pySM - The python state machine generator

Generated by Doxygen 1.8.13

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Here is a list of all files with brief descriptions:

Chapter 3

Data Structure Documentation

3.1 devCoffee_inputSignalsType Struct Reference

Structure defining input signals for state machine devCoffee.

`#include <DevCoffee.h>`

Data Fields

- pySm_bool developer_is_ill_HA_b
- pySm_uint8 another_input_ui8

3.1.1 Detailed Description

Structure defining input signals for state machine devCoffee.

3.1.2 Field Documentation

3.1.2.1 another_input_ui8

```
pySm_uint8 devCoffee_inputSignalsType::another_input_ui8
```

3.1.2.2 developer_is_ill_HA_b

```
pySm_bool devCoffee_inputSignalsType::developer_is_ill_HA_b
```

The documentation for this struct was generated from the following file:

- SWC/genSM/DevCoffee.h

3.2 devCoffee_outputSignalsType Struct Reference

Structure defining output signals for state machine devCoffee.

`#include <DevCoffee.h>`

Data Fields

- pySm_bool developer_is_productive_HA_b
- pySm_uint16 and_another_output_ui16

3.2.1 Detailed Description

Structure defining output signals for state machine devCoffee.

3.2.2 Field Documentation

3.2.2.1 and_another_output_ui16

`pySm_uint16 devCoffee_outputSignalsType::and_another_output_ui16`

3.2.2.2 developer_is_productive_HA_b

`pySm_bool devCoffee_outputSignalsType::developer_is_productive_HA_b`

The documentation for this struct was generated from the following file:

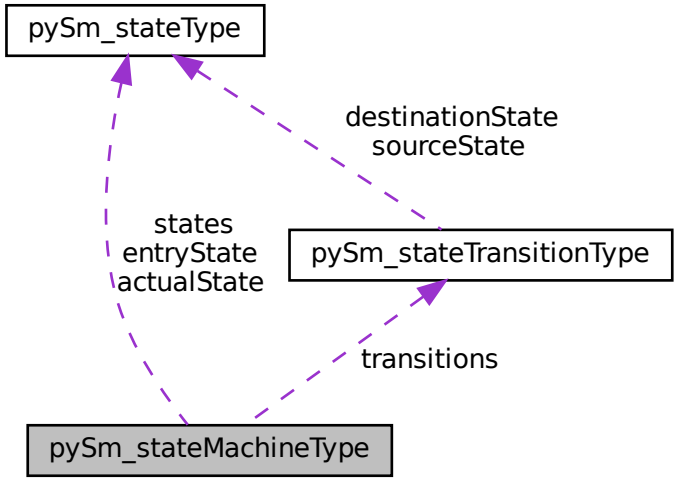
- SWC/genSM/DevCoffee.h

3.3 pySm_stateMachineType Struct Reference

Structure defining a state machine.

`#include <PySm.h>`

Collaboration diagram for pySm_stateMachineType:



Data Fields

- const pySm_stateType * entryState
- pySm_stateType * actualState
- const pySm_stateType ** states
- const pySm_uint8 numberOfStates
- const pySm_stateTransitionType * transitions
- const pySm_uint8 numberOfTransitions
- pySm_bool runEntryOfInitialState_b
- const pySm_stateMachineResetFunction resetVariables

3.3.1 Detailed Description

Structure defining a state machine.

A state machine is defined by it's

- entry state pySm_stateMachineType::entryState
- current active state pySm_stateMachineType::actualState

- a list of all states, pySm_stateMachineType::states given by an pointer array, pointing to all states of the generated state machine
- the overall number of all states pySm_stateMachineType::numberOfTransitions
- all existing transitions of the state machine pySm_stateMachineType::transitions, given by an pointer to an array, containing the transitions
- the overall number of transitions pySm_stateMachineType::numberOfTransitions
- a flag pySm_stateMachineType::runEntryOfInitialState_b, enabling the execution of the onEntry-function of the first, initial state (entryState). This flag get's generated as TRUE when the entryState has an onEntry statement
- a function pySm_stateMachineResetFunction::resetVariables for resetting the state machine's local variables

3.3.2 Field Documentation

3.3.2.1 actualState

```
pySm_stateType* pySm_stateMachineType::actualState
```

3.3.2.2 entryState

```
const pySm_stateType* pySm_stateMachineType::entryState
```

3.3.2.3 numberOfStates

```
const pySm_uint8 pySm_stateMachineType::numberOfStates
```

3.3.2.4 numberOfTransitions

```
const pySm_uint8 pySm_stateMachineType::numberOfTransitions
```

3.3.2.5 resetVariables

```
const pySm_stateMachineResetFunction pySm_stateMachineType::resetVariables
```

3.3.2.6 runEntryOfInitialState_b

```
pySm_bool pySm_stateMachineType::runEntryOfInitialState_b
```

3.3.2.7 states

```
const pySm_stateType** pySm_stateMachineType::states
```

3.3.2.8 transitions

```
const pySm_stateTransitionType* pySm_stateMachineType::transitions
```

The documentation for this struct was generated from the following file:

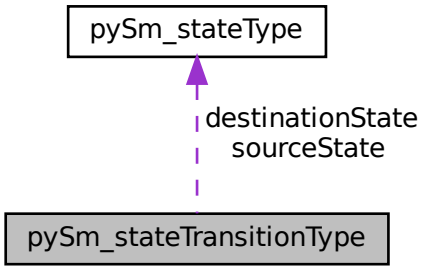
- LIB/PySm.h

3.4 pySm_stateTransitionType Struct Reference

Structure defining a state transition.

```
#include <PySm.h>
```

Collaboration diagram for pySm_stateTransitionType:



Data Fields

- const pySm_stateType * sourceState
- const pySm_stateType * destinationState
- const pySm_transitionTestFunction transitionTest
- const pySm_transitionPriorityType transitionPriority
- const pySm_transitionActionFunction transitionAction

3.4.1 Detailed Description

Structure defining a state transition.

