Spiritum Duo

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1 Ariadne implementation	1
1.0.1 Data type definitions (patient, decisionpoint, etc)	 1
1.0.2 Queries (getPatient, etc)	 1
1.0.3 Mutations (createPatient, etc)	 1
1.0.4 Scalars (Date/DateTime, etc)	 1
2 Hierarchical Index	3
2.1 Class Hierarchy	 3
3 Class Index	5
3.1 Class List	 5
4 Class Documentation	7
4.1 services.BaseService Class Reference	 7
4.2 authentication.logincontroller.ContextNotDefined Class Reference	 8
4.2.1 Detailed Description	 8
4.3 tests.conftest.ContextStorage Class Reference	 8
4.3.1 Detailed Description	 8
4.4 createuser.CreateUserInput Class Reference	 9
4.5 common.DataCreatorInputErrors Class Reference	 9
4.5.1 Detailed Description	 10
4.6 models.DecisionPoint.DecisionPoint Class Reference	 10
4.6.1 Member Data Documentation	 11
4.6.1.1 added_at	 11
4.6.1.2 clinician_id	 11
4.6.1.3 decision_type	 11
4.6.1.4 on_pathway_id	 11
4.6.1.5 updated_at	 12
4.7 dataloaders.decision_point.DecisionPointLoader Class Reference	 12
4.7.1 Detailed Description	 13
4.7.2 Member Function Documentation	 13
4.7.2.1 load_from_id()	 13
4.7.2.2 load_many_from_id()	 13
4.8 dataloaders.decision_point.DecisionPointsByOnPathway Class Reference	 14
4.8.1 Detailed Description	 14
4.8.2 Member Function Documentation	 14
4.8.2.1 load_many_from_id()	 14
4.9 dataloaders.decision_point.DecisionPointsByPatient Class Reference	 14
4.9.1 Detailed Description	 15
4.9.2 Member Function Documentation	 15
4.9.2.1 load_from_id()	 15
4.10 SdTypes.DecisionTypes Class Reference	 15
4.11 authentication.logincontroller.LoginController Class Reference	 16

4.11.1 Detailed Description	16
4.11.2 Member Function Documentation	16
4.11.2.1 login()	17
4.11.2.2 logout()	17
4.12 models.Milestone.Milestone Class Reference	17
4.12.1 Member Data Documentation	18
4.12.1.1 added_at	18
4.12.1.2 current_state	18
4.12.1.3 decision_point_id	19
4.12.1.4 fwd_decision_point_id	19
4.12.1.5 milestone_type_id	19
4.12.1.6 on_pathway_id	19
4.12.1.7 test_result_reference_id	19
4.12.1.8 updated_at	20
4.13 dataloaders.milestone.MilestoneByDecisionPointLoader Class Reference	20
4.13.1 Detailed Description	21
4.13.2 Member Function Documentation	21
4.13.2.1 load_from_id()	21
4.13.2.2 load_many_from_id()	22
4.14 dataloaders.milestone.MilestoneByOnPathway Class Reference	22
4.14.1 Detailed Description	22
4.14.2 Member Function Documentation	22
4.14.2.1 load_many_from_id()	22
4.15 SdTypes.MilestoneState Class Reference	23
4.16 models.MilestoneType.MilestoneType Class Reference	24
4.16.1 Member Data Documentation	24
4.16.1.1 is_checkbox_hidden	25
4.17 dataloaders.milestone_type.MilestoneTypeLoader Class Reference	25
4.17.1 Detailed Description	26
4.17.2 Member Function Documentation	26
4.17.2.1 load_all()	26
4.17.2.2 load_from_id()	26
4.17.2.3 load_many_from_id()	27
4.18 models.OnPathway.OnPathway Class Reference	27
4.18.1 Member Data Documentation	28
4.18.1.1 added_at	28
4.18.1.2 awaiting_decision_type	28
4.18.1.3 is_discharged	28
4.18.1.4 lock_end_time	29
4.18.1.5 lock_user_id	29
4.18.1.6 pathway_id	29
4.18.1.7 patient_id	29

4.18.1.8 referred_at	29
4.18.1.9 under_care_of_id	30
4.18.1.10 updated_at	30
4.19 dataloaders.on_pathway.OnPathwayByldLoader Class Reference	30
4.19.1 Detailed Description	31
4.19.2 Member Function Documentation	31
4.19.2.1 load_from_id()	31
4.19.2.2 load_many_from_id()	32
4.20 dataloaders.on_pathway.OnPathwaysByPatient Class Reference	32
4.20.1 Detailed Description	32
4.20.2 Member Function Documentation	32
4.20.2.1 load_from_id()	33
4.21 models.Pathway.Pathway Class Reference	33
4.22 dataloaders.pathway.PathwayByIdLoader Class Reference	34
4.22.1 Detailed Description	35
4.22.2 Member Function Documentation	35
4.22.2.1 load_all()	35
4.22.2.2 load_from_id()	36
4.22.2.3 load_many_from_id()	36
4.23 dataloaders.pathway.PathwayByNameLoader Class Reference	36
4.23.1 Detailed Description	37
4.23.2 Member Function Documentation	37
4.23.2.1 load_from_id()	37
4.23.2.2 load_many_from_id()	38
4.24 models.Patient.Patient Class Reference	38
4.25 trustadapter.trustadapter.Patient_IE Class Reference	39
4.26 dataloaders.patient.PatientByHospitalNumberFromIELoader Class Reference	39
4.26.1 Detailed Description	40
4.26.2 Member Function Documentation	40
4.26.2.1 load_from_id()	41
4.26.2.2 load_many_from_id()	41
4.27 dataloaders.patient.PatientByHospitalNumberLoader Class Reference	41
4.27.1 Detailed Description	42
4.27.2 Member Function Documentation	42
4.27.2.1 load_from_id()	42
4.27.2.2 load_many_from_id()	43
4.28 dataloaders.patient.PatientByldLoader Class Reference	43
4.28.1 Detailed Description	44
4.28.2 Member Function Documentation	44
4.28.2.1 load_from_id()	44
4.28.2.2 load_many_from_id()	44
4.29 common.PatientNotInIntegrationEngineError Class Reference	45

4.29.1 Detailed Description	45
4.30 authentication.authentication.PermissionsError Class Reference	46
4.30.1 Detailed Description	46
4.31 trustadapter.trustadapter.PseudoTrustAdapter Class Reference	47
4.31.1 Detailed Description	48
4.31.2 Constructor & Destructor Documentation	48
4.31.2.1init()	48
4.31.3 Member Function Documentation	48
4.31.3.1 create_patient()	48
4.31.3.2 create_test_result()	49
4.31.3.3 load_many_patients()	49
4.31.3.4 load_many_test_results()	49
4.31.3.5 load_patient()	50
4.31.3.6 load_test_result()	50
4.31.3.7 test_connection()	50
4.32 services.PubSubService Class Reference	51
4.32.1 Constructor & Destructor Documentation	51
4.32.1.1init()	52
4.33 common.ReferencedItemDoesNotExistError Class Reference	52
4.33.1 Detailed Description	53
4.34 dataloaders.patient.ReferencePatient Class Reference	53
4.35 manage-demo.RequestPlaceholder Class Reference	53
4.35.1 Detailed Description	54
4.36 manage.RequestPlaceholder Class Reference	54
4.36.1 Detailed Description	54
4.37 authentication.authentication.SDAuthentication Class Reference	55
4.37.1 Detailed Description	55
4.38 containers.SDContainer Class Reference	56
4.38.1 Member Data Documentation	56
4.38.1.1 pubsub_service	57
4.38.1.2 trust_adapter_service	57
4.38.1.3 wiring_config	57
4.39 sdpubsub.SdPubSub Class Reference	57
4.40 sdpubsub.SdPubSubEvent Class Reference	58
4.41 authentication.authentication.SDUser Class Reference	58
4.42 models.Session.Session Class Reference	59
4.42.1 Member Data Documentation	60
4.42.1.1 expiry	60
4.42.1.2 user_id	60
4.43 authentication.authentication.SessionAlreadyExists Class Reference	60
4.43.1 Detailed Description	61
4.44 sdpubsub.Subscriber Class Reference	61

