

Module	Topics (1hr Each)	Video link	E-Materials/PPT
3	Arrays basics Types of arrays	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/8.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/8.php</a>	<a href="https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH</a>  <a href="https://www.tutorialspoint.com/cprogramming/c_arrays.htm">https://www.tutorialspoint.com/cprogramming/c_arrays.htm</a>
	One dimensional (1D) arrays with Example	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/9.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/9.php</a>	<a href="https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH</a>
	Binary search program with explanation Linear search program with explanation	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/10.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/10.php</a>	<a href="https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH</a>
	Bubble sort & selection sort program with explanation	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/11.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/11.php</a> <a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/12.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/12.php</a>  <a href="https://www.youtube.com/watch?v=wXFYcGTEU4c">https://www.youtube.com/watch?v=wXFYcGTEU4c</a>	<a href="https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDn Cf4cLfxDOmuLT4_oARFISOMH</a>

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<b>Multidimensional (2D) arrays explanation with example program</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/12.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/12.php</a>	
<b>Matrix multiplication, transpose of matrix, addition and Sub of matrix program with explanation</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/13.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/13.php</a> <a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/14.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/14.php</a> <a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/15.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/15.php</a>	<a href="https://drive.google.com/open?id=1KJeb8YDnCF4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDnCF4cLfxDOmuLT4_oARFISOMH</a>
<b>Basic of string with example program</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/15.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/15.php</a>	<a href="https://drive.google.com/open?id=1KJeb8YDnCF4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDnCF4cLfxDOmuLT4_oARFISOMH</a>
<b>String operations</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/16.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/16.php</a>	<a href="https://drive.google.com/open?id=1KJeb8YDnCF4cLfxDOmuLT4_oARFISOMH">https://drive.google.com/open?id=1KJeb8YDnCF4cLfxDOmuLT4_oARFISOMH</a>
<b>Program links</b>	<a href="https://www.youtube.com/watch?v=N35fv1YA_24">https://www.youtube.com/watch?v=N35fv1YA_24</a>	
<b>Bubble sort</b>		
<b>Selection sort</b>	<a href="https://www.youtube.com/watch?v=wXFYcGTEU4c&amp;t=930s">https://www.youtube.com/watch?v=wXFYcGTEU4c&amp;t=930s</a>	
<b>Binary search</b>		

	<p><b>Linear search</b></p> <p><b>Matrix multiplication</b></p> <p><b>Matrix addition</b></p> <p><b>Transpose of matrix</b></p> <p><b>String operation</b></p>	<p><a href="https://www.youtube.com/watch?v=9Qo5cVZbMhM&amp;t=4s">https://www.youtube.com/watch?v=9Qo5cVZbMhM&amp;t=4s</a></p> <p><a href="https://www.youtube.com/watch?v=HtubN1qZ4O0&amp;t=185s">https://www.youtube.com/watch?v=HtubN1qZ4O0&amp;t=185s</a></p> <p><a href="https://www.youtube.com/watch?v=2K0nuYFGETM&amp;t=1201s">https://www.youtube.com/watch?v=2K0nuYFGETM&amp;t=1201s</a></p> <p><a href="https://www.youtube.com/watch?v=ju5fERRpv6I&amp;t=83s">https://www.youtube.com/watch?v=ju5fERRpv6I&amp;t=83s</a></p> <p><a href="https://www.youtube.com/watch?v=-arlesoWEoI&amp;t=244s">https://www.youtube.com/watch?v=-arlesoWEoI&amp;t=244s</a></p> <p><a href="https://www.youtube.com/watch?v=-aq1HABoA7E">https://www.youtube.com/watch?v=-aq1HABoA7E</a></p>	
4	<p><b>User defined functions and recursion</b></p> <p><b>Basics, function and program structure, function declaration, call</b></p>	<p><a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/18.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/18.php</a></p> <p><a href="https://www.programiz.com/c-programming/c-user-defined-functions">https://www.programiz.com/c-programming/c-user-defined-functions</a></p> <p><a href="https://drive.google.com/open?id=11xJXJhShfJjtX4so7hy3IN5N575G_SyR">https://drive.google.com/open?id=11xJXJhShfJjtX4so7hy3IN5N575G_SyR</a></p>	<p><a href="https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAAXX2E4tIGqnyvH">https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAAXX2E4tIGqnyvH</a></p>