A state transition is defined by it's

- source pySm_stateTransitionType::sourceState and
- destination state pySm_stateTransitionType::destinationState ,
- it's transition condition pySm_StateTransitionType::transitionTest (given by the transition test function) ,
- the transitions priority pySm_stateTransitionType::transitionPriority
- and actions to be performed, if an transition has been triggered, given by the transition action function pySm_stateTransitionType::transitionAction

3.4.2 Field Documentation

3.4.2.1 destinationState

```
const pySm_stateType* pySm_stateTransitionType::destinationState
```

3.4.2.2 sourceState

```
const pySm_stateType* pySm_stateTransitionType::sourceState
```

3.4.2.3 transitionAction

```
const pySm_transitionActionFunction pySm_stateTransitionType::transitionAction
```

3.4.2.4 transitionPriority

```
const pySm_transitionPriorityType pySm_stateTransitionType::transitionPriority
```

3.4.2.5 transitionTest

```
const pySm_transitionTestFunction pySm_stateTransitionType::transitionTest
```

The documentation for this struct was generated from the following file:

- LIB/PySm.h

3.5 pySm_stateType Struct Reference

Structure defining a state.

```
#include <PySm.h>
```

Data Fields

- const pySm_stateFunction onEntryState
- const pySm_stateFunction onState
- const pySm_stateFunction onExitState

3.5.1 Detailed Description

Structure defining a state.

A state is defined by it's

- entry function PySm_StateType::onEntryState
- during (state main function) PySm_StateType::onState
- exit function PySm_StateType::onExitState. Each of these functions can be generated as NULL_PTR, if not needed

3.5.2 Field Documentation

3.5.2.1 onEntryState

```
const pySm_stateFunction pySm_stateType::onEntryState
```

OnEntryState-function, if needed.

3.5.2.2 onExitState

```
const pySm_stateFunction pySm_stateType::onExitState
```

OnExitState-function, if needed.

3.5.2.3 onState

```
const pySm_stateFunction pySm_stateType::onState
```

OnDuringState-function, if needed.

The documentation for this struct was generated from the following file:

- LIB/PySm.h

Chapter 4

File Documentation

4.1 Debug/LIB/PySm.d File Reference

4.2 Debug/LIB/pySm.d File Reference

4.3 Debug/main.d File Reference

4.4 Debug/SWC/genSM/DevCoffee.d File Reference

4.5 Debug/SWC/genSM/Devcoffee.d File Reference

4.6 Debug/SWC/genSM/devCoffee.d File Reference

4.7 Debug/SWC/sm1.d File Reference

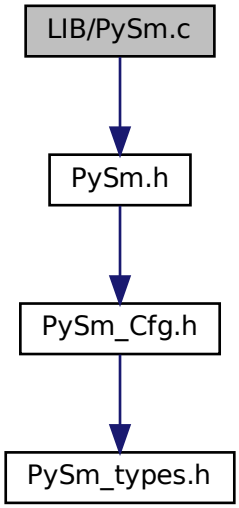
4.8 Debug/SWC/Swc.d File Reference

4.9 Debug/SWC/swc.d File Reference

4.10 LIB/PySm.c File Reference

File containing the main implementation of the pySM API and internal functions.

```
#include "PySm.h"
```
Include dependency graph for PySm.c:



Functions

- static pySm_returnType PySm_checkState (const pySm_stateMachineType *stateMachine, const pySm_↩ stateType *stateToCheck)

  Checks a state of a given state machine.
- pySm_returnType PySm_runStateMachine (pySm_stateMachineType *stateMachine)

  Runs the given state machine.
- pySm_returnType PySm_resetStateMachine (pySm_stateMachineType *stateMachine)

  Resets the given state machine.

4.10.1 Detailed Description

File containing the main implementation of the pySM API and internal functions.

Author

Markus Burger

Date

2017-09-11

4.10.2 Function Documentation

4.10.2.1 PySm_checkState()

```
static pySm_returnType PySm_checkState (
            const pySm_stateMachineType * stateMachine,
            const pySm_stateType * stateToCheck )  [static]
```

Checks a state of a given state machine.

Checks, if a given state exists in a given state machine

```
pySm_returnType out = pySm_checkState(&stateMachine, &stateToCheck);
```

Parameters

stateMachine	State machine object
stateToCheck	State to check if existing in `stateMachine`

Returns

Returns either PYSM_E_UNKNOWN_STATE when the given state doesn't exist in `stateMachine` or PYSM_E_OK

4.10.2.2 PySm_resetStateMachine()

```
pySm_returnType PySm_resetStateMachine (
            pySm_stateMachineType * stateMachine )
```

Resets the given state machine.

Resets the given state machine back to initial state and resets the state machine's local variables back to their initial values

```
pySm_returnType out = pySm_resetStateMachine(&stateMachine);
```

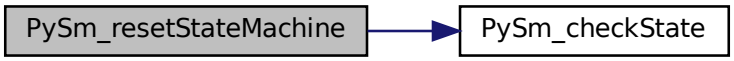
Parameters

stateMachine	State machine object to reset

Returns

Returns either PYSM_INVALID_MACHINE when an invalid stateMachine has been given or PYSM_E_OK

Here is the call graph for this function:



4.10.2.3 PySm_runStateMachine()

```
pySm_returnType PySm_runStateMachine (
            pySm_stateMachineType * stateMachine )
```

Runs the given state machine.

