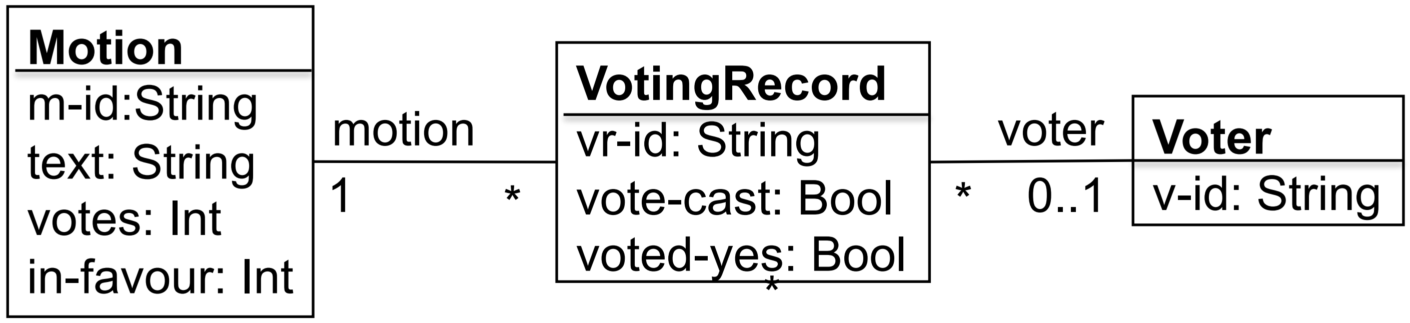
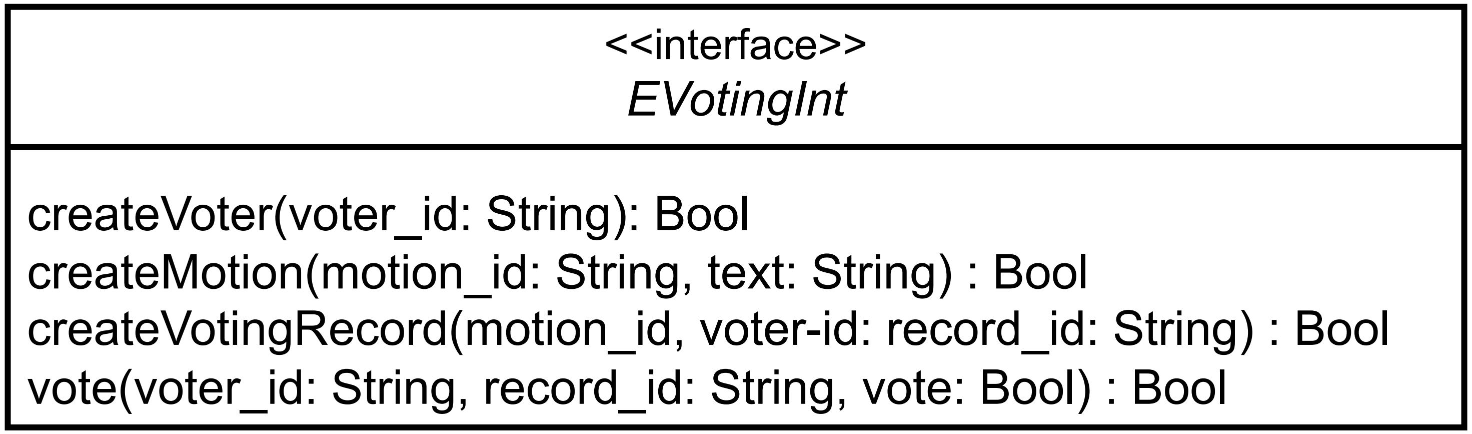
Class Diagram and Interface




<<interface>>
EVotingInt

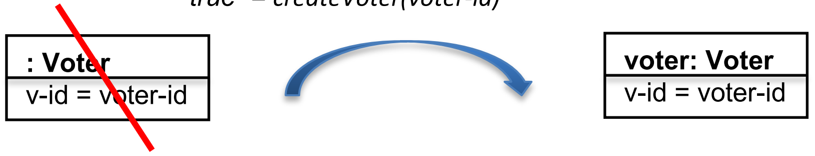
createVoter(voter_id: String): Bool
createMotion(motion_id: String, text: String) : Bool
createVotingRecord(motion_id, voter-id: record_id: String) : Bool
vote(voter_id: String, record_id: String, vote: Bool) : Bool

Contracts

createVoter(voter-id: String): Bool

Create voter with *voter-id* if none with that id exists yet and return *true*; otherwise return *false*.

