Assignment One: ID1303

1. Write a program that accepts a date and prints the corresponding day of the week.

2. Write a program that accepts a string and prints a histogram of the vowels, i.e. a graphical representation of the frequencies.

   Example run:

   Enter the string: In Xanadu did Kubla Khan A stately pleasure-dome decree.

   Histogram:

   ```
   *
   * *
   * *
   * *
   * *     *
   * * *   *
   * * * * *
   A E I O U
   ```

3. (a) Write a **function** with the following declaration: double evaluatePolynomial(double P[],double n,double x);

   This function accepts the degree n and the coefficients $a_0, a_1, \ldots, a_n$ of a polynomial $P(x) = a_0 + a_1x + \ldots + a_nx^n$ and a real number x and returns the value of $P(x)$.

   Example to test the function:

   Enter the degree of the polynomial: 3

   Enter the value of a0: 3.6

   Enter the value of a1: -2.5

   Enter the value of a2: 0

   Enter the value of a3: 1

   Enter the value of x: 4

   The value of the polynomial at 4 is: 57.6

   (b) Find a real root of $P(x)$ (up to 2 decimal places of accuracy), if one exists.

   With the input polynomial as above, the output should be:

   A real root of the polynomial is: -2.06