Executes the given state machine

```
pySm_returnType out = pySm_runStateMachine(&stateMachine);
```

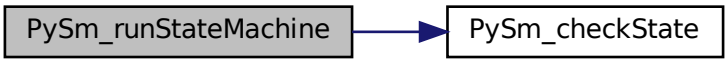
Parameters

stateMachine	State machine object to run

Returns

Returns either PYSM_INVALID_MACHINE when an invalid statemachine has been given or PYSM_E_OK

Here is the call graph for this function:

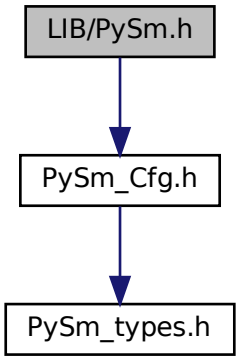


4.11 LIB/PySm.h File Reference

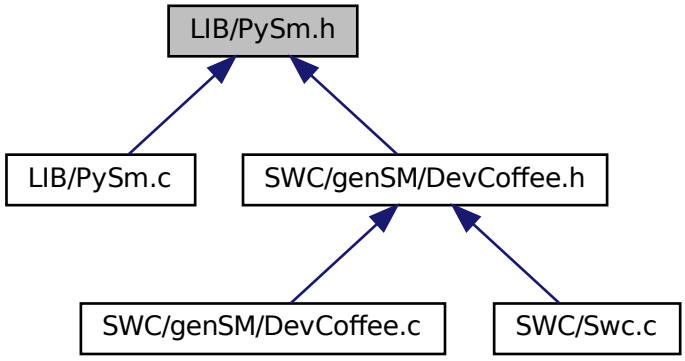
File containing typedefs and extern callable function declarations.

```
#include "PySm_Cfg.h"
```

Include dependency graph for PySm.h:



This graph shows which files directly or indirectly include this file:



Data Structures

- struct pySm_stateType

  Structure defining a state.
- struct pySm_stateTransitionType

  Structure defining a state transition.
- struct pySm_stateMachineType

  Structure defining a state machine.

Typedefs

- typedef void(∗ pySm_stateFunction) (void)

  Function pointer definition for state functions.
- typedef void(∗ pySm_stateMachineResetFunction) (void)

  Function pointer definition for state machine reset functions.
- typedef void(∗ pySm_transitionActionFunction) (void)

  Function pointer definition for state transition functions.
- typedef pySm_bool(∗ pySm_transitionTestFunction) (void)

  Function pointer definition for state transition test functions.
- typedef pySm_uint8 pySm_transitionPriorityType

  Type for transition priorities.

Enumerations

- enum pySm_returnType { PYSM_E_OK = 0u, PYSM_E_UNKNOWN_STATE, PYSM_E_UNKNOWN_TR↩ ANSITION, PYSM_INVALID_MACHINE }

  Return type for the pySM librarie's API functions.

Functions

- pySm_returnType PySm_runStateMachine (pySm_stateMachineType ∗stateMachine)

  Runs the given state machine.
- pySm_returnType PySm_resetStateMachine (pySm_stateMachineType ∗stateMachine)

  Resets the given state machine.

4.11.1 Detailed Description

File containing typedefs and extern callable function declarations.

Author

Markus Burger

Date

2017-09-11

4.11.2 Typedef Documentation

4.11.2.1 pySm_stateFunction

```
typedef void(* pySm_stateFunction) (void)
```

Function pointer definition for state functions.

4.11.2.2 pySm_stateMachineResetFunction

```
typedef void(* pySm_stateMachineResetFunction) (void)
```

Function pointer definition for state machine reset functions.

This function get's generated and is used to reset state machine local internal static variables. This function normally get's called only when resetting a whole state machine by the according API function.

4.11.2.3 pySm_transitionActionFunction

```
typedef void(* pySm_transitionActionFunction) (void)
```

Function pointer definition for state transition functions.

These functions get called (if generated/needed) to perform given actions when a transition gets triggered and executed.

4.11.2.4 pySm_transitionPriorityType

```
typedef pySm_uint8 pySm_transitionPriorityType
```

Type for transition priorities.

4.11.2.5 pySm_transitionTestFunction

```
typedef pySm_bool(* pySm_transitionTestFunction) (void)
```

Function pointer definition for state transition test functions.

These functions get called to perform the evaluation of the transition condition.

4.11.3 Enumeration Type Documentation

4.11.3.1 pySm_returnType

```
enum pySm_returnType
```

Return type for the pySM librarie's API functions.

Enumerator

PYSM_E_OK	
PYSM_E_UNKNOWN_STATE	
PYSM_E_UNKNOWN_TRANSITION	
PYSM_INVALID_MACHINE	

4.11.4 Function Documentation

4.11.4.1 PySm_resetStateMachine()

```
pySm_returnType PySm_resetStateMachine (
            pySm_stateMachineType * stateMachine )
```

Resets the given state machine.

Resets the given state machine back to initial state and resets the state machine's local variables back to their initial values

```
pySm_returnType out = pySm_resetStateMachine(&stateMachine);
```

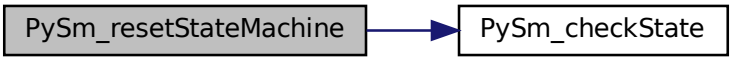
Parameters

stateMachine	State machine object to reset

Returns

Returns either PYSM_INVALID_MACHINE when an invalid stateMachine has been given or PYSM_E_OK

Here is the call graph for this function:



4.11.4.2 PySm_runStateMachine()

```
pySm_returnType PySm_runStateMachine (
            pySm_stateMachineType * stateMachine )
```

Runs the given state machine.

