Department: **Computer Science** Program: **B.S (Computer Science)**

**CSC-113:**

**Assignment 2**

**Programming Fundamentals**

Due Date:**27-11-2024** Total Marks: 05 Marks

**Teacher Name: Asghar Khan** Marks Obtained:

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| **Sr. No** | **Course Learning Outcomes** | | **PLOs** | **Blooms Taxonomy** |
| CLO\_2 | **Analyze** problem requirements to solve them using structured and modular programming techniques. |  | GA-3  (Problem Analysis) | C4  (Analyzing) |
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1. Use a one-dimensional array to solve the following problem. A company pays its salespeople on a commission basis. The salespeople receive $200 per week plus 9% of their gross sales for that week. For example, a salesperson who grosses $3000 in sales in a week receives $200 plus 9% of $3000 for a total of $470.
   1. Write a C program (using an array of counters) that **analyzes** how many salespeople earned salaries in each of the following ranges—assume that each sales person’s salary is truncated to an integer amount:

i. $200–299 ii. $300–399

iii. $400–499 iv. $500–599 v. $600–699 vi. $700–799

vii. $800–899

* + 1. $900–999
    2. $1000 and over

1. Define a function called hypotenuse that calculates a right triangle’s hypotenuse, based on the values of the other two sides. The function should take two double arguments and **interpret** by returning the hypotenuse as a double. Test your program with the side values specified in the following table:

|  |  |
| --- | --- |
| Side 1 | Side 2 |
| 3.0 | 4.0 |
| 5.0 | 12.0 |
| 8.0 | 15.0 |

1. **Illustrate** the following in one program
   1. Write a function that sort the array using bubble sort by using pass by value.