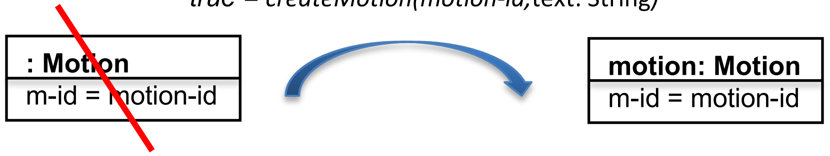
true = createVoter(voter-id)



createMotion(motion-id: String, text: String*): Bool*

Create motion with *motion-id* if none with that id exists yet and return *true*; otherwise return *false*.

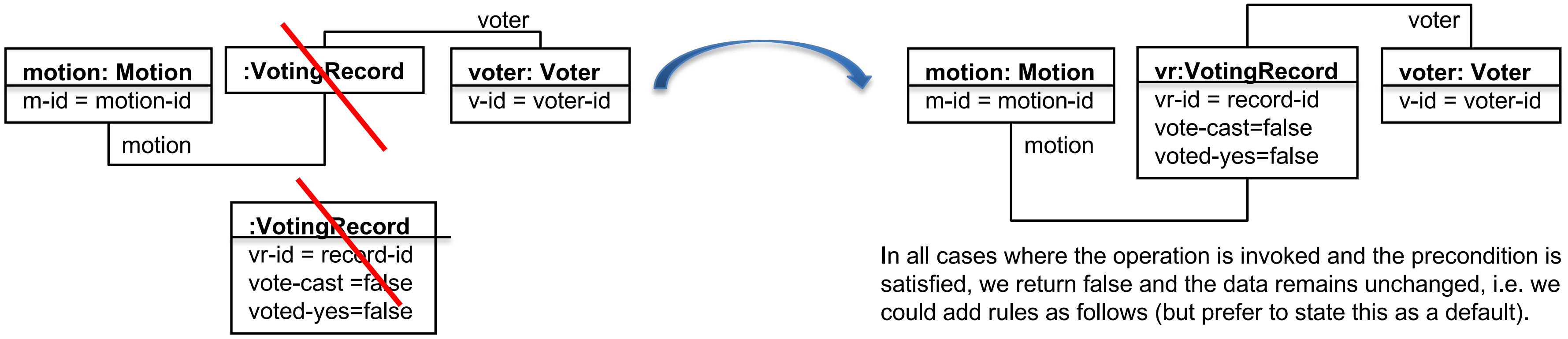
*true = createMotion(motion-id,*text: String*)*



createVotingRecord(motion-id, voter-id: record-id: String) : Bool

Create voting record with *record-id* if none with that id exists yet and there is no record yet for this voter and this motion, and return *true*; otherwise return *false*.

true = createVotingRecord(motion-id, voter-id: record-id)