Executes the given state machine

```
pySm_returnType out = pySm_runStateMachine(&stateMachine);
```

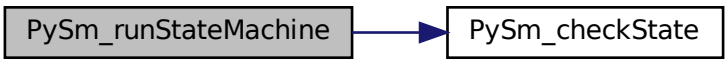
Parameters

stateMachine	State machine object to run

Returns

Returns either PYSM_INVALID_MACHINE when an invalid statemachine has been given or PYSM_E_OK

Here is the call graph for this function:

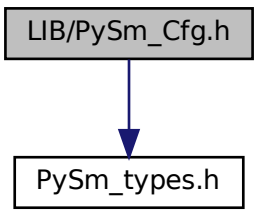


4.12 LIB/PySm_Cfg.h File Reference

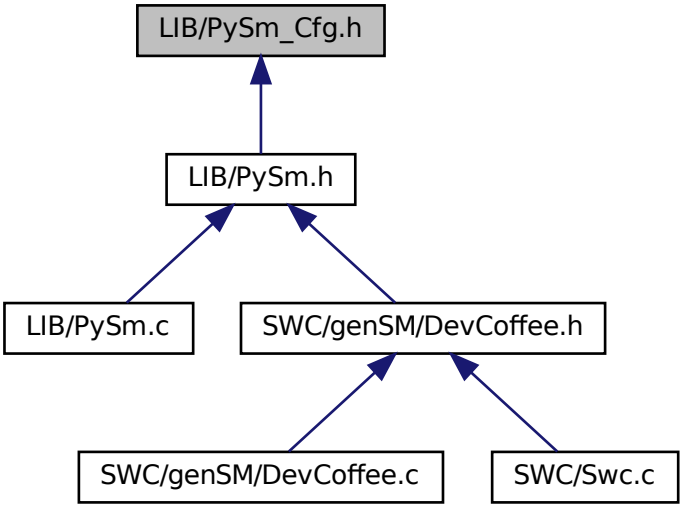
File containing configuration of the pySM library.

```
#include "PySm_types.h"
```

Include dependency graph for PySm_Cfg.h:



This graph shows which files directly or indirectly include this file:



Macros

- #define PYSM_MAX_NO_OF_TRANSITIONS_PER_STATE 10u
  Number of maximum allowed in-/outgoing transitions per state.

4.12.1 Detailed Description

File containing configuration of the pySM library.

Author

Markus Burger

Date

2017-09-11

4.12.2 Macro Definition Documentation

4.12.2.1 PYSM_MAX_NO_OF_TRANSITIONS_PER_STATE

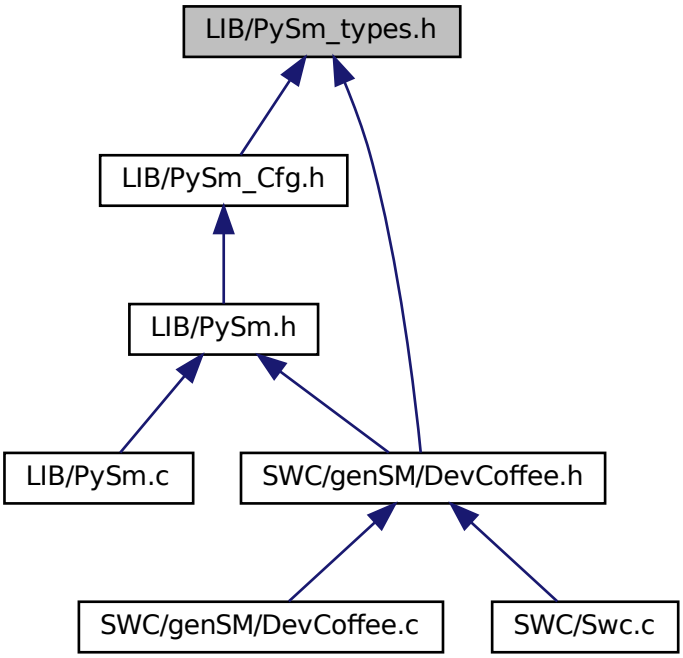
```
#define PYSM_MAX_NO_OF_TRANSITIONS_PER_STATE 10u
```

Number of maximum allowed in-/outgoing transitions per state.

4.13 LIB/PySm_types.h File Reference

File containing basic data types.

This graph shows which files directly or indirectly include this file:



Macros

- #define PYSM_TRUE 1u
- #define PYSM_FALSE 0u
- #define PYSM_STD_ON 1u
- #define PYSM_STD_OFF 0u
- #define PYSM_NULL_PTR (void ∗)0

Typedefs

- typedef signed char pySm_int8
- typedef short int pySm_int16
- typedef int pySm_int32
- typedef unsigned char pySm_uint8
- typedef unsigned short int pySm_uint16
- typedef unsigned int pySm_uint32
- typedef unsigned char pySm_bool

Variables

- __extension__ typedef long long int pySm_int64
- __extension__ typedef unsigned long long int pySm_uint64

4.13.1 Detailed Description

File containing basic data types.

Author

Markus Burger

Date

2017-09-11

4.13.2 Macro Definition Documentation

4.13.2.1 PYSM_FALSE

```
#define PYSM_FALSE 0u
```

4.13.2.2 PYSM_NULL_PTR

```
#define PYSM_NULL_PTR (void *)0
```

4.13.2.3 PYSM_STD_OFF

```
#define PYSM_STD_OFF 0u
```

4.13.2.4 PYSM_STD_ON

```
#define PYSM_STD_ON 1u
```

4.13.2.5 PYSM_TRUE

```
#define PYSM_TRUE 1u
```

4.13.3 Typedef Documentation

4.13.3.1 pySm_bool

```
typedef unsigned char pySm_bool
```

4.13.3.2 pySm_int16

```
typedef short int pySm_int16
```

4.13.3.3 pySm_int32

```
typedef int pySm_int32
```

4.13.3.4 pySm_int8

```
typedef signed char pySm_int8
```

4.13.3.5 pySm_uint16

```
typedef unsigned short int pySm_uint16
```

4.13.3.6 pySm_uint32

```
typedef unsigned int pySm_uint32
```

4.13.3.7 pySm_uint8

```
typedef unsigned char pySm_uint8
```

4.13.4 Variable Documentation

4.13.4.1 pySm_int64

```
__extension__ typedef long long int pySm_int64
```

4.13.4.2 pySm_uint64

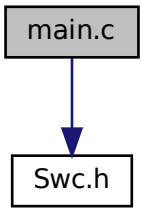
```
__extension__ typedef unsigned long long int pySm_uint64
```

4.14 main.c File Reference

Test main function, calling the test-SWC.

```
#include "Swc.h"
```

Include dependency graph for main.c:



Functions

- int main (void)

4.14.1 Detailed Description

Test main function, calling the test-SWC.

