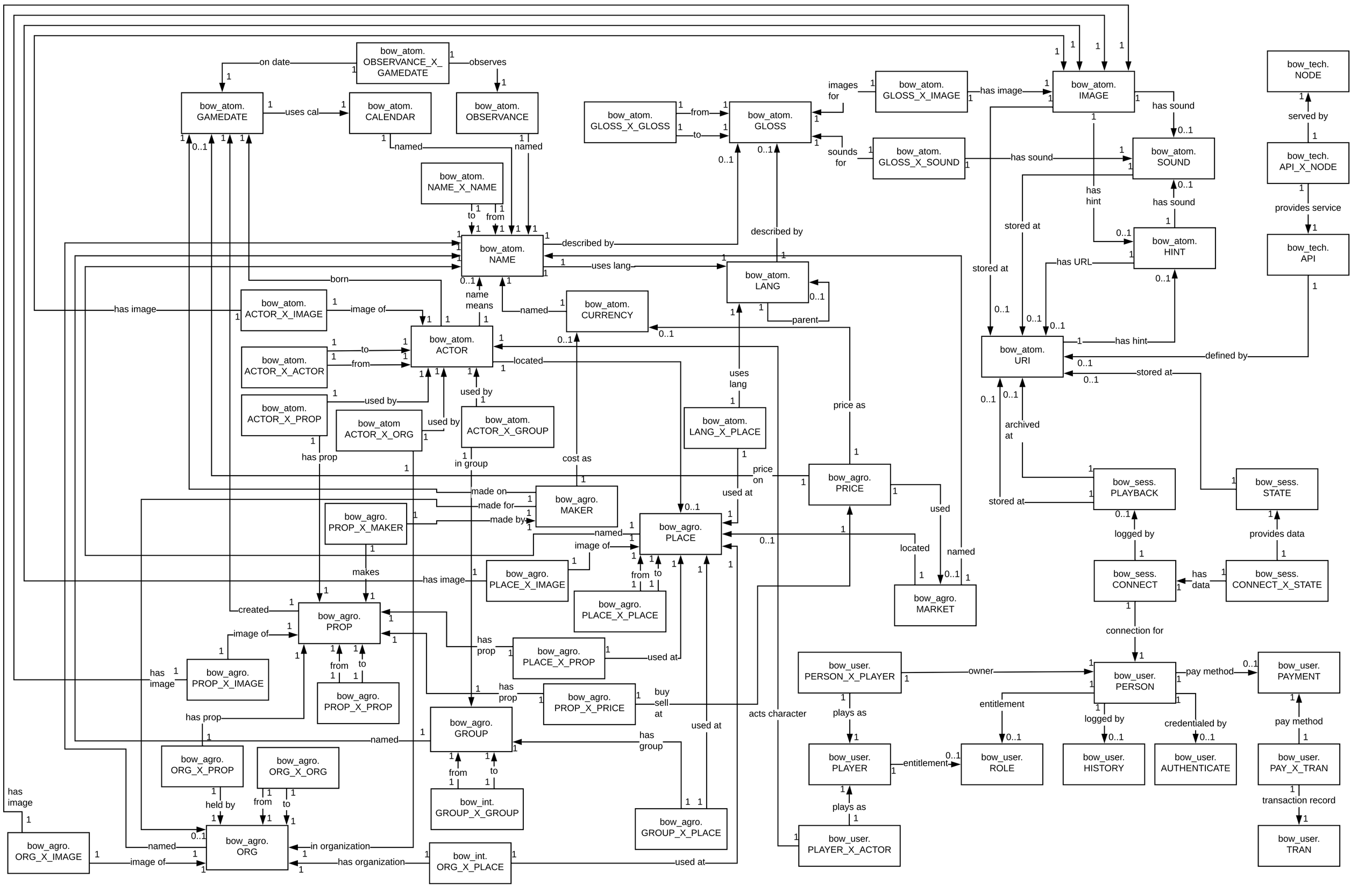
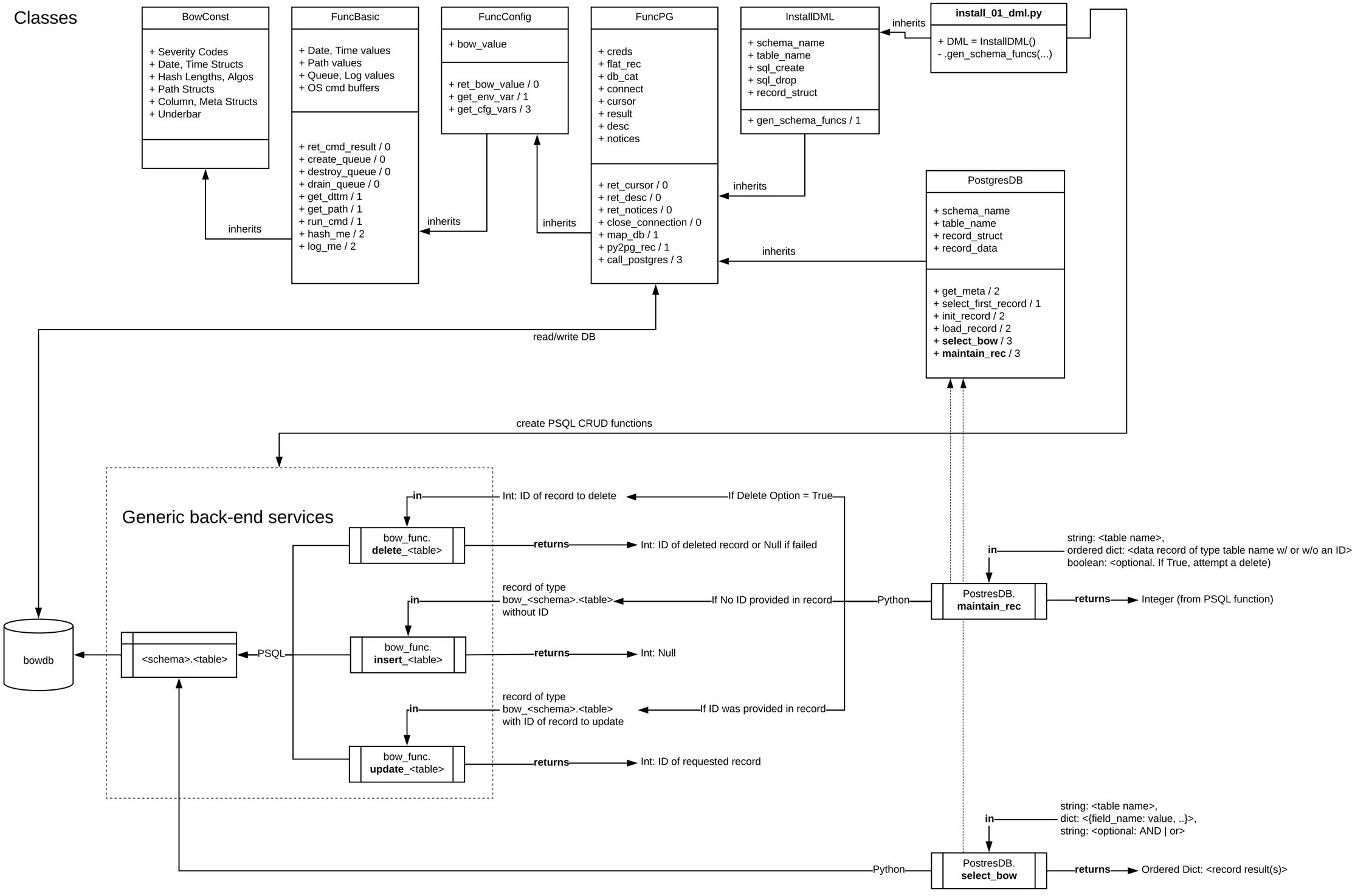
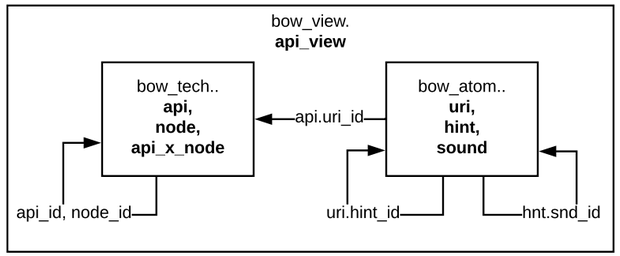
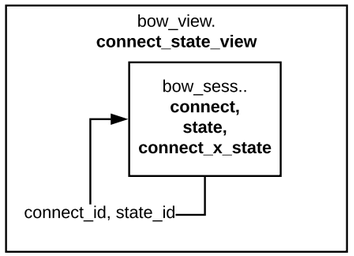

bow_atom. OBSERVANCE_X_ GAMEDATE
on date
observes
bow_atom. GAMEDATE
uses cal
bow_atom. CALENDAR
bow_atom. OBSERVANCE
named
named
bow_atom. NAME_X_NAME
to
from
bow_atom. NAME
described by
uses lang
bow_atom. LANG
parent
bow_atom. CURRENCY
born
name means
named
has image
bow_atom. ACTOR_X_IMAGE
image of
bow_atom. ACTOR
bow_atom. ACTOR_X_ACTOR
to
from
located
used by
bow_atom. ACTOR_X_PROP
used by
bow_atom ACTOR_X_ORG
used by
bow_atom. ACTOR_X_GROUP
has prop
in group
cost as
uses lang
bow_atom. LANG_X_PLACE
price as
price on
used at
bow_agro. PRICE
made on
made for
made by
bow_agro. MAKER
bow_agro. PROP_X_MAKER
named
image of
bow_agro. PLACE
bow_agro. GLOSS_X_GLOSS
from
to
bow_agro. GLOSS
images for
bow_atom. GLOSS_X_IMAGE
has image
bow_atom. IMAGE
sounds for
bow_atom. GLOSS_X_SOUND
has sound
bow_atom. SOUND
has sound
has hint
bow_atom. HINT
has URL
stored at
stored at
stored at
bow_atom. URI
has hint
defined by
stored at
archived at
bow_tech. NODE
served by
bow_tech. API_X_NODE
provides service
bow_tech. API
has image
bow_atom. PROP_X_IMAGE
image of
bow_agro. PROP
created
makes
has image
bow_agro. PLACE_X_IMAGE
bow_agro. PLACE_X_PLACE
has prop
