Thesis Title	Energy Analysis of a Gas Turbine
Programme of Studies	MSc in Energy Systems and the Built Environment
Course	MES 580 Master Thesis
Area of Study	Processes Modelling and Simulation
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Short Description	In terms of this project, a theoretical model was developed to evaluate the thermodynamic performance of a gas turbine by using the available data given. Realistic values were assumed for the compressor polytropic efficiency, mechanical efficiency, electrical efficiency and pressure drops of the gas turbine. The catalogue of data from the manufacturers will have the ability to be main inputs for the modeled program. The model had the ability to calculate values for the unknowns i.e. temperature, isentropic and polytrophic efficiencies of the individual components, power output, some emission related parameters and even economic parameters of the engine. The developed program is aimed to be used by engineers in order to have an easy access to the parameters a gas turbine can have. Moreover this program should provide also students a possibility to fully analyse and understand the performance of the gas turbine cycle while judging consistency of gas turbine cycle data sets and completing incomplete gas turbine datasets.