Author

Markus Burger

Date

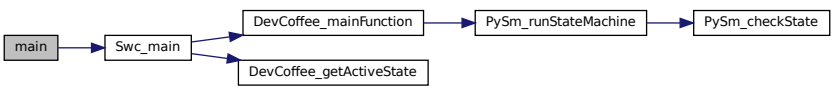
2017-09-11

4.14.2 Function Documentation

4.14.2.1 main()

```
int main (
            void  )
```

Here is the call graph for this function:

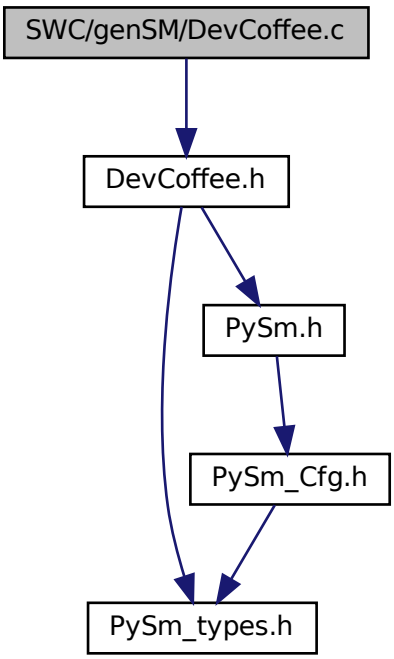


4.15 SWC/genSM/DevCoffee.c File Reference

Header for generated state machine devCoffee Generated 2017-09-27 19:41:10 by PySM - The python state machine generator.

```
#include "DevCoffee.h"
```

Include dependency graph for DevCoffee.c:



Functions

- static void devCoffee_SF_BREAKFAST_entry (void)
- static void devCoffee_SF_BREAKFAST (void)
- static void devCoffee_SF_BREAKFAST_exit (void)
- static void devCoffee_SF_IN_OFFICE_entry (void)
- static void devCoffee_SF_IN_OFFICE (void)
- static void devCoffee_SF_GET_COFFEE_entry (void)
- static void devCoffee_SF_RELAX_AND_SLEEP_entry (void)
- static void devCoffee_SF_RELAX_AND_SLEEP (void)
- static void devCoffee_SF_DEVELOPER_IS_ILL_entry (void)
- static void devCoffee_SF_DEVELOPER_IS_ILL (void)
- static void devCoffee_variableResetFunction (void)
- static pySm_bool devCoffee_TTF_IN_OFFICE_to_IN_OFFICE (void)
- static pySm_bool devCoffee_TTF_BREAKFAST_to_IN_OFFICE (void)
- static pySm_bool devCoffee_TTF_IN_OFFICE_to_GET_COFFEE (void)
- static pySm_bool devCoffee_TTF_IN_OFFICE_to_RELAX_AND_SLEEP (void)
- static pySm_bool devCoffee_TTF_RELAX_AND_SLEEP_to_BREAKFAST_1 (void)
- static pySm_bool devCoffee_TTF_BREAKFAST_to_DEVELOPER_IS_ILL (void)
- static pySm_bool devCoffee_TTF_DEVELOPER_IS_ILL_to_BREAKFAST (void)
- static pySm_bool devCoffee_TTF_RELAX_AND_SLEEP_to_BREAKFAST_2 (void)
- static void devCoffee_TAF_IN_OFFICE_to_IN_OFFICE (void)
- static void devCoffee_TAF_GET_COFFEE_to_IN_OFFICE (void)

- static void devCoffee_TAF_IN_OFFICE_to_RELAX_AND_SLEEP (void)
- static void devCoffee_TAF_RELAX_AND_SLEEP_to_BREAKFAST (void)
- pySm_returnType DevCoffee_mainFunction (devCoffee_inputSignalsType *swc_inputSignals, devCoffee_↩ outputSignalsType *swc_outputSignals)

  Main function of the state machine devCoffee.
- void DevCoffee_getActiveState (devCoffee_activeStateType *swc_activeState)

  Main function of the state machine devCoffee.

Variables

- static const pySm_stateType devCoffee_state_BREAKFAST
- static const pySm_stateType devCoffee_state_IN_OFFICE
- static const pySm_stateType devCoffee_state_GET_COFFEE
- static const pySm_stateType devCoffee_state_RELAX_AND_SLEEP
- static const pySm_stateType devCoffee_state_DEVELOPER_IS_ILL
- static const pySm_stateType * devCoffee_states_pa [5]
- static pySm_stateTransitionType devCoffee_transitions_sa [9]
- pySm_stateMachineType devCoffee_stateMachine_s
- static devCoffee_inputSignalsType * devCoffee_inputSignals
- static devCoffee_outputSignalsType * devCoffee_outputSignals
- static devCoffee_activeStateType devCoffee_activeState = devCoffee_UNINITALIZED_STATE_MACHINE
- pySm_uint8 coffeein_level_ui8 = 0u
- pySm_uint8 productivity_ui8 = 0u
- pySm_uint8 current_hour_ui8 = 0u

4.15.1 Detailed Description

Header for generated state machine devCoffee Generated 2017-09-27 19:41:10 by PySM - The python state machine generator.

