1. (**3 Marks**)
   The surface area, *s*, of a cylinder is given by the formula $s = 2\pi rl$, where *r* is the cylinder's radius and *l* is its length. Using this formula write a Python function named **`surface`** that accepts the radius and length of a cylinder and returns its surface area. Include the function in a working program. The main program should call **`surface`** and display the value returned by the function.

2. (**5 Marks**)
   Write a Python program that will read a word stored in a text file. If the file does not exist, an exception should be thrown indicating file read error. The read word is then sent to a function named **`histogram`** that will store the frequency of occurrence of each letter in the word and save it in a dictionary (Hint: Use built-in function **`dict()`** to create an empty dictionary). Possible outputs are depicted below.

   The output if the file does not exist:

   ```
   Error...file not found!
   ```

   Or the output:

   ```
   Histogram of the word CORRECT is:
   {'c': 2, 'o': 1, 'r': 2, 'e': 1, 't': 1}
   ```

3. (**4 Marks**)
   Write a Python program to generate a sequence of even integer numbers in the form of a Numpy array from 0 to 40. The program should also calculate the sum and mean value of the elements of the array. The required output is shown below.

   ```
   Generated 4x5 array:

    [[ 2  4  6  8 10]
    [12 14 16 18 20]
    [22 24 26 28 30]
    [32 34 36 38 40]]

   Sum = 420   Mean = 21.0
   Position of value 28: row = 2  col = 3
   ```

4. (**3 Marks**)
   Using Pandas DataFrame, write the Python code needed to generate the output shown below.

   ```
       A   B   C
   1  56  71  13
   2  29  63  34
   3  83  60  71
   Number of values greater than 50: 6
   ```