

# Report for Project 4: Semantic Database Design

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The database design is missing triggers and assertions. Below we mention the triggers and assertions that are needed.

## Triggers

1. When adding a Member or an Enemy a trigger makes sure that the person doesn't exist in either tables beforehand.
2. When deleting a person a trigger checks if the person is a member. If so then it gives an error with the message 'Once a member, always a member. You can not leave WASP!'
3. When updating deathDate for a person in People table a triggers makes sure that you do not put a date before birthDate.
4. When adding a person to Members table a trigger makes sure that joinDate is not before birthDate of the person in People table and that deathDate for that person is NULL.
5. When adding a new child to Children a trigger makes sure that its birthDate is not before its parent's birthDate.
6. When a child to member (parent) relation is added a trigger checks whether or not the member is married and if so adds a new child to member relation for the other parent. It also checks if the child already has a parent relation and if so returns an error.
7. When adding a member to a role a trigger checks whether or not the member has been in that role before, if so returns an error and a message like 'Cannot give member a role he has already had'. The trigger also makes sure that startDate and endDate are within birthDate and deathDate of a person.
8. When adding a relation between member and committee a trigger makes sure that the person is a member of WASP.
9. When adding a sponsorship relation a trigger checks that the person still has the role. The trigger also checks if a sponsorship has already been made for that person in that role for today. It should be noted that sponsorDate is a partial key so a check for if a sponsorship has already been made is maybe unnecessary.
10. When a review is updated with a grade a trigger makes sure that the grade is somewhere on the scale from 1 to 10.

## Assertions

1. Making sure that the minimum amount of people per linking is two.