

C++ Pointers Lab Assignments 'ABC' 4-2-2023

1.	<p>Nested Structures</p> <p>Define a dateofbirth structure as { int dd; int mm; int yy; }.</p> <p>Define a stud structure as { rno(int) , name(char[10]) , dob(is a struct of dateofbirth) }.</p> <p>Write functions to read and print five student details of struct std. The functions only should be called in main function.</p>
2.	<p>Unions</p> <p>Define a union as sub-detail with files as : marks(float), grade(character),rank(integer).</p> <p>Define a stud structure as { rno(int) , name(char[10]) , sgot (is a union of sub-detail) }. You can have addition filed of tag in structure.</p> <p>Write functions to read and print five student details of struct std. The functions only should be called in main function. When entering the data for students you choose any one of marks or grade or rank for a student.</p>
3.	<p>Write functions iterative and recursive using pointers only to</p> <p>i)find length of string ,</p> <p>ii)to copy one string to another string,</p> <p>iii)to concatenate two strings</p> <p>Call all the six functions in the main function.</p>
4.	<p>Reading, Sorting, and printing of Array of integers using pointers only.</p> <p>// have to use as : if *(a+i) > *(a+j))</p>
5.	<p>Factorial recursive functions using refernces, pointers .</p> <p>i) int *fact(int n) ---- in main f= fact(..) ... cout << "factorial is " <<</p> <p>ii) void fact(int n, int &f) in main fact(....) ... cout<<"factorial is " <<</p> <p>iii) void fact(int n, int *f) in main fact(....) ... cout<<"factorial is " <<</p>
6.	<p>Value – Reference – Pointer :</p> <p>Consider the following code :</p> <pre>void S(int x, int &y, int *z) { int t; t = x + y ; x = y + z ; y = x + t ; z = y + z; cout << x << y << z << endl; }</pre> <p>main()</p> <pre>{ int a = 3 , b = 5 , c = 7 ; S(a , b , c); cout << a << b << c ; }</pre> <p>The bold code statements <u>should not be changed</u>. You may have to change/adjust the other statements in such a way that the output should be</p> <pre>12 20 27 3 20 27</pre> <p>Note : you may have to add symbols only, i.e. * or & as part of the change. You should not add any statements.</p> <p>Let your codes have much 'value' by including 'pointers' of 'reference'</p> <p>Let you be the 'address' of an 'alias' of 'value'</p> <p style="text-align: right;">~ KR</p>