, it reads from the user his or her choice of Daily Number. Add an output message indicating whether or not the user won.

5. The Pennsylvania Lottery has a Daily Number game that pays 80 to 1 if you play it “boxed.” Here’s how. You pay $1 for a ticket and choose three digits, each 0 to 9. If the lottery chooses your three digits (in any order) then you win $80.

   Write a complete Java application that builds three **Spinner** objects, each of which can choose a digit from 0 to 9. Use them to choose the boxed Daily Number and print it.

6. Write a complete Java application that inputs from the user a USD/EUR exchange rate and builds a **USD_X_Exchange** object that converts U.S. dollars to euros. Google the current exchange rate to use for your input.

   Next input from the user an amount representing U.S. dollars and use your object to calculate the equivalent amount in euros. Output the result in this form:

   \[ x \text{ USD buys } y \text{ EUR} \]

   Don’t worry about a lot of decimal places in your output (23.45678 is OK for now).

7. Modify your solution to exercise 6 so that it inputs an amount representing euros and uses your object to calculate and print the equivalent amount in U.S. dollars. The object itself must remain unmodified.
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| 8. | **Extend your solution to exercise 6 so that, in addition to euros, it builds objects that convert U.S. dollars to British pounds, Japanese Yen and Canadian dollars (four objects in all). The exchange rates must be input from the user. Google the current exchange rates to use for your input.**  
Next input from the user an amount representing U.S. dollars and use your four objects to calculate the equivalent amount in each of the other currencies. Print the result using a format similar to that of exercise 6. |
| 9. | **Modify your solution to exercise 8 so that it inputs an amount representing euros and prints the equivalent amount in U.S. dollars, British pounds, Japanese Yen and Canadian dollars.**  
*Hint:* Use the same four objects that you build for exercise 8. Use the USD/EUR object to convert the input to dollars and then use the other three objects to convert the dollars to the other currencies. |