

FAST NUCES KARACHI CAMPUS
CS211 Discrete Structures (Fall 2017)

Monday, October 9, 2017

Instructor: Dr. Fahad Samad

Instructions:

- 1) You can work in a group of two.
- 2) Submission deadline: **November 13, 2017**
- 3) **Deliverables:** Code in Hard and Soft copies (Names and Roll Number of each group member)
- 4) A student will get ZERO marks if he/she copies the assignment/project from the Internet or from each other.

TOTAL MARKS: 10

Project: (ANY ONE)

- 1) A program that generates a truth table of any expression having logical connectives and shows whether it is a tautology, contingency or a contradiction
- 2) A program when given any proposition in the form of mathematical expression returns its truth value
- 3) A program that displays the Venn diagram of any set (including sets formed with union, intersection, or difference of sets)
- 4) A program which when given a relation checks and verifies all the properties of a relation (properties that are discussed in the class lectures)

OR

Assignment: (ANY TWO)

- 1) A program that construct a matrix given a relation and vice versa
- 2) A program that finds whether a relation is an equivalence relation
- 3) A program that generates a power set of a set
- 4) A program that generates a Cartesian product of two sets
- 5) A program that calculates the inverse of a function