Author

Markus

Date

2017-09-27

4.15.2 Function Documentation

4.15.2.1 DevCoffee_getActiveState()

```
void DevCoffee_getActiveState (
            devCoffee_activeStateType * swc_activeState )
```

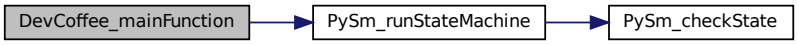
Main function of the state machine devCoffee.

4.15.2.2 DevCoffee_mainFunction()

```
pySm_returnType DevCoffee_mainFunction (
            devCoffee_inputSignalsType * swc_inputSignals,
            devCoffee_outputSignalsType * swc_outputSignals )
```

Main function of the state machine devCoffee.

Here is the call graph for this function:



4.15.2.3 devCoffee_SF_BREAKFAST()

```
static void devCoffee_SF_BREAKFAST (
            void ) [static]
```

4.15.2.4 devCoffee_SF_BREAKFAST_entry()

```
static void devCoffee_SF_BREAKFAST_entry (
            void ) [static]
```

4.15.2.5 devCoffee_SF_BREAKFAST_exit()

```
static void devCoffee_SF_BREAKFAST_exit (
            void ) [static]
```

4.15.2.6 devCoffee_SF_DEVELOPER_IS_ILL()

```
static void devCoffee_SF_DEVELOPER_IS_ILL (
            void ) [static]
```

4.15.2.7 devCoffee_SF_DEVELOPER_IS_ILL_entry()

```
static void devCoffee_SF_DEVELOPER_IS_ILL_entry (
             void  )  [static]
```

4.15.2.8 devCoffee_SF_GET_COFFEE_entry()

```
static void devCoffee_SF_GET_COFFEE_entry (
             void  )  [static]
```

4.15.2.9 devCoffee_SF_IN_OFFICE()

```
static void devCoffee_SF_IN_OFFICE (
             void  )  [static]
```

4.15.2.10 devCoffee_SF_IN_OFFICE_entry()

```
static void devCoffee_SF_IN_OFFICE_entry (
             void  )  [static]
```

4.15.2.11 devCoffee_SF_RELAX_AND_SLEEP()

```
static void devCoffee_SF_RELAX_AND_SLEEP (
             void  )  [static]
```

4.15.2.12 devCoffee_SF_RELAX_AND_SLEEP_entry()

```
static void devCoffee_SF_RELAX_AND_SLEEP_entry (
             void  )  [static]
```

4.15.2.13 devCoffee_TAF_GET_COFFEE_to_IN_OFFICE()

```
static void devCoffee_TAF_GET_COFFEE_to_IN_OFFICE (
             void  )  [static]
```

4.15.2.14 devCoffee_TAF_IN_OFFICE_to_IN_OFFICE()

```
static void devCoffee_TAF_IN_OFFICE_to_IN_OFFICE (
            void  )  [static]
```

4.15.2.15 devCoffee_TAF_IN_OFFICE_to_RELAX_AND_SLEEP()

```
static void devCoffee_TAF_IN_OFFICE_to_RELAX_AND_SLEEP (
            void  )  [static]
```

4.15.2.16 devCoffee_TAF_RELAX_AND_SLEEP_to_BREAKFAST()

```
static void devCoffee_TAF_RELAX_AND_SLEEP_to_BREAKFAST (
            void  )  [static]
```

4.15.2.17 devCoffee_TTF_BREAKFAST_to_DEVELOPER_IS_ILL()

```
static pySm_bool devCoffee_TTF_BREAKFAST_to_DEVELOPER_IS_ILL (
            void  )  [static]
```

4.15.2.18 devCoffee_TTF_BREAKFAST_to_IN_OFFICE()

```
static pySm_bool devCoffee_TTF_BREAKFAST_to_IN_OFFICE (
            void  )  [static]
```

4.15.2.19 devCoffee_TTF_DEVELOPER_IS_ILL_to_BREAKFAST()

```
static pySm_bool devCoffee_TTF_DEVELOPER_IS_ILL_to_BREAKFAST (
            void  )  [static]
```

4.15.2.20 devCoffee_TTF_IN_OFFICE_to_GET_COFFEE()

```
static pySm_bool devCoffee_TTF_IN_OFFICE_to_GET_COFFEE (
            void  )  [static]
```

4.15.2.21 devCoffee_TTF_IN_OFFICE_to_IN_OFFICE()

```
static pySm_bool devCoffee_TTF_IN_OFFICE_to_IN_OFFICE (
            void  )  [static]
```

4.15.2.22 devCoffee_TTF_IN_OFFICE_to_RELAX_AND_SLEEP()

```
static pySm_bool devCoffee_TTF_IN_OFFICE_to_RELAX_AND_SLEEP (
            void  )  [static]
```

4.15.2.23 devCoffee_TTF_RELAX_AND_SLEEP_to_BREAKFAST_1()

```
static pySm_bool devCoffee_TTF_RELAX_AND_SLEEP_to_BREAKFAST_1 (
            void  )  [static]
```

4.15.2.24 devCoffee_TTF_RELAX_AND_SLEEP_to_BREAKFAST_2()

```
static pySm_bool devCoffee_TTF_RELAX_AND_SLEEP_to_BREAKFAST_2 (
            void  )  [static]
```

4.15.2.25 devCoffee_variableResetFunction()

```
static void devCoffee_variableResetFunction (
            void  )  [static]
```

