

Sub.	Re-Sub
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## Assignment Brief Submission&Resub

LOs	LO1		LO2	
Grade “ Sub”				
Grade “Resub”	P	Not Achieved “ repeat unit”	P	Not Achieved “ repeat unit”
Student Name:			ID Number	
Unit Number and Title:	ICT 212	Programming Essentials in C++		
Qualification	Higher Diploma in Information Technology (y2-1st semester)			
Academic Year:	2023/2024	Assessor Name	Dr. Ghada Maher	
Assignment Title	Understand C++ functions and arrays, pointers, references, and C++ Data Structures, union and an introduction to the fundamentals of object-oriented programming (OOP).	Internal Verifier Name	Dr. Eman Monir	
Assignment No.	2	Issue Date	20/12/2023	
Submission Format Type of Evidence	Document	Submission Date	23/12/2023	

## STUDENT DECLARATION

### Plagiarism

Plagiarism is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalised. It is your responsibility to ensure that you understand correct referencing practices. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet. Please consult the relevant unit lecturer or your course tutor if you need any further advice.

### Student Declaration

#### Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

**Also, I acknowledge that I have received the feedback about my work from the assessor.**

Student signature:

Date: / /

### FORMATIVE FEEDBACK

Assessor's Formative Feedback:

Confirm action completed:

Assessor Signature: Ghada Maher

Date: 12/12/2023

### IV assessment brief approval

IV's signature:  
Dr. Eman Monir

Date:  
14/12/2023

Learning Outcomes and Assessment Criteria:			
Learning Outcome	Pass	Merit	Distinction
LO3: Understand C++ functions and arrays.	<p><b>P6</b> create a function to implement a task.</p> <p><b>P7</b> create the single and multidimensions array.</p> <p><b>P8</b> take and store data from the user in the multidimensions array.</p>	<p><b>M4</b> apply the concept of passing an array to function.</p>	<p><b>D3</b> analyze and implement a C++ program to solve a real-world problem that includes function and multidimensions array.</p>
LO4 Understand the pointers, references.	<p><b>P9</b> explain the difference between the pointers and references</p> <p><b>P10</b> Write the C++ Program that includes dynamic array.</p>	<p><b>M5</b> illustrate the fundamental difference between passing an array to function using pointers or as an argument.</p>	<p><b>D4</b> Implement a C++ program to solve a real-world problem that includes Pointers.</p>
<b>LO5</b> Understand the C++ Data Structures, union and an introduction to the fundamentals of object-oriented programming (OOP).	<p><b>P11</b> explain the difference between the structure and union.</p> <p><b>P12</b> Explain the concept of object-oriented programming.</p> <p><b>P13</b> illustrate the structure of object-oriented programming.</p>	<p><b>M6</b> compare between the structure and class.</p>	<p><b>D5</b> Analyze and implement a program for a complex real-world problem that includes function and structure and dynamic array.</p>



4- Create a function to find the sum of the single dimension array.

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5- Apply the concept of passing an array to the above function to find the sum of single array that stored in number 3.

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6- Analyse and implement C++ program to find the sum of Marks for each student.

The marks of students is store in the two-dimensions array as the following.

	Python	C++	C	C#	Java	DB	Math
Student1	80	70	86	100	90	60	66
Student2	90	89	60	66	96	84	93
Student3	86	100	90	99	89	70	69

Create a function sum-grades that takes the above two dimensions array, then return the name and the sum of grades on the screen for each student.

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1- Explain the difference between the pointers and references.

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2- Write the C++ Program that includes dynamic array in single dimension

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3- Illustrate the fundamental difference between passing an array to function using pointers or as an argument.

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4- Implement a C++ program to find the sum of single dimension array using the Pointer.

A series of horizontal dashed lines for handwriting practice, consisting of two groups of three lines each. The first group has a solid top line, a dashed middle line, and a solid bottom line. The second group has a solid top line, a dashed middle line, and a solid bottom line.

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**Task 3:**

1. Explain the difference between the structure and union.

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2. Explain the concept of object-oriented programming.

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3. **Illustrate** the structure of object-oriented programming.

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4. Compare between the structure and class.

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5. Analyse and implement a program to solve the following problem.  
Create array to store the data of books, each element of this array includes structure to store the book number, book title, and book Author. Then create a function that take from user the title of book and the book number then return the book author

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- Class handouts, learning materials, and Individual research.

## Higher Nationals - Summative Assignment Feedback Form

Student Name			Student ID	
Unit Number and Title:	ICT 212-Programming Essentials in C++			
Assignment Number(1 of 2)	2	Assignment Title	Understand C++ functions and arrays, pointers, references, and C++ Data Structures, union and an introduction to the fundamentals of object-oriented programming (OOP)	
<p><b>Assessor Summative Feedback:</b> Feedback should be against the learning outcomes and assessment criteria to help students understand how these inform the process of judging the overall grade. *should be constructive and useful including:</p> <ul style="list-style-type: none"> <li>- Feedback should give full guidance to the students on how they have met the learning outcomes and assessment criteria</li> </ul> <p>a) Strengths of performance</p> <p>b) Limitations of performance</p> <p>c) Any improvements needed in future assessments</p>				
Assessor Signature: <i>Ghada Maher</i>		Date: 23 / 12 /2023		
Re-submission Date	/ /	Actual Date Received Re-submission	/ /	
<p><b>Resubmission Feedback:</b></p> <p>*Please note resubmission feedback is focussed only on the resubmitted work</p>				
Assessor Signature: <i>Ghada Maher</i>			Date: 23 / 12 /2023	
Internal Verifier's Comments:				
Signature:			Date: / /	

\* Please note that grade decisions are provisional. They are only confirmed once internal and external moderation has taken place and grades decisions have been agreed at the assessment board.

Summative Assignment Feedback Form