

## Exercise Seven

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This exercise will give the Delegate the opportunity to practise Array, Looping and Argument techniques

7.1 Create a new module to accept a single argument from the command line, this argument should be printed out directly with an appropriate message concatenated to it.

Save as ex7\_1.java

```
c:\Java>java ex7_1 "This is an argument passed"
```

```
The argument passed was This is an argument passed
```

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7.2 Using `ex7_1.java`, develop the module so that the number of arguments passed is tested, if more than one argument is passed print out an appropriate message, if no arguments are passed do the same. Save as `ex7_2.java`.

```
c:\Java>java ex7_2
```

```
Arguments are incorrect for this process
```

```
c:\Java>java ex7_2 Hello World
```

```
Arguments are incorrect for this process
```

```
c:\Java>java ex7_2 "Hello World"
```

```
The argument passed was Hello World
```

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7.3 Create a new module, create a two dimension array which is ten by ten, using any of the before mentioned looping techniques populate this array to represent the multiplication tables for numbers 1 to 10. Save as ex7\_3.java

	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>0</b>	1	2	3	4	5	6	7	8	9	10
<b>1</b>	2	4	6	8	10	12	14	16	18	20
<b>2</b>	3	6	9	12	15	18	21	24	27	30
<b>3</b>	4	8	12	16	20	24	28	32	36	40
<b>4</b>	5	10	15	20	25	30	35	40	45	50
<b>5</b>	6	12	18	24	30	36	42	48	54	60
<b>6</b>	7	14	21	28	35	42	49	56	63	70
<b>7</b>	8	16	24	32	40	48	56	64	72	80
<b>8</b>	9	18	27	36	45	54	63	72	81	90
<b>9</b>	10	20	30	40	50	60	70	80	90	100

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7.4 Test module `ex7_3.java` by amending the module to take two arguments, both integers which will represent the co-ordinates of the two dimensional array, print out the values of the array at the following co-ordinates. Save as `ex7_4.java`

```
c:\Java>java ex7_4 5 0  
6
```

```
c:\Java>java ex7_4 5 5  
36
```

```
c:\Java>java ex7_4 9 9  
100
```

```
c:\Java>java ex7_4 0 0  
1
```

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**If there is sufficient time, or you are waiting for other delegates to complete their work please attempt the following exercise, but only after you have satisfied yourself that you have completed the previous exercises properly.**

7.5 Using `ex7_4.java`, test the arguments to make sure the following ...

- a. There are not more than two arguments passed
- b. There are not less than two arguments passed
- c. Both arguments are numeric
- d. Neither of the arguments is greater than 9

Save as `ex7_5.java`

Results should be as follows ...

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*c:\Java>java ex7\_5*

*Arguments are incorrect for this process*

*c:\Java>java ex7\_5 1*

*Arguments are incorrect for this process*

*c:\Java>java ex7\_5 a 1*

*First argument is not numeric*

*c:\Java>java ex7\_5 1 v*

*Second argument is not numeric*

*c:\Java>java ex7\_5 10 1*

*Value of first argument is greater than 9*

*c:\Java>java ex7\_5 1 99*

*Value of second argument is greater than 9*