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Programming in C++
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Assignment #1
May 10, 2015

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1. Write a program that reads an integer and determines and prints whether it's odd or even. [Hint: Use the modulus operator. An even number is a multiple of two. Any multiple of two leaves a remainder of zero when divided by 2.]

2. Write a program that reads in two integers and determines and prints if the first is a multiple of the second. [Hint: Use the modulus operator.]

3. Write a program that prints a box, an oval, an arrow and a diamond as follows:

4. Write a program that inputs a five-digit integer, separates the integer into its digits and prints them separated by three spaces each. [Hint: Use the integer division and modulus operators.] For example, if the user types in 42339, the program should print:

5. Write a program that calculates the squares and cubes of the integers from 0 to 10. Use tabs to print the following neatly formatted table of values:

```
integer square  cube
0       0       0
1       1       1
2       4       8
3       9       27
4       16      64
5       25      125
6       36      216
7       49      343
8       64      512
9       81      729
10      100     1000
```

6. Create a Body Mass Index (BMI) calculator application that reads the user's weight in kilograms and height in meters, calculate and display the user's body mass index. Also, the application should display the following information from the Department of Health and Human Services/National Institutes of Health so the user can evaluate his/her BMI:

```
BMI VALUES
Underweight: less than 18.5
Normal:      between 18.5 and 24.9
Overweight:  between 25 and 29.9
Obese:       30 or greater
```

The formula for calculating BMI is:

$$BMI = \frac{weightInKilograms}{heightInMeters \times heightInMeters}$$

Questions adapted from C++ How to Program, P.J. Deitel, H.M. Deitel. -- 8th ed