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|  | **Assignment No. 1 Semester: Spring 2023**  **CS201 – Introduction to Programming** | **Total Marks: 20**  **Due Date: 20th May,2023** |
| **Instructions**  **Please read the following instructions carefully before submitting assignment:**  **It should be clear that your assignment will not get any credit if:**   * **Assignment is submitted after due date.** * **Submitted assignment does not open or file is corrupt.** * **Assignment is copied (From internet/students).**   **Recommended tool to develop Assignment**   * **Dev C++**   **Objectives:**  To enable students to understand and practice the concepts of:   * Data Types and Variables * Arithmetic and Logical Operators * Expression solving * If-else statements * Repetition structure * Functions   **Assignment Submission Instructions**  You have to submit only**.cpp** file on the assignments interface of CS201 from your LMS account. ***Assignment submitted in* any other format *will be scaled with* zero mark*.*** *So, check your solution file format before submission.*  For any query related to assignment, please contact [cs201@vu.edu.pk](mailto:cs201@vu.edu.pk).    **Lectures: 1 to 9** | | |
| **Assignment Statement** | | |

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| When an object falls because of gravity, the following formula can be used to determine the distance the object falls in a specific time period:    Whereis the distance in meters, is 9.8(constant of gravity) and is the amount of time, in seconds, that the object has taken to fall.  You need to write a C++ program that has:   1. A function **fallingDistance** which:  * Accepts an object’s falling time (in seconds) as an argument. * Calculates the distance, in meters, that the object has fallen in that time. * Returns this calculated distance.  1. In the **main()** function there is a:  * A loop struct in which: * the function **fallingDistance** is calledpassing data given in the table. * Sum of all these distances is calculated. * Average distance is calculated and displayed.  1. Following is the time data:  |  | | --- | | Time(seconds) | | 1 | | 3 | | 5 | | 7 | | 9 |  1. You can use any of the loop structs like…for-loop, while or do-while loop. 2. The formula to calculate average is:   Average = (sum of values) **/** number of values   1. It is required that you use the given data set otherwise marks will be deducted.   Sample screenshot of the program is given below:    Lectures Covered: 1 to 9  **Due date: 20th May, 2023** |