

# 1 Safelet Template

**channelset**  $\{ProcessName\} AppSync ==$   
 $\{ \textit{getSequencerCall}, \textit{getSequencerRet}, \textit{initializeApplicationCall}, \textit{initializeApplicationRet}, \textit{end\_safelet\_app} \}$

**channelset**  $\{ProcessName\} ChanSet ==$   
 $\{ \textit{getSequencerCall}, \textit{getSequencerRet}, \textit{initializeApplicationCall}, \textit{initializeApplicationRet}, \textit{end\_safelet\_app} \}$

**process**  $\{ProcessName\} App \hat{=}$

$\textit{InitializeApplication} \hat{=}$   
 $\left( \begin{array}{l} \textit{initializeApplicationCall} \longrightarrow \\ \textit{initializeApplicationRet} \longrightarrow \\ \mathbf{Skip} \end{array} \right)$

$\textit{GetSequencer} \hat{=}$   
 $\left( \begin{array}{l} \textit{getSequencerCall} \longrightarrow \\ \textit{getSequencerRet} ! \{SchedulableID\} \longrightarrow \\ \mathbf{Skip} \end{array} \right)$

$\textit{Methods} \hat{=}$   
 $\left( \begin{array}{l} \textit{GetSequencer} \\ \square \\ \textit{InitializeApplication} \end{array} \right); \textit{Methods}$

$\bullet (\textit{Methods}) \triangle (\textit{end\_safelet\_app} \longrightarrow \mathbf{Skip})$

## 2 Mission Sequencer Template

```
channelset ${ProcessName}AppSync ==  
{| getNextMissionCall, getNextMissionRet, end_sequencer_app |}
```

```
channelset ${ProcessName}AppChanSet == MissionSequencerAppSync
```

```
process ${ProcessName}App  $\hat{=}$ 
```

```
GetNextMission  $\hat{=}$   
 $\left( \begin{array}{l} \text{getNextMissionCall} . \text{\$}\{SchedulableID\} \longrightarrow \\ \text{getNextMissionRet} . \text{\$}\{SchedulableID\} ! \text{\$}\{MissionID\} \longrightarrow \\ \mathbf{Skip} \end{array} \right)$ 
```

```
Methods  $\hat{=}$   
(GetNextMission) ; Methods
```

- $(Methods) \setminus MissionSequencerAppStateSync \triangle (end\_sequencer\_app . \text{\$}\{SchedulableID\} \longrightarrow \mathbf{Skip})$

### 3 Mission Template

**channelset** *MissionAppSync* ==  
 $\{ \text{initializeCall}, \text{register}, \text{initializeRet}, \text{cleanupMissionCall}, \text{cleanupMissionRet} \}$

**channelset** *MissionAppChanSet* ==  
 $\{ \text{initializeCall}, \text{initializeRet}, \text{cleanupMissionCall}, \text{cleanupMissionRet}, < \# \text{listschedulablesRegistersasSchedulableID} > \}$

**process**  $\{ \{ \text{ProcessName} \} \text{App} \hat{=}$

*Initialize*  $\hat{=}$   

$$\left( \begin{array}{l} \text{initializeCall} . \{ \text{MissionID} \} \longrightarrow \\ < \# \text{listschedulablesRegistersasSchedulableID} > \text{register} ! \{ \text{SchedulableID} \} ! \{ \text{MissionID} \} \longrightarrow \\ < \# \text{list} > \text{initializeRet} . \{ \text{MissionID} \} \longrightarrow \\ \mathbf{Skip} \end{array} \right)$$

*CleanUp*  $\hat{=}$   

$$\left( \begin{array}{l} < \# \text{ifcleanupmethodisresent} > \\ \quad < \text{getmethod} > \\ < \# \text{else} > \\ \quad \text{cleanupMissionCall} . \{ \text{MissionID} \} \longrightarrow \\ \quad \text{cleanupMissionRet} . \{ \text{MissionID} \} ! \text{True} \longrightarrow \\ \quad \mathbf{Skip} \\ < / \# \text{if} > \end{array} \right)$$

*Methods*  $\hat{=}$   

$$\left( \begin{array}{l} \text{Initialize} \\ \square \\ \text{CleanUp} \end{array} \right) ; \text{Methods}$$

$\bullet (\text{Methods}) \triangle (\text{end\_mission\_app} . \{ \text{MissionID} \} \longrightarrow \mathbf{Skip})$

## 4 Handslers Template

**process**  $\$ \{ ProcessName \} App \hat{=}$

$Methods \hat{=}$   
 $handlerAsyncEvent ; Methods$

$handlerAsyncEvent \hat{=}$   
 $\left( \begin{array}{l} handleAsyncEventCall . \$ \{ SchedulableID \} \longrightarrow \\ handleAsyncEventRet . \$ \{ SchedulableID \} \longrightarrow \\ \mathbf{Skip} \end{array} \right)$

$\bullet (Methods) \triangle (end\_ \$ \{ HandlerType \} EventHandler\_app . \$ \{ SchedulableID \} \longrightarrow \mathbf{Skip})$

## 5 Managed Thread Template

**process**  $\${ProcessName}$  *App*  $\hat{=}$

*Methods*  $\hat{=}$   
*Run* ; *Methods*

*Run*  $\hat{=}$   
 $\left( \begin{array}{l} runCall . \${SchedulableID} \longrightarrow \\ runRet . \${SchedulableID} \longrightarrow \\ \mathbf{Skip} \end{array} \right)$

• (*Methods*)  $\triangle$  (*end\_managedThread\_app* .  $\${SchedulableID}$   $\longrightarrow$  **Skip**)