bow_agro. PLACE_X_PROP
used at
has prop
bow_agro. PROP_X_PROP
has prop
bow_agro. PROP_X_PRICE
buy sell at
used at
has group
bow_agro. GROUP
named
bow_agro. GROUP_X_PLACE
bow_int. GROUP_X_GROUP
from
to
bow_agro. ORG_X_PROP
bow_agro. ORG_X_ORG
held by
from
to
has image
bow_agro. ORG_X_IMAGE
named
image of
bow_agro. ORG
in organization
has organization
bow_int. ORG_X_PLACE
used at
bow_agro. MARKET
located
used
named
bow_sess. PLAYBACK
logged by
bow_sess. CONNECT
has data
bow_sess. CONNECT_X_STATE
bow_sess. STATE
provides data
connection for
bow_user. PERSON_X_PLAYER
owner
bow_user. PERSON
pay method
bow_user. PAYMENT
pay method
transaction record
bow_user. PAY_X_TRAN
bow_user. TRAN
acts character
plays as
bow_user. PLAYER
entitlement
bow_user. ROLE
plays as
bow_user. PLAYER_X_ACTOR
entitlement
bow_user. HISTORY
logged by
bow_user. AUTHENTICATE
credentialed by

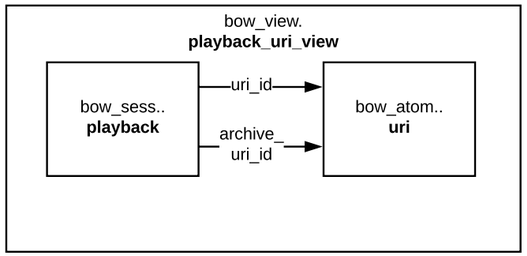
# Classes

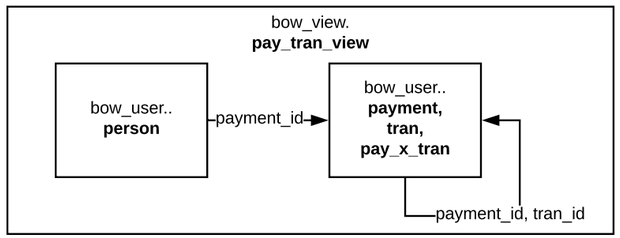

BowConst
+ Severity Codes
+ Date, Time Structs
+ Hash Lengths, Algos
+ Path Structs
+ Column, Meta Structs
+ Underbar
FuncBasic
+ Date, Time values
+ Path values
+ Queue, Log values
+ OS cmd buffers
+ ret_cmd_result / 0
+ create_queue / 0
+ destroy_queue / 0
+ drain_queue / 0
+ get_dttm / 1
+ get_path / 1
+ run_cmd / 1
+ hash_me / 2
+ log_me / 2
FuncConfig
+ bow_value