4.45 trustadapter.trustadapter.TestResult_IE Class Reference
4.46 dataloaders.test_result.TestResultByReferenceIdFromIELoader Class Reference
4.46.1 Detailed Description
4.46.2 Member Function Documentation
4.46.2.1 load_from_id()
4.46.2.2 load_many_from_id()
4.47 trustadapter.trustadapter.TestResultRequest_IE Class Reference
4.48 update_test_result.TestResultUpdate Class Reference
4.49 trustadapter.trustadapter.TrustAdapter Class Reference
4.49.1 Detailed Description
4.49.2 Member Function Documentation
4.49.2.1 create_patient()
4.49.2.2 create_test_result()
4.49.2.3 load_many_patients()
4.49.2.4 load_many_test_results()
4.49.2.5 load_patient()
4.49.2.6 load_test_result()
4.49.2.7 test_connection()
4.50 services.TrustAdapterService Class Reference
4.50.1 Constructor & Destructor Documentation
4.50.1.1init()
4.50.2 Member Function Documentation
4.50.2.1 create_patient()
4.50.2.2 create_test_result()
4.50.2.3 load_many_patients()
4.50.2.4 load_many_test_results()
4.50.2.5 load_patient()
4.50.2.6 load_test_result()
4.50.2.7 test_connection()
4.51 trustadapter.trustadapter.TrustIntegrationCommunicationError Class Reference
4.51.1 Detailed Description
4.52 sdpubsub.Unsubscribed Class Reference
4.53 models.User.User Class Reference
4.53.1 Member Data Documentation
4.53.1.1 default_pathway_id
4.53.1.2 last_login
4.54 dataloaders.user.UserByldLoader Class Reference
4.54.1 Detailed Description
4.54.2 Member Function Documentation
4.54.2.1 load_from_id()
4.54.2.2 load_many_from_id()
4.55 dataloaders.user.UserByUsernameLoader Class Reference

4.55.1 Detailed Description	78
4.55.2 Member Function Documentation	78
4.55.2.1 load_from_id()	78
4.55.2.2 load_many_from_id()	78
4.56 datacreators.decision_point.UserDoesNotOwnLock Class Reference	79
4.56.1 Detailed Description	79
Index	81

Chapter 1

Ariadne implementation

1.0.1 Data type definitions (patient, decisionpoint, etc)

- · Create data type definition
- Save in gql/types
- Add import to gql/types/__init__.py

1.0.2 Queries (getPatient, etc)

- · Create query definition
- Save in gql/query
- Add import to gql/query/__init__.py

1.0.3 Mutations (createPatient, etc)

- · Create mutation definition
- Save in gql/mutation
- Add import to gql/mutation/__init__.py

1.0.4 Scalars (Date/DateTime, etc)

- Add definition in gql/scalars.py
- · Add serialize function
- Add to type_list

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

services.BaseService	7
services.PubSubService	51
services.TrustAdapterService	68
tests.conftest.ContextStorage	8
common.DataCreatorInputErrors	9
dataloaders.decision point.DecisionPointsByOnPathway	14
dataloaders.decision_point.DecisionPointsByPatient	
containers.DeclarativeContainer	
containers.SDContainer	56
dict	
manage-demo.RequestPlaceholder	53
manage.RequestPlaceholder	
enum.Enum	
SdTypes.DecisionTypes	15
SdTypes.MilestoneState	
Exception	
authentication.authentication.PermissionsError	46
authentication.authentication.SessionAlreadyExists	60
authentication.logincontroller.ContextNotDefined	
common.PatientNotInIntegrationEngineError	
common.ReferencedItemDoesNotExistError	
datacreators.decision_point.UserDoesNotOwnLock	
sdpubsub.Unsubscribed	
trustadapter.trustadapter.TrustIntegrationCommunicationError	
authentication.logincontroller.LoginController	
dataloaders.milestone.MilestoneByOnPathway	
db.Model	
models.DecisionPoint.DecisionPoint	10
models.Milestone.Milestone	17
models.MilestoneType.MilestoneType	
models.OnPathway.OnPathway	
models.Pathway.Pathway	
models.Patient.Patient	
models.Session.Session	
models.User.User	

Hierarchical Index

dataloaders.on_pathway.OnPathwaysByPatient	. 32
trustadapter.trustadapter.Patient_IE	. 39
dataloaders.patient.ReferencePatient	
sdpubsub.SdPubSub	. 57
sdpubsub.SdPubSubEvent	. 58
sdpubsub.Subscriber	61
trustadapter.trustadapter.TestResult_IE	61
trustadapter.trustadapter.TestResultRequest_IE	64
ABC	
trustadapter.trustadapter.TrustAdapter	. 65
trustadapter.trustadapter.PseudoTrustAdapter	. 47
AuthenticationBackend	
authentication.authentication.SDAuthentication	. 55
BaseModel	
createuser.CreateUserInput	. 9
update test result.TestResultUpdate	
BaseUser	
authentication.authentication.SDUser	. 58
DataLoader	
dataloaders.decision_point.DecisionPointLoader	. 12
dataloaders.milestone.MilestoneByDecisionPointLoader	
dataloaders.milestone type.MilestoneTypeLoader	
dataloaders.on pathway.OnPathwayByIdLoader	
dataloaders.pathway.PathwayByIdLoader	
dataloaders.pathway.PathwayByNameLoader	
dataloaders.patient.PatientByHospitalNumberFromIELoader	
dataloaders.patient.PatientByHospitalNumberLoader	
dataloaders.patient.PatientByldLoader	
dataloaders.test result.TestResultByReferenceIdFromIELoader	
dataloaders.user.UserByldLoader	
dataloaders.user.UserByUsernameLoader	

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

services.BaseService
authentication.logincontroller.ContextNotDefined
tests.conftest.ContextStorage
createuser.CreateUserInput
common.DataCreatorInputErrors
models.DecisionPoint.DecisionPoint
dataloaders.decision_point.DecisionPointLoader
dataloaders.decision_point.DecisionPointsByOnPathway
dataloaders.decision_point.DecisionPointsByPatient
SdTypes.DecisionTypes
authentication.logincontroller.LoginController
models.Milestone.Milestone
dataloaders.milestone.MilestoneByDecisionPointLoader
dataloaders.milestone.MilestoneByOnPathway
SdTypes.MilestoneState
models.MilestoneType.MilestoneType
dataloaders.milestone_type.MilestoneTypeLoader
models.OnPathway.OnPathway
dataloaders.on_pathway.OnPathwayByldLoader
dataloaders.on_pathway.OnPathwaysByPatient
models.Pathway.Pathway
dataloaders.pathway.PathwayByldLoader
dataloaders.pathway.PathwayByNameLoader
models.Patient.Patient
trustadapter.trustadapter.Patient_IE
dataloaders.patient.PatientByHospitalNumberFromIELoader
dataloaders.patient.PatientByHospitalNumberLoader
dataloaders.patient.PatientByldLoader
common.PatientNotInIntegrationEngineError
authentication.authentication.PermissionsError
trustadapter.trustadapter.PseudoTrustAdapter
services.PubSubService
common.ReferencedItemDoesNotExistError
dataloaders.patient.ReferencePatient
manage-demo.RequestPlaceholder

6 Class Index

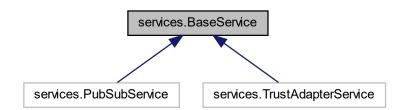
manage.RequestPlaceholder	54
authentication.authentication.SDAuthentication	55
containers.SDContainer	56
sdpubsub.SdPubSub	57
sdpubsub.SdPubSubEvent	58
authentication.authentication.SDUser	58
models.Session.Session	59
authentication.authentication.SessionAlreadyExists	60
sdpubsub.Subscriber	61
trustadapter.trustadapter.TestResult_IE	61
dataloaders.test_result.TestResultByReferenceIdFromIELoader	62
trustadapter.trustadapter.TestResultRequest_IE	64
update_test_result.TestResultUpdate	64
	65
services.TrustAdapterService	68
trustadapter.trustadapter.TrustIntegrationCommunicationError	72
sdpubsub.Unsubscribed	73
models.User.User	74
dataloaders.user.UserByldLoader	75
dataloaders.user.UserByUsernameLoader	77
datacreators decision, point UserDoesNotOwnLock	79

Chapter 4

Class Documentation

4.1 services.BaseService Class Reference

Inheritance diagram for services.BaseService:



Public Member Functions

• def __init__ (self)

Public Attributes

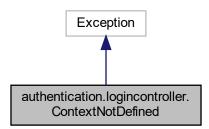
logger

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

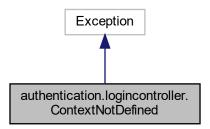
· services.py

4.2 authentication.logincontroller.ContextNotDefined Class Reference

Inheritance diagram for authentication.logincontroller.ContextNotDefined:



Collaboration diagram for authentication.logincontroller.ContextNotDefined:



4.2.1 Detailed Description

Raised when the context variable has not been specified when requried

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

· authentication/logincontroller.py

4.3 tests.conftest.ContextStorage Class Reference

4.3.1 Detailed Description

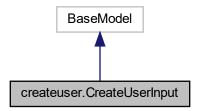
Used to hold functions and data between test cases $% \left(1\right) =\left(1\right) \left(1\right)$

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

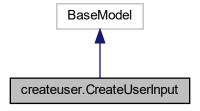
tests/conftest.py

4.4 createuser.CreateUserInput Class Reference

Inheritance diagram for createuser.CreateUserInput:



Collaboration diagram for createuser.CreateUserInput:



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

· rest/createuser.py

4.5 common.DataCreatorInputErrors Class Reference

Public Member Functions

- def __init__ (self)
- def addError (self, str field=None, str message=None)
- def hasErrors (self)

Public Attributes

errorList

4.5.1 Detailed Description

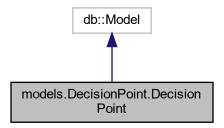
Stores user errors for data creators where user input is taken, or possible user errors occur

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

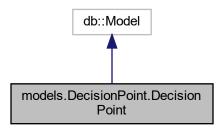
· common.py

4.6 models.DecisionPoint.DecisionPoint Class Reference

Inheritance diagram for models.DecisionPoint.DecisionPoint:



Collaboration diagram for models.DecisionPoint.DecisionPoint:



Static Public Attributes

- **id** = db.Column(db.Integer(), primary_key=True)
- · clinician id
- · on pathway id
- · decision_type
- added_at
- updated_at
- **clinic_history** = db.Column(db.String(), nullable=False)
- **comorbidities** = db.Column(db.String(), nullable=False)

4.6.1 Member Data Documentation

4.6.1.1 added at

```
models.DecisionPoint.DecisionPoint.added_at [static]
```

Initial value:

4.6.1.2 clinician_id

models.DecisionPoint.DecisionPoint.clinician_id [static]

Initial value:

4.6.1.3 decision type

models.DecisionPoint.DecisionPoint.decision_type [static]

Initial value:

4.6.1.4 on_pathway_id

```
models.DecisionPoint.DecisionPoint.on_pathway_id [static]
```

Initial value:

4.6.1.5 updated_at

models.DecisionPoint.DecisionPoint.updated_at [static]

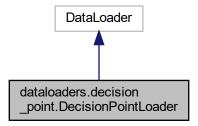
Initial value:

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

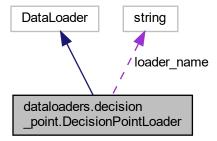
· models/DecisionPoint.py

4.7 dataloaders.decision_point.DecisionPointLoader Class Reference

Inheritance diagram for dataloaders.decision_point.DecisionPointLoader:



 $Collaboration\ diagram\ for\ dataloaders. decision_point. DecisionPointLoader:$



Public Member Functions

- def __init__ (self, db)
- List[DecisionPoint] fetch (self, keys)
- List[DecisionPoint] batch_load_fn (self, keys)
- Union[DecisionPoint, None] load from id (cls, context=None, int id=None)
- Union[List[DecisionPoint], None] load_many_from_id (cls, context=None, List[int] ids=None)

Static Public Attributes

• string loader_name = "_decision_point_loader"

4.7.1 Detailed Description

```
This is class for loading decision points and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.7.2 Member Function Documentation

4.7.2.1 load_from_id()

4.7.2.2 load_many_from_id()

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

· dataloaders/decision_point.py

4.8 dataloaders.decision_point.DecisionPointsByOnPathway Class Reference

Static Public Member Functions

• Union[List[DecisionPoint], None] load_many_from_id (context=None, id=None)

4.8.1 Detailed Description

```
This is class for loading decision points using an OnPathway id

Attributes:

None
```

4.8.2 Member Function Documentation

4.8.2.1 load many from id()

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

· dataloaders/decision_point.py

4.9 dataloaders.decision_point.DecisionPointsByPatient Class Reference

Static Public Member Functions

Union[List[DecisionPoint], None] load_from_id (context=None, int id=None, int pathwayId=None, DecisionTypes decisionType=None, Union[int, None] limit=None)

4.9.1 Detailed Description

```
This is class for loading decision points using a patient's ID

Attributes:

None
```

4.9.2 Member Function Documentation

4.9.2.1 load_from_id()

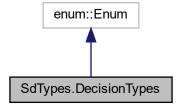
```
from_id (
           context = None,
          int id = None,
           int pathwayId = None,
           DecisionTypes decisionType = None,
           Union[int, None] limit = None ) [static]
   Load all decision points by a patient's record {\tt ID}
   and where filters match
   Parameters:
      context (dict): request context
      id (int): ID of patient's record
      pathwayId (int): ID of pathway to filter by
      decisionType (DecisionTypes): decision type to filter by
      limit (int): number of records to return
      List[DecisionPoint]/None
```

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

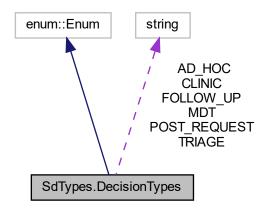
· dataloaders/decision_point.py

4.10 SdTypes.DecisionTypes Class Reference

Inheritance diagram for SdTypes.DecisionTypes:



Collaboration diagram for SdTypes.DecisionTypes:



Static Public Attributes

- string TRIAGE = "TRIAGE"
- string **CLINIC** = "CLINIC"
- string MDT = "MDT"
- string **AD_HOC** = "AD_HOC"
- string FOLLOW_UP = "FOLLOW UP"
- string **POST_REQUEST** = "POST_REQUEST"

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

· SdTypes.py

4.11 authentication.logincontroller.LoginController Class Reference

Public Member Functions

- def __init__ (self, context=None)
- def login (self, Request request=None)
- def logout (self, Request request=None)

4.11.1 Detailed Description

A class to handle authentication methods

4.11.2 Member Function Documentation

4.11.2.1 login()

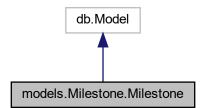
4.11.2.2 logout()

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

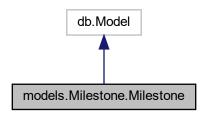
· authentication/logincontroller.py

4.12 models.Milestone.Milestone Class Reference

Inheritance diagram for models. Milestone. Milestone:



Collaboration diagram for models.Milestone.Milestone:



Static Public Attributes

- **id** = db.Column(db.Integer(), primary_key=True)
- on_pathway_id
- · decision_point_id
- fwd_decision_point_id
- test_result_reference_id
- current_state
- milestone_type_id
- added_at
- updated_at

4.12.1 Member Data Documentation

4.12.1.1 added_at

```
models.Milestone.Milestone.added_at [static]
```

Initial value:

4.12.1.2 current_state

```
models.Milestone.Current_state [static]
```

Initial value:

```
= db.Column(
Enum(MilestoneState, native_enum=False),
default=MilestoneState.INIT.value,
server_default=MilestoneState.INIT.value, nullable=False
```

4.12.1.3 decision_point_id

```
models.Milestone.Milestone.decision_point_id [static]
```

Initial value:

4.12.1.4 fwd_decision_point_id

```
models.Milestone.Milestone.fwd_decision_point_id [static]
```

Initial value:

```
= db.Column(
    db.Integer(),
    db.ForeignKey('tbl_decision_point.id'), nullable=True)
```

4.12.1.5 milestone_type_id

```
models.Milestone.Milestone.milestone_type_id [static]
```

Initial value:

4.12.1.6 on_pathway_id

```
models.Milestone.Milestone.on_pathway_id [static]
```

Initial value:

4.12.1.7 test_result_reference_id

```
models.Milestone.Milestone.test_result_reference_id [static]
```

Initial value:

```
= db.Column(
     db.String(), unique=True, nullable=False)
```

4.12.1.8 updated_at

models.Milestone.Milestone.updated_at [static]

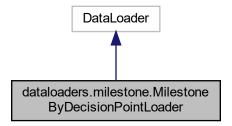
Initial value:

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

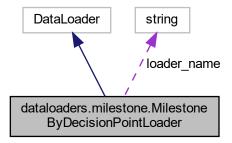
· models/Milestone.py

4.13 dataloaders.milestone.MilestoneByDecisionPointLoader Class Reference

Inheritance diagram for dataloaders.milestone.MilestoneByDecisionPointLoader:



 $Collaboration\ diagram\ for\ dataloaders. milestone. Milestone By Decision Point Loader:$



Public Member Functions

- def __init__ (self, db)
- Dict[int, Milestone] fetch (self, keys)
- def batch_load_fn (self, keys)
- Optional[Milestone] load_from_id (cls, context=None, id=None)
- Optional[List[Milestone]] load_many_from_id (cls, context=None, ids=None)
- "MilestoneByDecisionPointLoader" prime_with_context (cls, context=None, id=None, value=None)

Static Public Attributes

• string **loader_name** = "_milestone_by_decision_point_loader"

4.13.1 Detailed Description

```
This is class for loading milestones using IDs from
DecisionPoint and caching the result in the request context
Attributes:
loader_name (str): unique name of loader to cache data under
```

4.13.2 Member Function Documentation

4.13.2.1 load from id()

4.13.2.2 load_many_from_id()

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

· dataloaders/milestone.py

4.14 dataloaders.milestone.MilestoneByOnPathway Class Reference

Static Public Member Functions

• Union[List[Milestone], None] load_many_from_id (context=None, id=None, notOnDecisionPoint=None)

4.14.1 Detailed Description

