FACULTY OF ENGINEERING AND INFORMATION SCIENCES

SUBJECT'S INFORMATION:	
Subject:	CSCI251 Advanced Programming
Session:	July 2019
Programme / Section:	Computer Science
Lecturer:	Ms. Siti Hawa

Coursework Type *(tick appropriate box)*	❏ Individual Assignment	❏ Group Assignment	❏ Project
	✓ Lab Task	❏ Seminar / Tutorial Paper	❏ Others

Coursework Title:	**Lab Task 2**	Coursework Percentage:	1%

ASSESSMENT CRITERIA:
All programs should produce the correct result as stated in the specification. Programs should be written only using the programming structures and concepts already covered during lectures. Meaningful identifiers used. Proper indentation and line spacing. Suitable comments are recommended. Output should be well formatted with appropriate messages displayed. Numbers are shown with appropriate precision. Programs with syntax error and are unable to execute will not be awarded any mark.

SUBMISSION:
All completed work should be submitted online through Moodle before the due date provided. **SUBMIT AS EARLY AS POSSIBLE. ONLY ONE SUBMISSION IS ALLOWED. IF RE-SUBMISSION IS NECESSARY, YOU ARE REQUIRED TO REMOVE THE EARLIER SUBMISSION AND THIS MUST BE DONE BEFORE THE DUE DATE. OTHERWISE YOU WILL BE PENALIZED FOR LATE SUBMISSON.**

DUE DATE:	**WEEK 5**

PENALTIES FOR LATE SUBMISSION:
Penalties apply to all late work, except if student academic consideration has been granted. Late submissions will attract a penalty of 25% of the assessment mark per day including the weekend. Work more than (3) days late will be awarded a mark of zero.

PLAGIARISM:
When you submit an assessment task, you are declaring the following 1. It is your own work and you did not collaborate with or copy from others. 2. You have read and understand your responsibilities under the University of Wollongong's policy on plagiarism. 3. You have not plagiarised from published work (including the internet). Where you have used the work from others, you have referenced it in the text and provided a reference list at the end ot the assignment. Plagiarism will not be tolerated. Students are responsible for submitting original work for assessment, without plagiarising or cheating, abiding by the University's policies on Plagiarism as set out in the University Handbook under University Policy Directory and in Faculty handbooks and subject guides.

COURSEWORK SPECIFICATION

OBJECTIVES:

Following completion of this task, students should be able to:

- Write C++ programs using arrays and structures
- Write programs with output formatting.

Question 1 (Working with Arrays)

Write a program that keeps the exam marks for 20 students in an array of doubles. The marks should be read from the user. Invalid marks should not be accepted (marks should be 1 to 100). The program should include functions to calculate and return the following:

a) The lowest mark and the highest mark
b) The average marks
c) The percentage of students who passed (marks above or equal 50)

The program should then display all the calculated values.

Question 2 (Structures)

Write a program that declares a structure named `Event` to store the following information about an event:

- Event id
- Event type (e.g. Birthday, Wedding, Meeting, etc)
- Location of the event
- Date of the event (consists of day, month, and year – declared as a separate structure)
- Time of the event (consists of hour, minute, and second – declared as a separate structure)

Your program should read several event records from the user into an array of structure `Event`. Then display all the events in a tabular format.

The following shows an example display for the events entered:

Event records:

Event ID	Event Type	Location	Date of Event	Time of Event
W1001	Wedding	Concorde Hotel Ballroom	25/8/2012	18:30:00
B1003	Birthday	McDonalds	3/9/2012	13:00:00
G1005	Grand Opening	Tina Florist	10/8/2012	10:30:00
…	…	…	…	…