4.15.3 Variable Documentation

4.15.3.1 coffeein_level_ui8

```
pySm_uint8 coffeein_level_ui8 = 0u
```

4.15.3.2 current_hour_ui8

```
pySm_uint8 current_hour_ui8 = 0u
```

4.15.3.3 devCoffee_activeState

```
devCoffee_activeStateType devCoffee_activeState = devCoffee_UNINITALIZED_STATE_MACHINE  [static]
```

4.15.3.4 devCoffee_inputSignals

```
devCoffee_inputSignalsType* devCoffee_inputSignals  [static]
```

4.15.3.5 devCoffee_outputSignals

```
devCoffee_outputSignalsType* devCoffee_outputSignals  [static]
```

4.15.3.6 devCoffee_state_BREAKFAST

```
const pySm_stateType devCoffee_state_BREAKFAST  [static]
```

Initial value:

```
=
{
        .onEntryState = devCoffee_SF_BREAKFAST_entry,
        .onState = devCoffee_SF_BREAKFAST,
        .onExitState = devCoffee_SF_BREAKFAST_exit
}
```

4.15.3.7 devCoffee_state_DEVELOPER_IS_ILL

```
const pySm_stateType devCoffee_state_DEVELOPER_IS_ILL  [static]
```

Initial value:

```
=
{
        .onEntryState = devCoffee_SF_DEVELOPER_IS_ILL_entry,
        .onState = devCoffee_SF_DEVELOPER_IS_ILL,
        .onExitState = PYSM_NULL_PTR
}
```

4.15.3.8 devCoffee_state_GET_COFFEE

```
const pySm_stateType devCoffee_state_GET_COFFEE  [static]
```

Initial value:

```
=
{
        .onEntryState = devCoffee_SF_GET_COFFEE_entry,
        .onState = PYSM_NULL_PTR,
        .onExitState = PYSM_NULL_PTR
}
```

4.15.3.9 devCoffee_state_IN_OFFICE

```
const pySm_stateType devCoffee_state_IN_OFFICE  [static]
```

Initial value:

```
=
{
        .onEntryState = devCoffee_SF_IN_OFFICE_entry,
        .onState = devCoffee_SF_IN_OFFICE,
        .onExitState = PYSM_NULL_PTR
}
```

4.15.3.10 devCoffee_state_RELAX_AND_SLEEP

```
const pySm_stateType devCoffee_state_RELAX_AND_SLEEP  [static]
```

Initial value:

```
=
{
        .onEntryState = devCoffee_SF_RELAX_AND_SLEEP_entry,
        .onState = devCoffee_SF_RELAX_AND_SLEEP,
        .onExitState = PYSM_NULL_PTR
}
```

4.15.3.11 devCoffee_stateMachine_s

```
pySm_stateMachineType devCoffee_stateMachine_s
```

Initial value:

```
=
{
    &devCoffee_state_RELAX_AND_SLEEP,
    &devCoffee_state_RELAX_AND_SLEEP,
    devCoffee_states_pa,
    5u,
    devCoffee_transitions_sa,
    9u,
    PYSM_TRUE,
    devCoffee_variableResetFunction
}
```

4.15.3.12 devCoffee_states_pa

```
const pySm_stateType* devCoffee_states_pa[5]  [static]
```

Initial value:

```
=
{
        &devCoffee_state_BREAKFAST,
        &devCoffee_state_IN_OFFICE,
        &devCoffee_state_GET_COFFEE,
        &devCoffee_state_RELAX_AND_SLEEP,
        &devCoffee_state_DEVELOPER_IS_ILL
}
```

4.15.3.13 devCoffee_transitions_sa

```
pySm_stateTransitionType devCoffee_transitions_sa[9]  [static]
```

4.15.3.14 productivity_ui8

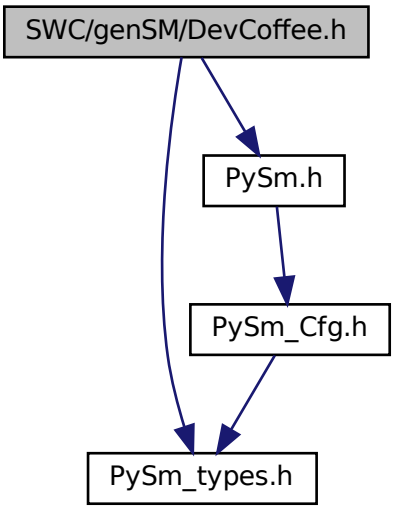
```
pySm_uint8 productivity_ui8 = 0u
```

4.16 SWC/genSM/DevCoffee.h File Reference

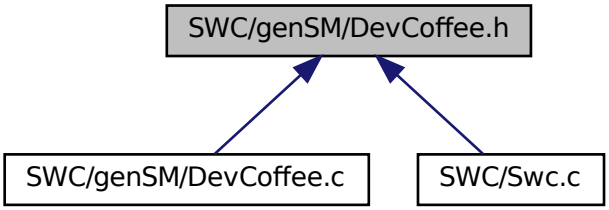
Header for generated state machine devCoffee Generated 2017-09-27 19:41:10 by PySM - The python state machine generator.

```
#include "PySm_types.h"
#include "PySm.h"
```

Include dependency graph for DevCoffee.h:



This graph shows which files directly or indirectly include this file:



Data Structures

- struct devCoffee_inputSignalsType

  Structure defining input signals for state machine devCoffee.
- struct devCoffee_outputSignalsType

  Structure defining output signals for state machine devCoffee.