```
This is class for loading milestones and caching the result in the request context

Attributes:

None
```

4.14.2 Member Function Documentation

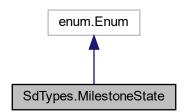
4.14.2.1 load many from id()

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

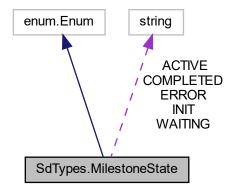
dataloaders/milestone.py

4.15 SdTypes.MilestoneState Class Reference

Inheritance diagram for SdTypes.MilestoneState:



Collaboration diagram for SdTypes.MilestoneState:



Static Public Attributes

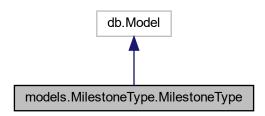
- string **INIT** = "INIT"
- string **ACTIVE** = "ACTIVE"
- string **WAITING** = "WAITING"
- string **ERROR** = "ERROR"
- string **COMPLETED** = "COMPLETED"

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

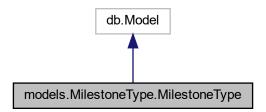
SdTypes.py

4.16 models.MilestoneType.MilestoneType Class Reference

 $Inheritance\ diagram\ for\ models. Milestone Type. Milestone Type:$



 $Collaboration\ diagram\ for\ models. Milestone Type. Milestone Type:$



Static Public Attributes

- **id** = db.Column(db.Integer(), primary_key=True)
- **name** = db.Column(db.String(), nullable=False)
- ref_name = db.Column(db.String(), nullable=False)
- **is_discharge** = db.Column(db.Boolean(), nullable=False, default=False)
- is_checkbox_hidden
- **is_test_request** = db.Column(db.Boolean(), nullable=False, default=False)

4.16.1 Member Data Documentation

4.16.1.1 is_checkbox_hidden

```
models.MilestoneType.MilestoneType.is_checkbox_hidden [static]
```

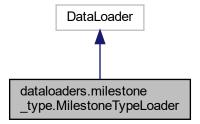
Initial value:

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

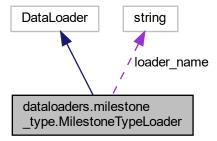
models/MilestoneType.py

4.17 dataloaders.milestone_type.MilestoneTypeLoader Class Reference

Inheritance diagram for dataloaders.milestone_type.MilestoneTypeLoader:



 $Collaboration\ diagram\ for\ dataloaders.milestone_type. MilestoneTypeLoader:$



Public Member Functions

- def __init__ (self, db)
- Dict[int, MilestoneType] fetch (self, keys)
- List[MilestoneType] batch_load_fn (self, keys)
- Optional[MilestoneType] load_from_id (cls, context=None, id=None)
- Optional[List[MilestoneType]] load_many_from_id (cls, context=None, ids=None)
- def load all (cls, context=None)

Static Public Attributes

• string loader name = " milestone type loader"

4.17.1 Detailed Description

```
This is class for loading MilestoneType objects and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.17.2 Member Function Documentation

4.17.2.1 load all()

4.17.2.2 load_from_id()

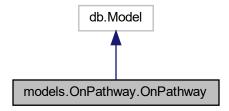
4.17.2.3 load_many_from_id()

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

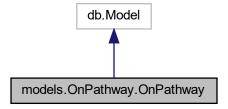
dataloaders/milestone_type.py

4.18 models.OnPathway.OnPathway Class Reference

Inheritance diagram for models.OnPathway.OnPathway:



Collaboration diagram for models.OnPathway.OnPathway:



Static Public Attributes

```
• id = db.Column(db.Integer(), primary_key=True)
```

- · patient_id
- · pathway id
- · is_discharged
- · awaiting_decision_type
- added_at
- updated_at
- · referred at
- under_care_of_id
- lock_user_id
- · lock_end_time

4.18.1 Member Data Documentation

4.18.1.1 added at

```
models.OnPathway.OnPathway.added_at [static]
```

Initial value:

4.18.1.2 awaiting_decision_type

```
models.OnPathway.OnPathway.awaiting_decision_type [static]
```

Initial value:

4.18.1.3 is_discharged

```
models.OnPathway.OnPathway.is_discharged [static]
```

Initial value:

4.18.1.4 lock_end_time

4.18.1.5 lock_user_id

models.OnPathway.OnPathway.lock_user_id [static]

Initial value:

4.18.1.6 pathway_id

models.OnPathway.OnPathway.pathway_id [static]

Initial value:

4.18.1.7 patient_id

models.OnPathway.OnPathway.patient_id [static]

Initial value:

4.18.1.8 referred_at

models.OnPathway.OnPathway.referred_at [static]

Initial value:

4.18.1.9 under_care_of_id

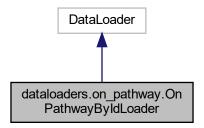
4.18.1.10 updated_at

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

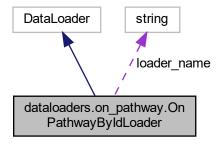
· models/OnPathway.py

4.19 dataloaders.on_pathway.OnPathwayByldLoader Class Reference

 $Inheritance\ diagram\ for\ dataloaders. on \underline{\hspace{0.3cm}} pathway. On Pathway Byld Loader:$



Collaboration diagram for dataloaders.on_pathway.OnPathwayByIdLoader:



Public Member Functions

- def __init__ (self, db)
- List[OnPathway] fetch (self, keys)
- List[OnPathway] batch_load_fn (self, keys)
- Union[OnPathway, None] load_from_id (cls, context=None, id=None)
- Union[List[OnPathway], None] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_on_pathway_loader"

4.19.1 Detailed Description

```
This is class for loading OnPathway records by their IDs

Attributes:
loader_name (str): unique name of loader to cache data under
```

4.19.2 Member Function Documentation

4.19.2.1 load from id()

4.19.2.2 load_many_from_id()

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

· dataloaders/on_pathway.py

4.20 dataloaders.on_pathway.OnPathwaysByPatient Class Reference

Static Public Member Functions

• Union[List[OnPathway], None] load_from_id (context=None, id=None, pathwayId=None, include ← Discharged=None, awaitingDecisionType=None, limit=None)

4.20.1 Detailed Description

```
This is class for loading OnPathway records
by their Patient ID
Attributes:
None
```

4.20.2 Member Function Documentation

4.20.2.1 load_from_id()

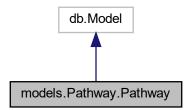
```
Union[List[OnPathway], None] dataloaders.on_pathway.OnPathwaysByPatient.load_from_id (
             context = None,
              id = None,
             pathwayId = None,
              includeDischarged = None,
              awaitingDecisionType = None,
             limit = None ) [static]
    Loads OnPathway records by their Patient ID
    Parameters:
        context (dict): request context
        ids (List[int]): ID to find
        pathwayId (int): filter by OnPathway ID
        includeDischarged (bool): filter to include discharged patients
        awaitingDecisionType (DecisionTypes): filter by
           awaiting_decision_types
        limit (int): number of records to return
    Returns:
        List[OnPathway]/None
```

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

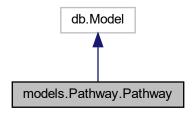
· dataloaders/on_pathway.py

4.21 models.Pathway.Pathway Class Reference

Inheritance diagram for models.Pathway.Pathway:



Collaboration diagram for models.Pathway.Pathway:



Static Public Attributes

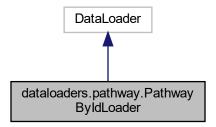
- **id** = db.Column(db.Integer(), primary_key=True)
- **name** = db.Column(db.String(), unique=True)

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

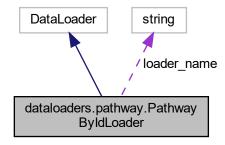
· models/Pathway.py

4.22 dataloaders.pathway.PathwayByldLoader Class Reference

 $Inheritance\ diagram\ for\ dataloaders.pathway. Pathway Byld Loader:$



Collaboration diagram for dataloaders.pathway.PathwayByldLoader:



Public Member Functions

- def __init__ (self, db)
- List[Pathway] fetch (self, keys)
- List[Pathway] batch_load_fn (self, keys)
- Union[Pathway, None] load_from_id (cls, context=None, id=None)
- Union[List[Pathway], None] load_many_from_id (cls, context=None, ids=None)
- Union[List[Pathway], None] load all (cls)

Static Public Attributes

• string **loader_name** = "_pathway_by_id_loader"

