

Abstract

As the air transportation industry expands, airports face numerous challenges to manage the increasing traffic. Among these problems, runway crossings are a considerable source of ground traffic inefficiency and risk. Building end-around taxiways are the only strategy to avoid crossings, but these are not always feasible, and therefore airport planners must find alternatives. This study consisted of a simulation over an airport that currently requires a vast amount of its arrivals to go through runway crossings in order to reach the apron; the airport simulation software utilized was the Total Airspace and Airport Modeler (TAAM).

The airport scheduling is a challenging task where computer vision and programming language play a important role. This technology can be used in many ways such as in scheduling of any task to get fast results (example: train scheduling having single rail track or multiple, also in airplane scheduling having single runway or multiple runway)

The basic working of the project is based on principle of AVL tree and C and C++ language.

The project is all about the implementation of AVL trees in scheduling airport runway system. In which a code in C++ is written which tells us the available scheduling times for an airplane. It takes the input and return, if the tree includes the input inserted that means you are able to schedule your airplane at the given input otherwise your input is rejected by the program.