**Chapter 2 Programming Exercises**

**For all three of the following programs, you must do the following:**

1. **Place a preamble at the beginning of each program. (See the sample preamble in Content). DO NOT USE THE DOCSTRING “”” IN PREAMBLES**
2. **Save each program in its own Python source file. (Not all in one file.)**
3. **Use only Python statements taught in Chapter 2.**
4. **Create meaningful prompts for input and output as shown in the book examples.**
5. **When complete, combine all three programs into one zip file and attach it to the appropriate link by the due date.**
6. **DO NOT SUBMIT INTERACTIVE MODE SESSIONS**

**Use an editor to create Python source code in a .PY format file (Example the editor IDLE) to complete each of the following programs:**

1. Write an algorithm that prompts the user for a distance to travel (in miles) and a speed (in mph) and outputs time of arrival in hours. Name your program: Speed.py. Always program distance values anticipating decimal points, like Example 3. Format all output floating-point values to 4 digits.

**EXAMPLE:**

|  | **Example 1** | **Example 2** | **Example 3** |
| --- | --- | --- | --- |
| **Input** | **72 60** | **1282 85** | **120.5 59.2** |
| **Output** | **1.2** | **15.0823** | **2.0355** |

**Note: Output needs to match the examples.**

1. A "Point Spread" is a term used to in sports (and gambling) to describe the difference between two teams' scores.   For example, if one team scores 20 points and another team scores 30 points, the point spread is 10.  A point spread is always a positive number without decimal points.

Write a Python program that prompts the user for two sports game scores and outputs the point spread. Name your program: PointSpread.py  
  
 **EXAMPLE:**

|  | **Example 1** | **Example 2** | **Example 3** |
| --- | --- | --- | --- |
| **Input** | **8 15** | **89 103** | **42 14** |
| **Output** | **7** | **14** | **28** |

**Note: Output must match exactly.**

1. Write a Python program Write an algorithm that prompts the user for three sports game scores and outputs the average. Name your program: AverageScores.py. Round all output floating-point values to 2 digits.

**EXAMPLE:**

|  | **Example 1** | **Example 2** | **Example 3** |
| --- | --- | --- | --- |
| Input | 8 15 12 | 89 103 63 | 14 42 36 |
| Output | 11.67 | 85.00 | 30.67 |

**Note: Output must match (within a predefined tolerance).**