

## **Algebraic specification**

### **Types:**

*Trip, User, Invitation, Dayplan, Day*

### **Functions:**

*createTrip: Trip*

*createInvitation: Invitation*

*sendInvitation: Invitation x User -> Invitation*

*cancelTrip: Trip->Empty*

*createDayplan Day -> Dayplan*

*isPublicTrip -> Boolean*

*validateInvitation: Invitation -> Invitation*

*changeDayplan: DayPlan x Day -> DayPlan*

### **Axioms**

$\forall t: \text{Trip}, u: \text{User}, i: \text{Invitation}, p: \text{Dayplan}, d: \text{Day}$

*A1: createInvitation (i) = i*

*A2: sendInvitation (validateInvitation (i),u) = i*

*A3: createDayplan (createTrip (t), d) = p*

### **Preconditions:**

*sendInvitation (i: Invitation) requires validateInvitation (i: Invitation)*

*createDayplan (d: DayPlan) requires createTrip (t: Trip)*

*changeDayPlan (d: DayPlan) requires createTrip()  $\wedge$  createDayplan()*