

# Compound Interest

## Chapter 5

\*\*\*\*\***READ THESE INSTRUCTIONS**\*\*\*\*\*

Banks pay interest on savings accounts on a periodic basis. When a bank pays interest, the amount is added to the customer's balance. During the next period, interest is earned on both the customer's original balance and the previous periods' interest. This concept is called **compound interest**.

### Example:

Original customer deposit of \$1000, with interest of 5% compounded annually. At the end of year one, the interest paid will be  $(1000 * .05) = \$50$ . The customer's balance will then be  $(1000 + 50) = \$1050$ . At the end of year 2, the interest paid will be  $(1050 * .05) = \$52.50$ , and the customer's new balance will be  $(1050 + 52.50) = \$1102.50$ , and so on.

Write a program that prompts the user for their original deposit, a rate of interest and the number of periods for which they keep their money invested. Your program should calculate each period's interest and cumulative balance. Output should be formatted as follows (using example numbers from above):

Period	Interest	Balance
1	50.00	1050.00
2	52.50	1102.50