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	<b>and function definition</b> <b>Classification/function categories</b>		
4	<b>functions cont</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/19.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/19.php</a> (please avoided 10.a program , rest content you can see) <a href="https://www.studytonight.com/c/storage-classes-in-c.php">https://www.studytonight.com/c/storage-classes-in-c.php</a>  <a href="https://www.tutorialspoint.com/cprogramming/pdf/c_storage_classes.pdf">https://www.tutorialspoint.com/cprogramming/pdf/c_storage_classes.pdf</a>	<a href="https://drive.google.com/open?id=10_jFsy2vYWM-g0PXrJ9BZGpnatRf_Nd4">https://drive.google.com/open?id=10_jFsy2vYWM-g0PXrJ9BZGpnatRf_Nd4</a>
	<b>formal/actual parameter, locations of functions, array and function</b>	<a href="https://www.youtube.com/watch?v=vPLXP3K5XeY">https://www.youtube.com/watch?v=vPLXP3K5XeY</a> <a href="https://www.youtube.com/watch?v=hKWxSYYbvVk">https://www.youtube.com/watch?v=hKWxSYYbvVk</a> <a href="https://www.youtube.com/watch?v=b4wccZ07MP4">https://www.youtube.com/watch?v=b4wccZ07MP4</a>	<a href="https://overiq.com/c-programming-101/actual-and-formal-arguments-in-c/">https://overiq.com/c-programming-101/actual-and-formal-arguments-in-c/</a>  <a href="https://www.differencebetween.com/difference-between-actual-and-vs-formal-parameters/">https://www.differencebetween.com/difference-between-actual-and-vs-formal-parameters/</a>
	<b>Recursion basics</b>	<a href="https://www.youtube.com/watch?v=SUfe1UX1m4M">https://www.youtube.com/watch?v=SUfe1UX1m4M</a>  <a href="https://www.youtube.com/watch?v=j1-68rf0wsg">https://www.youtube.com/watch?v=j1-68rf0wsg</a>  <a href="https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH">https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH</a>	<a href="https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH">https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH</a>

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	<p><b>Direct and Indirect recursion</b></p>	<p><a href="https://www.youtube.com/watch?v=t9whckmAeq0">https://www.youtube.com/watch?v=t9whckmAeq0</a></p> <p><a href="https://www.youtube.com/watch?v=5YhBF8bRfrQ">https://www.youtube.com/watch?v=5YhBF8bRfrQ</a></p> <p><a href="https://www.programtopia.net/c-programming/docs/recursion-c-programming">https://www.programtopia.net/c-programming/docs/recursion-c-programming</a></p> <p><a href="https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH">https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH</a></p>	<p><a href="https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH">https://drive.google.com/open?id=1MZHEVXSYP82kS0fsAUAXX2E4tIGqnyvH</a></p>
	<p><b>Pre requirement –type def Structure basics, difference b/w arrays and structure , declaration of structure variable</b></p> <p><b>a. Taged structure</b></p> <p><b>b. type defined structure</b></p> <p><b>variable initialization</b></p>	<p><a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/21.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/21.php</a></p> <p><a href="https://www.youtube.com/watch?v=ZdDEvLgxQDQ">https://www.youtube.com/watch?v=ZdDEvLgxQDQ</a></p>	<p><a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a></p>

