START of public class MoonSearch

START of main method

Call calcAvg(radii) and print out results

Call calcAvg(density) and print out results

Call findHighValue(radii) and print out results

Call findLeastValue(distance) and print out results

Call findHighestTwo(names, radii) and print out results

Call findLeastTwo(names, density) and print out results

Ask “Enter a moon:”

Scanner input for this prompting = String moon

Call findMoon(names, moon) and print results

END of main method

START of calcAvg() method 🡪 public static double calcAvg(double[] values)

Declare and initialize double total = 0

START FOR LOOP🡪 for (int i =0; i < values.length; i++) //do not need () for length

total += values[i]

END FOR LOOP

Declare and initialize double average = total / values.length

RETURN average

END of calcAvg() method

START of findHighValue() method 🡪 public static double findLeastValue(double[] values)

Declare and initialize int largest = values[0]

START FOR LOOP 🡪 for (int i = 0; I < values.length; i++)

START IF

If (values[i] > largest)

Set largest to values[i]

END IF

END FOR LOOP

RETURN largest

END of findHighValue() method

START of findLeastValue() method 🡪 public static double findLeastValue(double[] values)

Declare and initialize int least = values[0]

START FOR LOOP 🡪 for (int i = 0; i < values.length; i++)

START IF

if (values[i] < least)

Set least to values[i]

END IF

END FOR LOOP

RETURN least

END of findLeastValue() method

START of findHighestTwo() method 🡪 public static String[] findHighestTwo(String[] names, double[] values)

Declare and initialize double largest = values[0]

Declare and initialize double secondLargest = values[0]

Declare and initialize int indexOfLargest = 0

Declare and initialize int indexOfSecondLargest = 0

START FOR 🡪 for (int i = 0; i < values.length; i++)

IF

if (values[i] > largest)

secondLargest = largest

indexOfSecondLargest = indexOfLargest

largest = values[i]

indexOfLargest = i

ELSE IF

secondLargest = values[i]

indexOfSecondLargest = i

END IF

END FOR

Declare and initialize String[] greatestMoons = {names[indexOfLargest], names[indexOfSecondLargest]}

RETURN greatestMoons

END of findHighestTwo() method

START of findLeastTwo() method 🡪 public static String[] findLeastTwo(String[] names, double[] values)

Declare and initialize double smallest = values[0]

Declare and initialize double small = values[0]

START FOR 🡪 for (int i = 0; I < values.length; i++)

IF values[i] < smallest

small = smallest

indexOfSmall = indexOfSmallest

smallest = values[i]

indexOfSmall = i

ELSE IF values[i] < small && values[i] > smallest

small = values[i]

indexOfSmall = i

END FOR

Declare/initialize String[] smallMoons = {names[indexOfSmallest], names[indexOfSmall]}

RETURN smallMoons

END of findLeastTwo() method

START of findMoon() method 🡪 public static boolean findMoon(String[] names, String moon)

Declare boolean moonFound

START FOR 🡪 for (int i = 0; I < names.length; i++)

if (moon.compareTo(names[i]) == 0)

moonFound = true

RETURN moonFound

else

moonFound = false

END FOR

RETURN moonfound //here in case moonFound never becomes true

END of findMoon() method

END of public class MoonSearch