ALGORITHMS LAB

PROJECT REPORT



TOPIC:-RUNWAY SCHEDULING SYSTEM

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**Project report**

RUNWAY SCHEDULING SYSTEM**:-**

We have made a runway scheduling system that basically manages runway allocation to plane ensuring that no two planes stay at a same runway at the same time.We have used classes,kmp algorithm and some graphics in it.

**We have generalised the number of runway according to the instructions.**

**• Algorithms used-**

* KMP (Knuth Morris Pratt) Pattern Searching:- The KMP matching algorithm uses degenerating property (pattern having same sub-patterns appearing more than once in the pattern) of the pattern and improves the worst case complexity to O(n). The basic idea behind KMP’s algorithm is: whenever we detect a mismatch (after some matches), we already know some of the characters in the text of the next window. We take advantage of this information to avoid matching the characters that we know will anyway match.

**Important Functions in the projects-**

* function() - in this function we have searched for a match corresponding to a runway pattern and assigned the value 1 to that particular spot on the runway.
* function1() - This function is used for synchronization process.If two consecutive flights have the same runway assigned to them then we search for free slots in the other runways and assigned the free slot available to that particular plane.

SCREENSHOTS



