

Student Number:

Student Name:

Date

CS5483 Tutorial Question 8

Find the maximal forward references of web pages in a database D of sessions (A, B, C), (A, C, B), (B, C, E), (A, C), (A, C, D, C, E) and (A, B, C, A, C, B, C, A, C, D, E) with the minimum support S_{min} of two sessions.

Model answer:

The forward references of the following sessions are:

Sessions	Forward reference
(A, B, C)	(A, B, C)
(A, C, B)	(A, C, B)
(B, C, E)	(B, C, E)
(A, C)	(A, C)
(A, C, D, C, E)	(A, C, D), (C, E)
(A, B, C, A, C, B, C, A, C, D, E)	(A, B, C), (A, C, B), (C, A), (C, D, E)

Total forward references per session are:

Method 1: (manually)

- (A, B, C)
- (A, C, B)
- (B, C, E)
- (A, C)
- (A, C, D)
- (C, E)
- (A, B, C)
- (A, C, B)
- (C, A)
- (C, D, E)

Method 2: (AprioriAll algorithm)

- L1: (A B C D E)
- C2: (A B) (A C) (A D) (A E) (B A) (B C) (B D) (B E) (C A) (C B) (C D) (C E) (D A) (D B) (D C) (D E) (E A) (E B) (E C) (E D)
- L2:(A B) (A C) (B C) (C B) (C D) (C E)
- C3: (A B C) (A B D) (A B E) (A C B) (A C D) (A C E) (B C A) (B C D) (B C E) (C B A) (C B D) (C B E) (C D A) (C D B) (C D E) (C E A) (C E B) (C E D)
- L3: (A B C) (A C B)

The maximum forward references for at least 2 sessions are:

- (A, B, C)
- (A, C, B)
- (C, D)
- (C, E)