5	<b>Variable initialization</b> <b>end... Accessing member of structure, ,</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/22.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/22.php</a>	
	<b>Nested structure basics with ex accessing nested structure members reading and writing structure variable with ex</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/23.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/23.php</a> (see after 33.40 mint) <a href="https://www.youtube.com/watch?v=6HIs0SZ95AI&amp;t=43s">https://www.youtube.com/watch?v=6HIs0SZ95AI&amp;t=43s</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>
	<b>Arrays of structure with ex</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/25.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/25.php</a> (see till first 20 mint) <a href="https://www.youtube.com/watch?v=oBp22Jiv4kw">https://www.youtube.com/watch?v=oBp22Jiv4kw</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>
	<b>Structure and functions ,</b>	<a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/25.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/25.php</a> (after 31.00 mint) <a href="http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/26.php">http://nptel.vtu.ac.in/econtent/courses/BS/15PCD23/26.php</a> (see till 18.28 mint)	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>

<b>methods of structure passing</b>	<a href="https://www.youtube.com/watch?v=VF40lxbXR_0">https://www.youtube.com/watch?v=VF40lxbXR_0</a>	
<b>Pointer basics, declaration, initialization and accessing variable</b>	<a href="https://www.youtube.com/watch?v=rflI6_8AoXw">https://www.youtube.com/watch?v=rflI6_8AoXw</a> <a href="https://www.youtube.com/watch?v=uLsx6FmxfXI&amp;list=PL8aNYZggT4bgCXzo6XjPK-vfA6Zf6E0M&amp;index=11">https://www.youtube.com/watch?v=uLsx6FmxfXI&amp;list=PL8aNYZggT4bgCXzo6XjPK-vfA6Zf6E0M&amp;index=11</a> <a href="https://www.youtube.com/watch?v=vO0HuL63myc&amp;list=PLobCsj6YYCdjd_dK_nyQBmH55MxC9-yGN&amp;index=27">https://www.youtube.com/watch?v=vO0HuL63myc&amp;list=PLobCsj6YYCdjd_dK_nyQBmH55MxC9-yGN&amp;index=27</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>
<b>Pointer and array</b>	<a href="https://www.youtube.com/watch?v=HpBzbCvcCvg">https://www.youtube.com/watch?v=HpBzbCvcCvg</a> <a href="https://www.youtube.com/watch?v=X4XkMrmyb0c">https://www.youtube.com/watch?v=X4XkMrmyb0c</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>
<b>Pointer and function ex prog, difference bw call by value and call by reference</b>	<a href="https://www.youtube.com/watch?v=lPaRC0icvzQ">https://www.youtube.com/watch?v=lPaRC0icvzQ</a> <a href="https://www.youtube.com/watch?v=82NrXp8RR0k">https://www.youtube.com/watch?v=82NrXp8RR0k</a> <a href="https://www.youtube.com/watch?v=LW8Rfh6TzGg">https://www.youtube.com/watch?v=LW8Rfh6TzGg</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>
<b>Pointer arithmetic operation</b>	<a href="https://www.youtube.com/watch?v=kWjF8uT48k8">https://www.youtube.com/watch?v=kWjF8uT48k8</a> <a href="https://www.youtube.com/watch?v=icxxQe89QAY">https://www.youtube.com/watch?v=icxxQe89QAY</a> <a href="https://www.youtube.com/watch?v=1MVmkpbXVas">https://www.youtube.com/watch?v=1MVmkpbXVas</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>

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	<b>Preprocessor directives</b>	<a href="https://www.youtube.com/watch?v=LR3iC2Yp4F8&amp;t=560s">https://www.youtube.com/watch?v=LR3iC2Yp4F8&amp;t=560s</a> <a href="https://www.youtube.com/watch?v=509GC9oKk-Q&amp;t=659s">https://www.youtube.com/watch?v=509GC9oKk-Q&amp;t=659s</a> <a href="https://www.tutorialspoint.com/cprogramming/cpreprocessors.htm">https://www.tutorialspoint.com/cprogramming/cpreprocessors.htm</a> <a href="https://www.tutorialride.com/c-programming/preprocessor-directives-in-c-programming.htm">https://www.tutorialride.com/c-programming/preprocessor-directives-in-c-programming.htm</a>	<a href="https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV">https://drive.google.com/open?id=1H99NwoHFZgOW3C3_oWfq2V-coPTq26YV</a>
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