Exercise 1: Roulette Payouts

A roulette wheel has 38 spaces on it. Of these spaces, 18 are black, 18 are red, and two are green. The green spaces are numbered 0 and 00. The red spaces are numbered 1, 3, 5, 7, 9, 12, 14, 16, 18, 19, 21, 23, 25, 27, 30 32, 34 and 36. The remaining integers between 1 and 36 are used to number the black spaces.

Many different bets can be placed in roulette. We will only consider the following subset of them in this exercise:

- Single number (1 to 36, 0, or 00)
- Red versus Black
- Odd versus Even (Note that 0 and 00 do **not** pay out for even)
- 1 to 18 versus 19 to 36

Write a program that simulates a spin of a roulette wheel by using Java's random number generator. Display the number that was selected and all of the bets that must be paid. For example, if 13 is selected then your program should display:

```
The spin resulted in 13...
Pay 13
Pay Black
Pay Odd
Pay 1 to 18
```

If the simulation results in 0 or 00 then your program should display Pay 0 or Pay 00 without any further output.

Exercise 2: Next Day

Write a program that reads a date from the user and computes its immediate successor. For example, if the user enters values that represent 2013-11-18 then your program should display a message indicating that the day immediately after 2013-11-18 is 2013-11-19. If the user enters values that represent 2013-11-30 then the program should indicate that the next day is 2013-12-01. If the user enters values that represent 2013-12-31 then the program should indicate that the next day is 2014-01-01. The date will be entered in numeric form with three separate input statements; one for the year, one for the month, and one for the day. Ensure that your program works correctly for leap years.