**Design, Data Structures and Algorithm Analysis**

Algorithm Design and data structures are an integral part of software development.

In this course module, you will explore these in the context of design and development of components, modules and systems.

**Content**

Please refer the following presentations from the “E3\_C\_Design” compressed file. While studying you can follow the order specified here.

1. Design-Foundation\_Rel\_1.1
2. Design-Proficient\_Rel\_1.1
3. Design-Advanced\_Rel\_1.1
4. Introduction\_To\_Algorithms
5. Algorithm Analysis

**Assignments**

There are few assignments available in the “E3\_C\_Assignments” compressed file. You should complete the assignments by breaking each problem and represent them in terms of components, modules and identify the interfaces. Kindly go through the slides and build upon the ideas presented there to make a complete solution.

You can have your own different approach too.

1. E3\_AlgorithmDesignAssignments
2. Sorting\_Algorithm\_Design
3. AlgorithmDesign\_StateMachines
4. AlgorithmDesign\_BestRoute

You should complete the assignments offline and need not submit the assignments.

**Case –Study**

There is a case-study related to Packet-Encoder. SRS and Design is available in the “E3\_C\_Case Study” compressed file. Read the requirements and the design available in the directory to understand.

You should think of any alternate design, which is better compared to the current design.

**Self-Assessment**

Check your understanding by taking the self-assessments available as MCQ in the platform. There are 2 self-assessments (One for generic questions and second related to the case study given)

**Recommended Reading**

Few additional references are also available in the “References” compressed file.