

SWS assignment: Blinded Dating Appointments

a·po·the·si·pho·bi·a

–*noun* An abnormal fear of rejection.

Etymology: Greek *apōthēsis* rejection + *phobos* fear.

Background

Some people have such a strong fear of rejection, that they will never take the initiative and ask for a date if there is even a slight chance they may be rejected.

Wouldn't it be nice to know in advance that the other party is also interested in you?

Here modern Software Technology is coming to the rescue of all apothesisphobes with:

♡♡♡♡♡♡ *Blinded Dating Appointments*♡♡♡♡♡♡♡♡

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The BDA system

The BDA system is a *reactive* system. In many ways it is like any online dating system: users have to register and provide a profile. They can browse through the profiles of other registered users looking for someone with whom they would like to have a date.

If they find such a person, they can mark him or her as someone they want to have a date with. This action is totally invisible to the other person. But when two users happen to mark each other as an interest, the BDA system notices that there is a mutual interest: both parties would like to date each other. Only then does it notify the two users, establishing a direct contact.

Constraints

Two users brought in contact because of mutual interest are called *linked*.

In the BDA system a user may have several mutual interests with different users, but they can be linked at any time to at most one other user. Any of the two linked users can sever the link by unmarking the other person, so that there is no longer a mutual interest.

When a link is severed, but an involved user has another mutual interest with some available (that is, currently not linked) user, the BDA system will again establish a link.

The assignment

Specify the BDA system as a reactive system.

Keep the spec abstract and do not overspecify. Details of the GUI, registering, profiles, and browsing should not be specified. The events of interest are marking, unmarking, linking and unlinking.

For the spec, the important system properties are:

- users are only linked if and while there is mutual interest;
- no user is multiply linked;
- no user is left without link unless all mutually interested parties (if any) are already linked to someone else.