

**Programming Fundamentals**

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| Lab 05 | |
| **Topic** | File Reading  Functions |
| **Objective** | * Hands on practice to read from file using user defined function. |

**SECTION-A**

1. Write a C++ program containing a function (name: calculateFileSize) which takes file name as parameter and read all content of the file. Function returns an integer value which indicates no. of characters(including space) in file. Print it in main function.

## Sample output:

|  |  |
| --- | --- |
| inputFile.txt | Ouput |
| How are you?  What to do now? | There are 27 characters in file. |

1. Write a C++ program having a function which takes a string as parameter and calculates the total no. of bits required to store this string in memory. Print total space required in MB’s , KB’s, and Bytes using another function named PrintStorageSpace() which takes the output of first function as input. i.e. takes no. of bits as paramter

## Sample output:

|  |
| --- |
| Enter your string: University of central punjab.  **Output**:  You need:  232 bits  29 Bytes  0.029 Mb’s |

|  |  |
| --- | --- |
| **Marks** | **GP** |
| 85-100 | 4.00 |
| 80-84 | 3.7 |
| 75-79 | 3.3 |
| 70-74 | 3.0 |
| 60-69 | 2.0 |
| 50-59 | 1.0 |
| <50 | 0.0 |

1. Write a C++ program having a user defined function (named calculateGPA) which takes 3 subjects and theri credit hours as input. Then, function calculates GPA of the student on the basis of following criteria:

## Sample output:

|  |
| --- |
| Enter subject 1 Marks: 85  Enter subject 1 credit hours: 3  Enter subject 2 Marks: 80  Enter subject 2 credit hours: 3  Enter subject 3 Marks: 94  Enter subject 3 credit hours: 4  Your GPA is: **3.91** |

1. Write a C++ program to read data written in a text file. Now, pass this data to a user defined function (*name: ProcessString())*which writes this data to another text file after removing all vowels from this text.

## Sample output:

|  |  |
| --- | --- |
| **InputFile.txt** | **OutputFile.txt** |
| **I like to each oranges.**  **Do you also like?** | **Lk t ch rngs.**  **D y ls lk?** |