1. Implement the Math.pow, Math,max, Math.min method (25pt.)

Write three methods that returns power, max and min of two double number.

1-1 Prompt the user to enter 2 double numbers. (These are the sample input numbers)

1) This must follow the print format. (2.5pt)

```
Enter your first number: 2.0
Enter your second number: 4.0
```

1-2 Find the power of two number. (**Not using Math.pow, make your own method**)

1) Make method that returns power of two number by using the following header: (10pt)

- ***public static double power(double num1, double num2)***

1-3 Find the max and min of two number. (**Not using Math.max or Math.min, make your own method**)

1) Make method that returns maximum number of two number by using the following header: (5pt)

- ***public static double max(double num1, double num2)***

2) Make method that returns minimum number of two number by using the following header: (5pt)

- ***public static double min(double num1, double num2)***

1-4 Display the output in following format. (These are sample input numbers) (2.5pt)

```
Enter your first number: 3.0
Enter your second number: 2.0
Power of two number : 9.00
Max of two number : 3.0
Min of the number : 2.0
```

2. Find the largest and the smallest element (25pt.)

Write two methods that find the largest element in an array and the smallest element in an array of double values.

2-1. Prompt the user to enter 10 numbers. (These are the sample input numbers.)

```
Enter the inputs: 1.1 2 0.4 5 6.7 -2.3 6 3.2 9 10.3
```

1) This must be done in your ***main*** method. (1.5pt)

2) You must follow the print format above. (1pt)

2-2. Find the largest element.

1) Use the following header to find the largest element: (5pt)

- ***public static double max(double[] myArray)***

2) Invoke this method to return the maximum value. (5pt)

2-3. Find the smallest element.

1) Use the following header to find the smallest element: (5pt)

- ***public static double min(double[] myArray)***

2) Invoke this method to return the minimum value. (5pt)

2-4. Display the maximum and the minimum value together. (These are sample input numbers)

```
The maximum value is : 10.3 and the minimum value is : -2.3
```

1) This must be done in your ***main*** method. (1.5pt)

1) You must follow the print format above. (1pt)

3. Determine if the word entered is a palindrome. (25pt.)

Write a function that determines whether a given word is a palindrome. (**ONLY LETTERS**)

3-1. Prompt the user to enter letters like the following sample. (These are the sample input) (2.5pt)

```
Enter the letters :abcddcba
```

3-2. Implement the method that determines whether a given word is a palindrome. (20pt)

1) Use the following header to validate the palindrome:

- ***public static boolean validate(String word)***

3-3. Display the output in following format. (These are sample input numbers) (2.5pt)

(If the word is a palindrome)

```
Enter the letters :abcddcba
The letter is a palindrome
```

(If the word is not a palindrome)

```
Enter the letters :absdf
The letter is not a palindrome
```