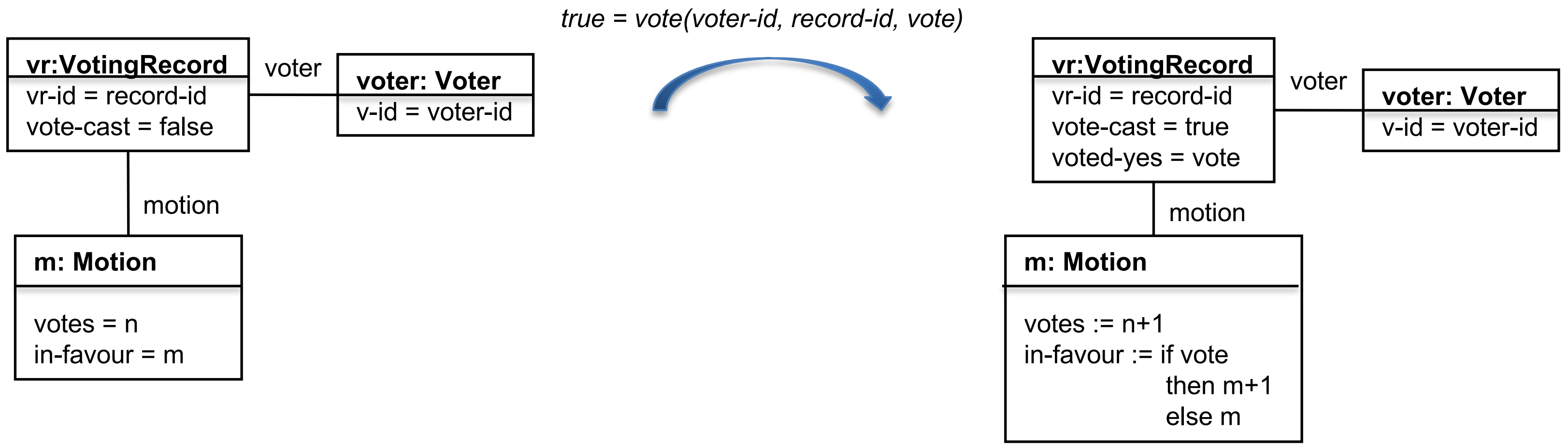


In all cases where the operation is invoked and the precondition is not satisfied, we return false and the data remains unchanged, i.e. we could add rules as follows (but prefer to state this as a default).

Contracts

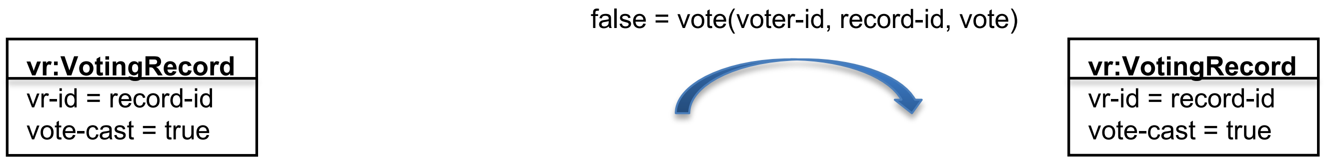
vote(voter-id: String, record-id: String, vote: Bool): Bool

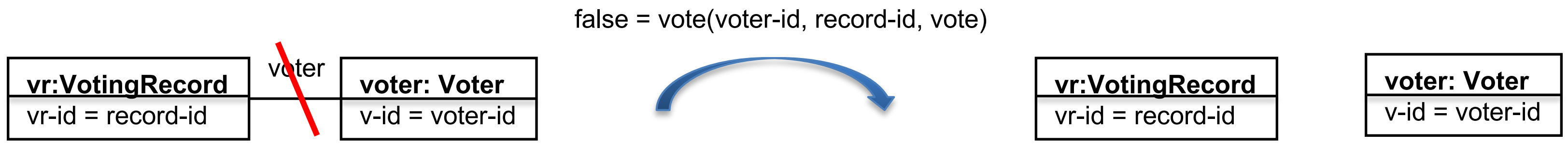
Voter with voter-id registers vote in voting record with record-id; returns true if voter is eligible, false otherwise. Motion gets updated according to vote attribute.

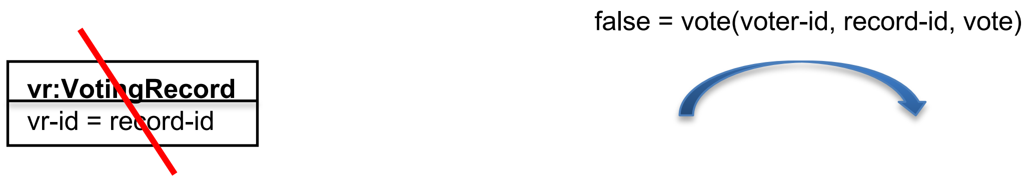


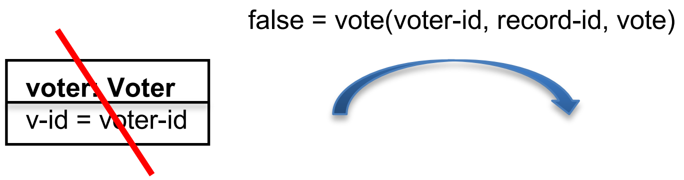
Contracts

In all cases where the operation is invoked and the precondition is not satisfied, we return false and the data remains unchanged, as specified by the rules.


false = vote(voter-id, record-id, vote)
vr:VotingRecord
vr-id = record-id
vote-cast = true
vr:VotingRecord
vr-id = record-id
vote-cast = true


false = vote(voter-id, record-id, vote)
vr:VotingRecord
vr-id = record-id
voter
voter: Voter
v-id = voter-id
vr:VotingRecord
vr-id = record-id
voter: Voter
v-id = voter-id


false = vote(voter-id, record-id, vote)
vr:VotingRecord
vr-id = record-id


false = vote(voter-id, record-id, vote)
voter: Voter
v-id = voter-id