

Student Number:

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CS5483 Review Question 8

Define Forward maximal sequence, its algorithm and what is its application on customer relationship management in e-commerce.

Model answer

A forward sequential pattern is defined as an ordered set of pages without backward sequence that satisfies a given support and is maximal (i.e. it has no subsequence that is also frequent).

The support level of sequential patterns is

Frequent forward ordering web pages occurrences of  $X_1, X_2 \dots X_n$   
Each Customer/User

Algorithm of Forward maximal sequence

Input:

$D = \{S_1, S_2 \dots S_k\}$  where  $D$  is the database of session(s)  $S$

$S$  = Support level

Output:

Maximal reference sequences

Begin

Find maximal forward references from  $D$ ;

Find large reference sequences from the maximal ones;

Find maximal reference sequences from the large ones;

end

An application of Forward maximal sequence is to study customers behaviour of their interest in accessing certain web pages on a web site for e-commerce.