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| **SOUTHERN CROSS UNIVERSITY** |

**ASSIGNMENT COVER SHEET**

For use with online submission of assignments

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| **Student ID No.:** | **24050160** |
| **Unit Name:** | **Fundamentals of Programming** |
| **Unit Code:** | **PROG5001** |
| **Tutor’s name:** | **Dr Thair Al-Dala'in** |
| **Assignment No.:** | **Assignment 1** |
| **Assignment Title:** | **Programming Practice (Algorithm 1 & 2)** |
| **Due date:** | **12.09.2022** |
| **Date submitted:** | **12.09.2022** |

**Declaration:**

***I have read and understand the Rules Relating to Awards (***[***Rule 3 Section 18 – Academic Misconduct Including Plagiarism***](http://policies.scu.edu.au/view.current.php?id=00140#s18)***) as contained in the SCU Policy Library. I understand the penalties that apply for plagiarism and agree to be bound by these rules. The work I am submitting electronically is entirely my own work.***

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| **Signed:** | **H.G Oshan Manusanka** |
| **Date:** | **12.09.2022** |

**F5: Find the highest mark and the lowest mark and print the result on the screen**

**(Algorithm 1)**

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Find Max

Inputs: array with marks

Outputs: max value in the array

START

1. Let marks = array with marks;

2. Let max = 0;

3. For marks as mark {

1. If mark > max;

2. Max = mark;

}

4. Return max;

END

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Find Min

Inputs: array with marks

Outputs: min value in the array

START

1. Let marks = array with marks;

2. Let min = first number of the array;

3. For marks as mark {

1. If mark < min;

2. Min = mark;

}

4. Return min;

END

**F6: Calculate the mean and standard deviation of the marks and print the result on the screen**

**(Algorithm 2)**

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Cal Mean

Inputs: array with marks

Outputs: mean value of the array

START

1. Let marks = array with marks;

2. Let mean , sum;

3. For marks as mark {

1. Sum = sum + mark

}

4. Mean = sum/array length

5. Display mean

6. Return mean;

END

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Cal SD

Inputs: array with marks

Outputs: standard deviation of the array

START

1. Let marks = array with marks;

2. Let mean , sum , sd;

3. Let length = length of array

4. For marks as mark {

1. Sum = sum + mark;

}

5. Mean = sum/length

6. For marks as mark {

1. sd = sd + (mark - mean)^2;

}

7. sd = sqrt of (sd/length)

8. Display sd;

9. Return sd;

END