

This module will be imported into every implementation

EXTENDS *Sequences*

An ordered event stream of every event that occurs in the system. All the specifications will be written based on it. This is an observability value that you wouldn't have access to in the implementation. We'll only have the *API* method stubs write to it; no implementation may read from it. This will be enforced with code review

VARIABLE *events*

Represents every potential user in the system

CONSTANT *USERS*

Constants that should be set to single model values to allow comparisons.

Only equality comparisons will be made.

CONSTANTS

*SubscriptionFee*,  
*CancellationFee*,  
*FailedPaymentFee*

$Fees \triangleq \{SubscriptionFee, CancellationFee, FailedPaymentFee\}$

Event Types: Describes everything that can happen in the system

$MonthPassEvent \triangleq [type : \{ "monthpass" \}]$

$StartSubscriptionEvent \triangleq [type : \{ "startsubscription" \}, user : USERS]$

$CancelSubscriptionEvent \triangleq [type : \{ "cancelsubscription" \}, user : USERS]$

$StartTrialEvent \triangleq [type : \{ "starttrial" \}, user : USERS]$

$CancelTrialEvent \triangleq [type : \{ "canceltrial" \}, user : USERS]$

$WatchVideoEvent \triangleq [type : \{ "watchvideo" \}, user : USERS]$

$BillEvent \triangleq [type : \{ "bill" \}, user : USERS, fee : Fees]$

$PaymentFailedEvent \triangleq [type : \{ "paymentfailed" \}, user : USERS, fee : Fees]$

$Event \triangleq$

$MonthPassEvent \cup$   
 $StartSubscriptionEvent \cup$   
 $CancelSubscriptionEvent \cup$   
 $StartTrialEvent \cup$   
 $CancelTrialEvent \cup$   
 $WatchVideoEvent \cup$   
 $BillEvent \cup$   
 $PaymentFailedEvent$

$EventsOk \triangleq$

$events \in Seq(Event)$

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\ \* Modification History  
\ \* Last modified *Fri Jun 17 00:07:38 MST 2022* by *elliotswart*  
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