4.22.1 Detailed Description

```
This is class for loading Pathways and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.22.2 Member Function Documentation

4.22.2.1 load_all()

4.22.2.2 load_from_id()

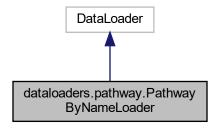
4.22.2.3 load_many_from_id()

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

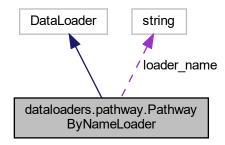
dataloaders/pathway.py

4.23 dataloaders.pathway.PathwayByNameLoader Class Reference

 $Inheritance\ diagram\ for\ dataloaders.pathway. Pathway By Name Loader:$



Collaboration diagram for dataloaders.pathway.PathwayByNameLoader:



Public Member Functions

- def __init__ (self, db)
- List[Pathway] fetch (self, keys)
- List[Pathway] batch_load_fn (self, keys)
- Union[Pathway, None] load_from_id (cls, context=None, id=None)
- Union[List[Pathway], None] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_pathway_by_name_loader"

4.23.1 Detailed Description

```
This is class for loading Pathways by their name and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.23.2 Member Function Documentation

4.23.2.1 load from id()

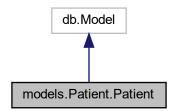
4.23.2.2 load_many_from_id()

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

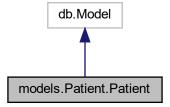
· dataloaders/pathway.py

4.24 models.Patient.Patient Class Reference

Inheritance diagram for models.Patient.Patient:



Collaboration diagram for models.Patient.Patient:



Static Public Attributes

- **id** = db.Column(db.Integer(), primary_key=True)
- **hospital_number** = db.Column(db.String(), nullable=False, unique=True)
- **national_number** = db.Column(db.String(), nullable=False, unique=True)

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

· models/Patient.py

4.25 trustadapter.trustadapter.Patient_IE Class Reference

Static Public Attributes

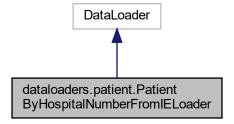
- int
- str
- date

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

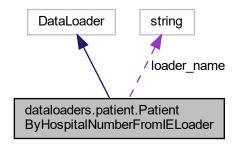
· trustadapter/trustadapter.py

4.26 dataloaders.patient.PatientByHospitalNumberFromIELoader Class Reference

Inheritance diagram for dataloaders.patient.PatientByHospitalNumberFromIELoader:



Collaboration diagram for dataloaders.patient.PatientByHospitalNumberFromIELoader:



Public Member Functions

- def __init__ (self, context=None)
- List[Patient] batch_load_fn (self, keys)
- Optional[ReferencePatient] load_from_id (cls, context=None, id=None)
- List[Optional[ReferencePatient]] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_patient_by_hospital_number_from_ie_loader"

4.26.1 Detailed Description

```
This is class for loading patients by their hospital numbers and caching the result in the request context from the TrustAdapter

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.26.2 Member Function Documentation

4.26.2.1 load_from_id()

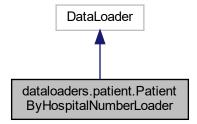
4.26.2.2 load_many_from_id()

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

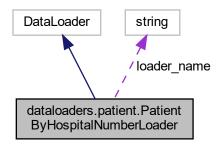
· dataloaders/patient.py

4.27 dataloaders.patient.PatientByHospitalNumberLoader Class Reference

Inheritance diagram for dataloaders.patient.PatientByHospitalNumberLoader:



Collaboration diagram for dataloaders.patient.PatientByHospitalNumberLoader:



Public Member Functions

- def __init__ (self, db)
- Dict[str, Patient] fetch (self, keys)
- List[Patient] batch_load_fn (self, keys)
- Union[Patient, None] load_from_id (cls, context=None, id=None)
- Union[List[Patient], None] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_patient_by_hospital_number_loader"

4.27.1 Detailed Description

```
This is class for loading patients by their hospital numbers and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.27.2 Member Function Documentation

4.27.2.1 load from id()

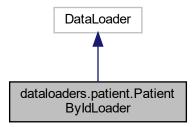
4.27.2.2 load_many_from_id()

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

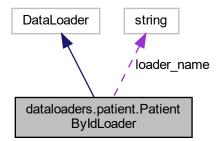
· dataloaders/patient.py

4.28 dataloaders.patient.PatientByldLoader Class Reference

Inheritance diagram for dataloaders.patient.PatientByldLoader:



 $Collaboration\ diagram\ for\ dataloaders.patient. Patient By Id Loader:$



Public Member Functions

- def __init__ (self, db)
- List[Patient] fetch (self, keys)
- Dict[str, Patient] batch_load_fn (self, keys)
- Union[Patient, None] load_from_id (cls, context=None, id=None)
- Union[List[Patient], None] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string **loader_name** = "_patient_by_id_loader"

4.28.1 Detailed Description

```
This is class for loading patients and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.28.2 Member Function Documentation

4.28.2.1 load_from_id()

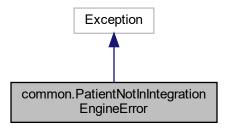
4.28.2.2 load_many_from_id()

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

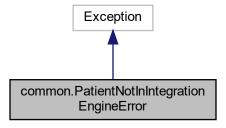
dataloaders/patient.py

4.29 common.PatientNotInIntegrationEngineError Class Reference

 $Inheritance\ diagram\ for\ common. Patient NotInIntegration Engine Error:$



Collaboration diagram for common.PatientNotInIntegrationEngineError:



4.29.1 Detailed Description

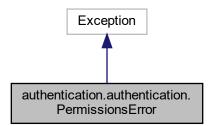
This is raised when a patient cannot be found via the integration engine

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

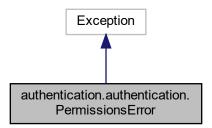
· common.py

4.30 authentication.authentication.PermissionsError Class Reference

Inheritance diagram for authentication.authentication.PermissionsError:



Collaboration diagram for authentication.authentication.PermissionsError:



4.30.1 Detailed Description

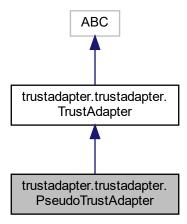
Raised when a user is lacking a required permission

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

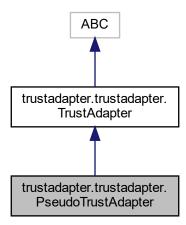
· authentication/authentication.py

4.31 trustadapter.trustadapter.PseudoTrustAdapter Class Reference

Inheritance diagram for trustadapter.trustadapter.PseudoTrustAdapter:



Collaboration diagram for trustadapter.trustadapter.PseudoTrustAdapter:



Public Member Functions

- def __init__ (self)
- def test_connection (self, str auth_token=None)
- def create_patient (self, Patient_IE patient=None, str auth_token=None)
- Optional[Patient_IE] load_patient (self, str hospitalNumber=None, str auth_token=None)

- List[Optional[Patient_IE]] load_many_patients (self, List hospitalNumbers=None, str auth_token=None)
- TestResult_IE create_test_result (self, TestResultRequest_IE testResult, str auth_token=None)
- Optional[TestResult_IE] load_test_result (self, str recordId=None, str auth_token=None)
- List[Optional[TestResult_IE]] load_many_test_results (self, List recordIds=None, str auth_token=None)

Public Attributes

TRUST_INTEGRATION_ENGINE_ENDPOINT

4.31.1 Detailed Description

```
Pseudo Integration Engine

This is the Integration Engine implementation for the pseudo-trust backend.
```

4.31.2 Constructor & Destructor Documentation

4.31.3 Member Function Documentation

4.31.3.1 create_patient()

Reimplemented from trustadapter.trustadapter.TrustAdapter.

4.31.3.2 create_test_result()

Reimplemented from trustadapter.trustadapter.TrustAdapter.

4.31.3.3 load many patients()

Reimplemented from trustadapter.trustadapter.TrustAdapter.

4.31.3.4 load_many_test_results()

 $Reimplemented\ from\ trustadapter. TrustAdapter.$

4.31.3.5 load_patient()

Reimplemented from trustadapter.trustadapter.TrustAdapter.

4.31.3.6 load_test_result()

 $\label{lem:lemented$

4.31.3.7 test_connection()

