

## Phase 19 Demo : Finite Set Types

### Example 1 : F ( finite sets )

$F\ X$  denotes all finite subsets of  $X$ :

$[SongIdAD, UserIdAD]$

$$\left| \begin{array}{l} songsAD : F\ SongIdAD \\ usersAD : F\ UserIdAD \end{array} \right.$$

### Example 2 : F1 ( non - empty finite sets )

$F1\ X$  denotes all non-empty finite subsets of  $X$ :

$$\left| \quad activeUsers : F_1\ UserIdAD \right.$$

### Example 3 : Combined with function types

Using  $F$  and  $F1$  with partial functions:

$[PlaylistId, Playlist]$

$$\left| \begin{array}{l} playlists : PlaylistId \rightarrow\ Playlist \\ playlistOwner : PlaylistId \rightarrow\ UserIdAD \\ playlistSubscribers : PlaylistId \rightarrow\ F_1\ UserIdAD \end{array} \right.$$