An Introduction/Disclaimer!

These are notes from a course I taught a motley group of 1st, 2nd and 3rd year B.Sc. students, Ph.D students and a few of my colleagues (I gave a few preparatory lectures to the first year students on regular languages, which is not part of this course.) in early 2006. These lectures constituted the first part of a three part course and deals with automata, logics, algebras and games over words. The second and third parts, if they ever see the light of day, would deal with trees/graphs and nonregular structures.

The course consisted of 17 lectures of about 1.5 hours each. The notes for the last 4 lectures are still in preparation. These 4 lectures dealt with LTL, its translation to alternating automata and a detailed proof of the expressive completeness of LTL w.r.t FO. (I have some slides from two tutorial lectures I gave at Guwahati in the summer of 2006 that cover part of this material and I have that made available here as a poor substitute.)

These notes are still in draft form and there are possibly a number of errors. I must also apologize for the absence of an appropriate listing of references in these notes. I hope to fix this lacuna sometime soon.

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PS (2013): Over the years I have added some additional material to this course. I am in the process of adding some additional notes to reflect this. This new material will be added as "Lecture 1a/2a/.." and so on. (One can omit them without loss of continuity.)