```
def trustadapter.trustadapter.PseudoTrustAdapter.test_connection ( self, \\ str \quad auth\_token = None \; ) Tests the connection to the trust integration engine :return: Boolean success state of connection
```

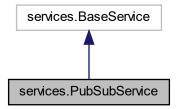
 $\label{lem:lemented$

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

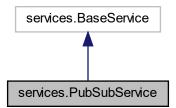
trustadapter/trustadapter.py

4.32 services.PubSubService Class Reference

Inheritance diagram for services. PubSubService:



Collaboration diagram for services. PubSubService:



Public Member Functions

- def __init__ (self, SdPubSub pubsub_client)
- def **publish** (self, str topic, Any message)
- def **subscribe** (self, str topic)

Additional Inherited Members

4.32.1 Constructor & Destructor Documentation

4.32.1.1 __init__()

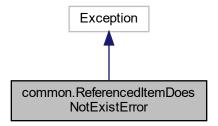
Reimplemented from services.BaseService.

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

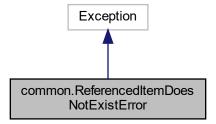
· services.py

4.33 common.ReferencedItemDoesNotExistError Class Reference

 $Inheritance\ diagram\ for\ common. Referenced Item Does Not Exist Error:$



 $Collaboration\ diagram\ for\ common. Referenced Item Does Not Exist Error:$



4.33.1 Detailed Description

This occurs when a referenced item does not exist and cannot be found when it should

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

· common.py

4.34 dataloaders.patient.ReferencePatient Class Reference

Static Public Attributes

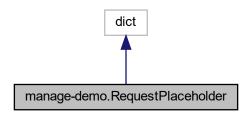
- str
- date

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

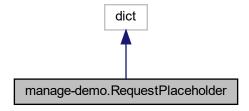
· dataloaders/patient.py

4.35 manage-demo.RequestPlaceholder Class Reference

Inheritance diagram for manage-demo.RequestPlaceholder:



Collaboration diagram for manage-demo.RequestPlaceholder:



4.35.1 Detailed Description

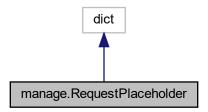
This is a test

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

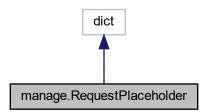
· manage-demo.py

4.36 manage.RequestPlaceholder Class Reference

Inheritance diagram for manage.RequestPlaceholder:



Collaboration diagram for manage.RequestPlaceholder:



4.36.1 Detailed Description

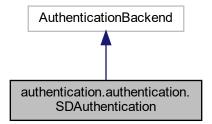
This is a class that has the properties of a dictionary too. This is to emulate how Starlette's request class operates, as context has to be passed to some functions to get the db connection and user objects

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

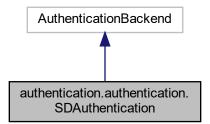
manage.py

4.37 authentication.authentication.SDAuthentication Class Reference

Inheritance diagram for authentication.authentication.SDAuthentication:



Collaboration diagram for authentication.authentication.SDAuthentication:



Public Member Functions

• def authenticate (self, HTTPConnection request)

4.37.1 Detailed Description

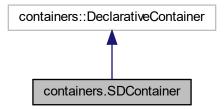
The backend's authentication mechanism as a middleware

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

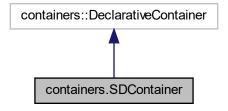
• authentication/authentication.py

4.38 containers.SDContainer Class Reference

Inheritance diagram for containers.SDContainer:



Collaboration diagram for containers.SDContainer:



Static Public Attributes

- wiring_config
- **config** = providers.Configuration()
- **trust_adapter** = trustadapter.PseudoTrustAdapter
- **pubsub** = sdpubsub.SdPubSub
- trust_adapter_client = providers.Singleton(trust_adapter)
- **pubsub_client** = providers.Singleton(pubsub)
- trust_adapter_service
- pubsub_service

4.38.1 Member Data Documentation

4.38.1.1 pubsub_service

4.38.1.2 trust_adapter_service

```
containers.SDContainer.trust_adapter_service [static]
```

Initial value:

4.38.1.3 wiring_config

```
containers.SDContainer.wiring_config [static]
```

Initial value:

```
containers.WiringConfiguration(
    modules=[
          "dataloaders", "datacreators",
          "gql.mutation.create_decision_point",
          "gql.query",
          "gql.subscription.milestone_resolved",
          "rest.update_test_result",
]
```

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

· containers.py

4.39 sdpubsub.SdPubSub Class Reference

Public Member Functions

- def __init__ (self)
- def publish (self, str topic, Any message)
- Asynclterator["Subscriber"] **subscribe** (self, str topic)

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

· sdpubsub.py

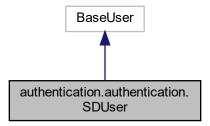
4.40 sdpubsub.SdPubSubEvent Class Reference

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

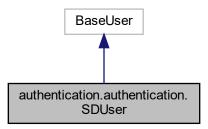
· sdpubsub.py

4.41 authentication.authentication.SDUser Class Reference

Inheritance diagram for authentication.authentication.SDUser:



Collaboration diagram for authentication.authentication.SDUser:



Public Member Functions

- None __init__ (self, int id=None, str username=None, str firstName=None, str lastName=None, str department=None, int default_pathway_id=None # TODO:make all either camelcase or snakecase)
- · bool is_authenticated (self)
- str get_display_name (self)
- str get_formatted_name (self)
- str get_department (self)

Public Attributes

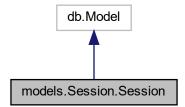
- id
- username
- firstName
- lastName
- department
- · default_pathway_id

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

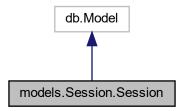
· authentication/authentication.py

4.42 models. Session. Session Class Reference

Inheritance diagram for models. Session. Session:



Collaboration diagram for models. Session. Session:



Static Public Attributes

- **session_key** = db.Column(db.String(), primary_key=True)
- user_id
- expiry

4.42.1 Member Data Documentation

4.42.1.1 expiry

```
models.Session.Session.expiry [static]
```

Initial value:

4.42.1.2 user_id

```
models.Session.Session.user_id [static]
```

Initial value:

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

models/Session.py

4.43 authentication.authentication.SessionAlreadyExists Class Reference

 $Inheritance\ diagram\ for\ authentication. authentication. Session Already Exists:$



Collaboration diagram for authentication.authentication.SessionAlreadyExists:



4.43.1 Detailed Description

Raised when a user attempts to login despite already having an active session

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

· authentication/authentication.py

4.44 sdpubsub.Subscriber Class Reference

Public Member Functions

- None __init__ (self, asyncio.Queue queue)
- Optional[AsyncGenerator] __aiter__ (self)
- def get (self)

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

• sdpubsub.py

4.45 trustadapter.trustadapter.TestResult_IE Class Reference

Static Public Attributes

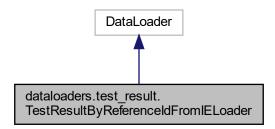
- int
- str
- · datetime

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

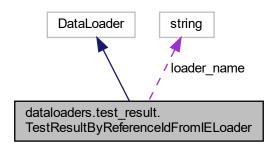
trustadapter/trustadapter.py

4.46 dataloaders.test_result.TestResultByReferenceIdFromIELoader Class Reference

Inheritance diagram for dataloaders.test_result.TestResultByReferenceIdFromIELoader:



 $Collaboration\ diagram\ for\ dataloaders. test_result. TestResultBy Reference IdFrom IEL oader:$



Public Member Functions

- def __init__ (self, context=None)
- Dict[int, TestResult_IE] fetch (self, keys, TrustAdapter trust_adapter=Provide[SDContainer.trust_adapter_←
 service])
- def batch_load_fn (self, keys)
- Optional[TestResult_IE] load_from_id (cls, context=None, id=None)
- List[Optional[TestResult_IE]] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_test_result_by_reference_id_from_ie_loader"

4.46.1 Detailed Description

```
This is class for loading test results by their reference IDs and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.46.2 Member Function Documentation

4.46.2.1 load_from_id()

4.46.2.2 load_many_from_id()

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

· dataloaders/test_result.py

4.47 trustadapter.trustadapter.TestResultRequest_IE Class Reference

Static Public Attributes

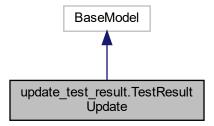
- · int
- str
- · datetime

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

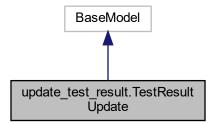
· trustadapter/trustadapter.py

4.48 update_test_result.TestResultUpdate Class Reference

Inheritance diagram for update_test_result.TestResultUpdate:



 $Collaboration\ diagram\ for\ update_test_result. TestResultUpdate:$



Static Public Attributes

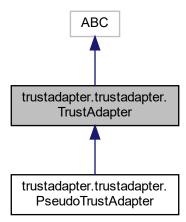
str

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

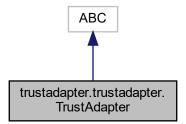
· rest/update_test_result.py

4.49 trustadapter.trustadapter.TrustAdapter Class Reference

Inheritance diagram for trustadapter.trustadapter.TrustAdapter:



 $Collaboration\ diagram\ for\ trustadapter. TrustAdapter:$



Public Member Functions

- def test_connection (self, str auth_token=None)
- def create_patient (self, Patient_IE patient, str auth_token=None)
- Optional[Patient_IE] load_patient (self, str hospitalNumber=None, str auth_token=None)
- List[Optional[Patient IE]] load many patients (self, List hospitalNumbers=None, str auth token=None)
- TestResult IE create test result (self, TestResultRequest IE testResult=None, str auth token=None)
- Optional[TestResult_IE] load_test_result (self, str recordId=None, str auth_token=None)
- List[Optional[TestResult_IE]] load_many_test_results (self, str recordIds=None, str auth_token=None)

4.49.1 Detailed Description

```
Integration Engine Abstract Base Class
This class represents the interface SD uses to communicate with a backend hospital system.
```

4.49.2 Member Function Documentation

4.49.2.1 create_patient()

 $Reimplemented\ in\ trustadapter. trustadapter. Pseudo Trust Adapter.$

4.49.2.2 create test result()

 $Reimplemented \ in \ trust adapter. trust adapter. Pseudo Trust Adapter.$

4.49.2.3 load_many_patients()

Reimplemented in trustadapter.trustadapter.PseudoTrustAdapter.