Macros

- #define WORKTIME_PER_DAY_H 8
- #define WAKE_UP_TIME_H 6 /∗ stand up at 6 o'clock ∗/
- #define GO_HOME_TIME (WORKTIME_PER_DAY_H+WAKE_UP_TIME_H)

Enumerations

- enum devCoffee_activeStateType { devCoffee_UNINITALIZED_STATE_MACHINE, DEVCOFFEE_BREAKFAST, DEVCOFFEE_IN_OFFICE, DEVCOFFEE_GET_COFFEE, DEVCOFFEE_RELAX_AND_SLEEP, DEVCOFFEE_DEVELOPER_IS_ILL }

  Enum for exporting current active state of state machine devCoffee.

Functions

- pySm_returnType DevCoffee_mainFunction (devCoffee_inputSignalsType ∗, devCoffee_outputSignalsType ∗)

  Main function of the state machine devCoffee.
- void DevCoffee_getActiveState (devCoffee_activeStateType ∗)

  Main function of the state machine devCoffee.

4.16.1 Detailed Description

Header for generated state machine devCoffee Generated 2017-09-27 19:41:10 by PySM - The python state machine generator.

Author

Markus

Date

2017-09-27

4.16.2 Macro Definition Documentation

4.16.2.1 GO_HOME_TIME

```
#define GO_HOME_TIME (WORKTIME_PER_DAY_H+WAKE_UP_TIME_H)
```

4.16.2.2 WAKE_UP_TIME_H

```
#define WAKE_UP_TIME_H 6 /* stand up at 6 o'clock */
```

4.16.2.3 WORKTIME_PER_DAY_H

```
#define WORKTIME_PER_DAY_H 8
```

4.16.3 Enumeration Type Documentation

4.16.3.1 devCoffee_activeStateType

```
enum devCoffee_activeStateType
```

Enum for exporting current active state of state machine devCoffee.

Enumerator

devCoffee_UNINITALIZED_STATE_MACHINE	
DEVCOFFEE_BREAKFAST	
DEVCOFFEE_IN_OFFICE	
DEVCOFFEE_GET_COFFEE	
DEVCOFFEE_RELAX_AND_SLEEP	
DEVCOFFEE_DEVELOPER_IS_ILL	

4.16.4 Function Documentation

4.16.4.1 DevCoffee_getActiveState()

```
void DevCoffee_getActiveState (
            devCoffee_activeStateType *  )
```

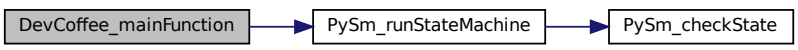
Main function of the state machine devCoffee.

4.16.4.2 DevCoffee_mainFunction()

```
pySm_returnType DevCoffee_mainFunction (
            devCoffee_inputSignalsType * ,
            devCoffee_outputSignalsType *  )
```

Main function of the state machine devCoffee.

Here is the call graph for this function:

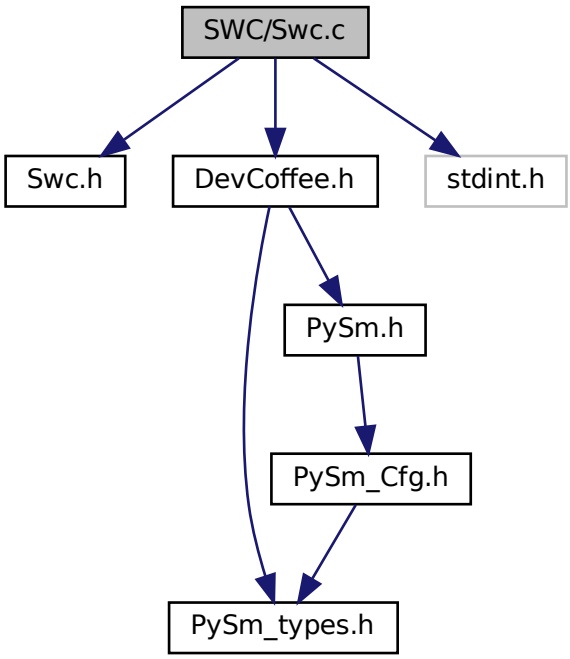


4.17 SWC/Swc.c File Reference

Test-SWC to demonstrate the use of the generated state machine.

```
#include "Swc.h"
#include "DevCoffee.h"
#include <stdint.h>
```

Include dependency graph for Swc.c:



Functions

- void Swc_main (void)

4.17.1 Detailed Description

Test-SWC to demonstrate the use of the generated state machine.

Author

Markus Burger

Date

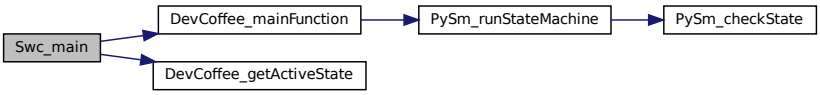
2017-09-11

4.17.2 Function Documentation

4.17.2.1 Swc_main()

```
void Swc_main (
            void  )
```

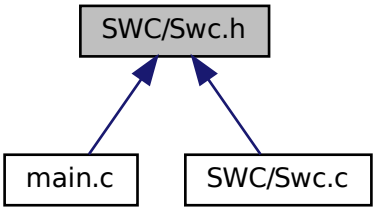
Here is the call graph for this function:



4.18 SWC/Swc.h File Reference

Header file of Test-SWC to demonstrate the use of the generated state machine.

This graph shows which files directly or indirectly include this file:



Functions

- void Swc_main (void)

4.18.1 Detailed Description

Header file of Test-SWC to demonstrate the use of the generated state machine.

Author

Markus Burger

Date

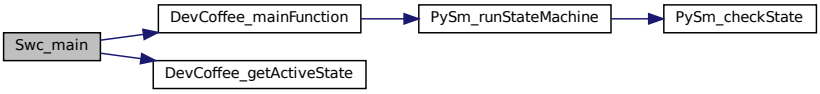
2017-09-11

4.18.2 Function Documentation

4.18.2.1 Swc_main()

```
void Swc_main (
            void  )
```

Here is the call graph for this function:



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