4.49.2.4 load many test results()

Reimplemented in trustadapter.trustadapter.PseudoTrustAdapter.

4.49.2.5 load patient()

Reimplemented in trustadapter.trustadapter.PseudoTrustAdapter.

4.49.2.6 load_test_result()

Reimplemented in trustadapter.trustadapter.PseudoTrustAdapter.

4.49.2.7 test_connection()

```
def trustadapter.trustadapter.TrustAdapter.test_connection ( self, \\ str = auth\_token = None \ ) Tests the connection to the trust integration engine :return: Boolean success state of connection
```

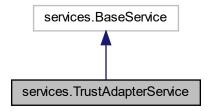
Reimplemented in trustadapter.trustadapter.PseudoTrustAdapter.

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

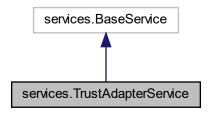
· trustadapter/trustadapter.py

4.50 services.TrustAdapterService Class Reference

Inheritance diagram for services. TrustAdapterService:



Collaboration diagram for services. TrustAdapterService:



Public Member Functions

- def init (self, TrustAdapter trust adapter client=None)
- def test_connection (self, str auth_token=None)
- def create_patient (self, Patient_IE patient, str auth_token=None)
- Optional[Patient_IE] load_patient (self, str hospitalNumber=None, str auth_token=None)
- List[Optional[Patient_IE]] load_many_patients (self, List hospitalNumbers=None, str auth_token=None)
- TestResult IE create test result (self, TestResultRequest IE testResult=None, str auth token=None)
- Optional[TestResult_IE] load_test_result (self, str recordId=None, str auth_token=None)
- List[Optional[TestResult_IE]] load_many_test_results (self, str recordIds=None, str auth_token=None)

Additional Inherited Members

4.50.1 Constructor & Destructor Documentation

```
4.50.1.1 __init__()
```

Reimplemented from services.BaseService.

4.50.2 Member Function Documentation

4.50.2.1 create_patient()

4.50.2.2 create_test_result()

4.50.2.3 load_many_patients()

4.50.2.4 load_many_test_results()

4.50.2.5 load_patient()

4.50.2.6 load_test_result()

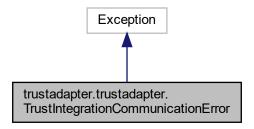
4.50.2.7 test_connection()

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

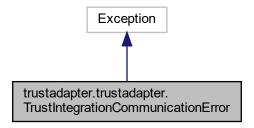
services.py

4.51 trustadapter.trustadapter.TrustIntegrationCommunicationError Class Reference

Inheritance diagram for trustadapter.trustadapter.TrustIntegrationCommunicationError:



Collaboration diagram for trustadapter.trustadapter.TrustIntegrationCommunicationError:



4.51.1 Detailed Description

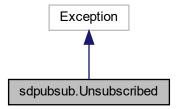
This is raised when the connection to the trust adapter fails or times out

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

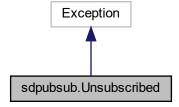
trustadapter/trustadapter.py

4.52 sdpubsub.Unsubscribed Class Reference

Inheritance diagram for sdpubsub. Unsubscribed:



Collaboration diagram for sdpubsub.Unsubscribed:

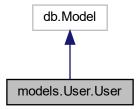


The documentation for this class was generated from the following file:

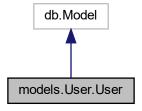
• sdpubsub.py

4.53 models.User.User Class Reference

Inheritance diagram for models. User. User:



Collaboration diagram for models.User.User:



Static Public Attributes

- **id** = db.Column(db.Integer(), primary_key=True)
- **username** = db.Column(db.String(), nullable=False, unique=True)
- **password** = db.Column(db.String(), nullable=False)
- **first_name** = db.Column(db.String(), nullable=False)
- last_name = db.Column(db.String(), nullable=False)
- **department** = db.Column(db.String(), nullable=False)
- last_login
- **is_active** = db.Column(db.Boolean(), nullable=False, default=True)
- · default_pathway_id

4.53.1 Member Data Documentation

4.53.1.1 default_pathway_id

4.53.1.2 last_login

```
models.User.User.last_login [static]

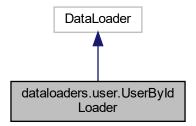
Initial value:
    db.Column(
         db.DateTime(), server_default=func.now(),
         nullable=False
```

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

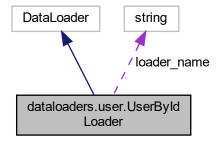
· models/User.py

4.54 dataloaders.user.UserByldLoader Class Reference

Inheritance diagram for dataloaders.user.UserByldLoader:



Collaboration diagram for dataloaders.user.UserByldLoader:



Public Member Functions

- def __init__ (self, db)
- List[User] fetch (self, keys)
- List[User] batch_load_fn (self, keys)
- Union[User, None] load_from_id (cls, context=None, id=None)
- Union[List[User], None] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_user_by_id_loader"

4.54.1 Detailed Description

```
This is class for loading users and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.54.2 Member Function Documentation

4.54.2.1 load_from_id()

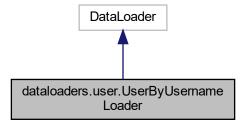
4.54.2.2 load_many_from_id()

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

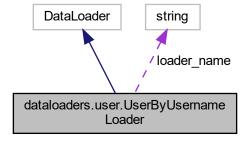
· dataloaders/user.py

4.55 dataloaders.user.UserByUsernameLoader Class Reference

Inheritance diagram for dataloaders.user.UserByUsernameLoader:



Collaboration diagram for dataloaders.user.UserByUsernameLoader:



Public Member Functions

- def __init__ (self, db)
- List[User] fetch (self, keys)
- List[User] batch_load_fn (self, keys)
- Union[User, None] load_from_id (cls, context=None, id=None)
- Union[List[User], None] load_many_from_id (cls, context=None, ids=None)

Static Public Attributes

• string loader_name = "_user_by_username_loader"

4.55.1 Detailed Description

```
This is class for loading users by their username and caching the result in the request context

Attributes:

loader_name (str): unique name of loader to cache data under
```

4.55.2 Member Function Documentation

4.55.2.1 load_from_id()

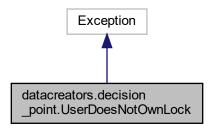
4.55.2.2 load_many_from_id()

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

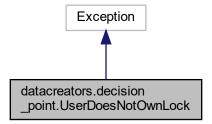
dataloaders/user.py

4.56 datacreators.decision_point.UserDoesNotOwnLock Class Reference

Inheritance diagram for datacreators.decision_point.UserDoesNotOwnLock:



Collaboration diagram for datacreators.decision_point.UserDoesNotOwnLock:



4.56.1 Detailed Description

This is raised when the user attempts to submit a decision point whilst not owning the OnPathway lock

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

datacreators/decision_point.py

Index

init	dataloaders.milestone.MilestoneByDecisionPointLoader,
services.PubSubService, 51	20
services.TrustAdapterService, 69	load_from_id, 21
trustadapter.trustadapter.PseudoTrustAdapter, 48	load_many_from_id, 21
	dataloaders.milestone.MilestoneByOnPathway, 22
added_at	load_many_from_id, 22
models.DecisionPoint.DecisionPoint, 11	dataloaders.milestone_type.MilestoneTypeLoader, 25
models.Milestone, 18	load_all, 26
models.OnPathway.OnPathway, 28	load_from_id, 26
authentication.authentication.PermissionsError, 46	load_many_from_id, 26
authentication.authentication.SDAuthentication, 55	dataloaders.on_pathway.OnPathwayByldLoader, 30
authentication.authentication.SDUser, 58	load_from_id, 31
authentication.authentication.SessionAlreadyExists, 60	load_many_from_id, 31
authentication.logincontroller.ContextNotDefined, 8	dataloaders.on_pathway.OnPathwaysByPatient, 32
authentication.logincontroller.LoginController, 16	load_from_id, 32
login, 16	dataloaders.pathway.PathwayByldLoader, 34
logout, 17	load_all, 35
awaiting_decision_type	load_from_id, 35
models.OnPathway.OnPathway, 28	load_many_from_id, 36
	dataloaders.pathway.PathwayByNameLoader, 36
clinician_id	load_from_id, 37
models.DecisionPoint.DecisionPoint, 11	load_many_from_id, 37
common.DataCreatorInputErrors, 9	dataloaders.patient.PatientByHospitalNumberFromIELoader,
common.PatientNotInIntegrationEngineError, 45	39
common.ReferencedItemDoesNotExistError, 52	load from id, 40
containers.SDContainer, 56	load_many_from_id, 41
pubsub_service, 56	dataloaders.patient.PatientByHospitalNumberLoader,
trust_adapter_service, 57	41
wiring_config, 57	load_from_id, 42
create_patient	load_many_from_id, 42
services.TrustAdapterService, 69	dataloaders.patient.PatientByldLoader, 43
trustadapter.trustadapter.PseudoTrustAdapter, 48	load_from_id, 44
trustadapter.trustadapter.TrustAdapter, 66	load_many_from_id, 44
create test result	dataloaders.patient.ReferencePatient, 53
services.TrustAdapterService, 70	dataloaders.test_result.TestResultByReferenceIdFromIELoader,
trustadapter.trustadapter.PseudoTrustAdapter, 48	62
trustadapter.trustadapter.TrustAdapter, 66	load_from_id, 63
createuser.CreateUserInput, 9	
current_state	load_many_from_id, 63
models.Milestone.Milestone, 18	dataloaders.user.UserByldLoader, 75
,	load_from_id, 76
datacreators.decision_point.UserDoesNotOwnLock, 79	load_many_from_id, 76
dataloaders.decision_point.DecisionPointLoader, 12	dataloaders.user.UserByUsernameLoader, 77
load_from_id, 13	load_from_id, 78
load_many_from_id, 13	load_many_from_id, 78
dataloaders.decision_point.DecisionPointsByOnPathway,	decision_point_id
14	models.Milestone.Milestone, 18
load_many_from_id, 14	decision_type
dataloaders.decision_point.DecisionPointsByPatient, 14	models.DecisionPoint.DecisionPoint, 11
load from id. 15	default_pathway_id

82 INDEX

models.User.User, 74	dataloaders.patient.PatientByHospitalNumberLoader,
expiry	dataloaders.patient.PatientByldLoader, 44
models.Session.Session, 60	dataloaders.test_result.TestResultByReferenceIdFromIELoader,
fwd_decision_point_id	dataloaders.user.UserByldLoader, 76
models.Milestone.Milestone, 19	dataloaders.user.UserByUsernameLoader, 78
	load_many_patients
is_checkbox_hidden	services.TrustAdapterService, 70
models.MilestoneType.MilestoneType, 24	trustadapter.trustadapter.PseudoTrustAdapter, 49
is_discharged	trustadapter.trustadapter.TrustAdapter, 66
models.OnPathway.OnPathway, 28	load_many_test_results
last_login	services.TrustAdapterService, 70
models.User.User, 75	trustadapter.trustadapter.PseudoTrustAdapter, 49
load_all	trustadapter.trustadapter.TrustAdapter, 67
dataloaders.milestone_type.MilestoneTypeLoader,	load_patient
26	services.TrustAdapterService, 70
dataloaders.pathway.PathwayByldLoader, 35	trustadapter.trustadapter.PseudoTrustAdapter, 49
load_from_id	trustadapter.trustadapter.TrustAdapter, 67
dataloaders.decision_point.DecisionPointLoader,	load_test_result
13	services.TrustAdapterService, 71
dataloaders.decision_point.DecisionPointsByPatient	trustadapter.trustadapter.PseudoTrustAdapter, 50
15	trustadapter.trustadapter.TrustAdapter, 67
dataloaders.milestone.MilestoneByDecisionPointLoa	adeck_end_time
21	models.OnPathway.OnPathway, 28
dataloaders.milestone_type.MilestoneTypeLoader,	lock_user_id
26	models.OnPathway.OnPathway, 29
dataloaders.on_pathway.OnPathwayByIdLoader,	login
31	authentication.logincontroller.LoginController, 16
dataloaders.on_pathway.OnPathwaysByPatient, 32	logout
dataloaders.pathway.PathwayByldLoader, 35	authentication.logincontroller.LoginController, 17
dataloaders.pathway.PathwayByNameLoader, 37	_manage-demo.RequestPlaceholder, 53
dataloaders.patient.PatientByHospitalNumberFromII	ELogica RequestPlaceholder, 54
40	milestone_type_id
dataloaders.patient.PatientByHospitalNumberLoade	er, models.Milestone.Milestone, 19
42	models.DecisionPoint.DecisionPoint, 10
dataloaders.patient.PatientByldLoader, 44	
dataloaders.test_result.TestResultByReferenceIdFro	omIELoader dinician id. 11
63	decision_type, 11
dataloaders.user.UserByldLoader, 76	on_pathway_id, 11
dataloaders.user.UserByUsernameLoader, 78	updated at, 11
load_many_from_id	models.Milestone.Milestone, 17
dataloaders.decision_point.DecisionPointLoader,	added_at, 18
13	current_state, 18
dataloaders.decision_point.DecisionPointsByOnPath	hway, decision_point_id, 18
14	fwd decision point id 19
dataloaders.milestone.MilestoneByDecisionPointLoa	ader, milestone_type_id, 19
21	on_pathway_id, 19
dataloaders.milestone.MilestoneByOnPathway, 22	test_result_reference_id, 19
dataloaders.milestone_type.MilestoneTypeLoader,	updated_at, 19
26	models.MilestoneType.MilestoneType, 24
dataloaders.on_pathway.OnPathwayByldLoader,	is_checkbox_hidden, 24
31	models.OnPathway.OnPathway, 27
dataloaders.pathway.PathwayByldLoader, 36	added_at, 28
dataloaders.pathway.PathwayByNameLoader, 37	awaiting_decision_type, 28
dataloaders.patient.PatientByHospitalNumberFromII	
#1	lock_end_time, 28
	lock_user_id, 29

INDEX 83

pathway_id, 29	create_patient, 48
patient_id, 29	create_test_result, 48
referred_at, 29	load_many_patients, 49
under_care_of_id, 29	load_many_test_results, 49
updated_at, 30	load_patient, 49
models.Pathway.Pathway, 33	load_test_result, 50
models.Patient.Patient, 38	test_connection, 50
models.Session.Session, 59	trustadapter.trustadapter.TestResult_IE, 61
expiry, 60	trustadapter.trustadapter.TestResultRequest_IE, 64
user_id, 60	trustadapter.trustadapter.TrustAdapter, 65
models.User, 74	create_patient, 66
default_pathway_id, 74	create_test_result, 66
last_login, 75	load_many_patients, 66
····	load_many_test_results, 67
on_pathway_id	load_patient, 67
models.DecisionPoint.DecisionPoint, 11	load_test_result, 67
models.Milestone, 19	test_connection, 68
	trustadapter.trustadapter.TrustIntegrationCommunicationError,
pathway_id	72
models.OnPathway.OnPathway, 29	12
patient_id	under care of id
models.OnPathway.OnPathway, 29	models.OnPathway.OnPathway, 29
pubsub_service	update test result.TestResultUpdate, 64
containers.SDContainer, 56	updated_at
containorois B containor, co	• —
referred_at	models.DecisionPoint.DecisionPoint, 11
models.OnPathway.OnPathway, 29	models.Milestone.Milestone, 19
	models.OnPathway.OnPathway, 30
sdpubsub.SdPubSub, 57	user_id
sdpubsub.SdPubSubEvent, 58	models.Session.Session, 60
sdpubsub.Subscriber, 61	wiring config
sdpubsub.Unsubscribed, 73	wiring_config
SdTypes.DecisionTypes, 15	containers.SDContainer, 57
SdTypes.MilestoneState, 23	
services.BaseService, 7	
services.PubSubService, 51	
init, 51	
services.TrustAdapterService, 68	
init, 69	
create_patient, 69	
create_test_result, 70	
load_many_patients, 70	
load_many_test_results, 70	
load_patient, 70	
load_test_result, 71	
test_connection, 71	
toot connection	
test_connection	
services.TrustAdapterService, 71	
trustadapter.trustadapter.PseudoTrustAdapter, 50	
trustadapter.trustadapter.TrustAdapter, 68	
test_result_reference_id	
models.Milestone, Milestone, 19	
tests.conftest.ContextStorage, 8	
trust_adapter_service	
containers.SDContainer, 57	
trustadapter.trustadapter.Patient_IE, 39	
trustadapter.trustadapter.PseudoTrustAdapter, 47	
init . 48	