+ ret_bow_value / 0
+ get_env_var / 1
+ get_cfg_vars / 3
FuncPG
+ creds
+ flat_rec
+ db_cat
+ connect
+ cursor
+ result
+ desc
+ notices
+ ret_cursor / 0
+ ret_desc / 0
+ ret_notices / 0
+ close_connection / 0
+ map_db / 1
+ py2pg_rec / 1
+ call_postgres / 3
InstallDML
+ schema_name
+ table_name
+ sql_create
+ sql_drop
+ record_struct
+ gen_schema_funcs / 1
inherits
install_01_dml.py
+ DML = InstallDML()
- .gen_schema_funcs(...)
inherits
inherits
inherits
inherits
PostgresDB
+ schema_name
+ table_name
+ record_struct
+ record_data
+ get_meta / 2
+ select_first_record / 1
+ init_record / 2
+ load_record / 2
+ select_bow / 3
+ maintain_rec / 3
read/write DB
create PSQL CRUD functions
Generic back-end services
in
Int: ID of record to delete
If Delete Option = True
bow_func.
delete_<table>
returns
Int: ID of deleted record or Null if failed
in
record of type
bow_<schema>.<table>
without ID
If No ID provided in record
bow_func.
insert_<table>
returns
Int: Null
in
record of type
bow_<schema>.<table>
with ID of record to update
If ID was provided in record
bow_func.
update_<table>
returns
Int: ID of requested record
Python
PostresDB.
maintain_rec
in
string: <table name>,
ordered dict: <data record of type table name w/ or w/o an ID>
boolean: <optional. If True, attempt a delete)
returns
Integer (from PSQL function)
bowdb
<schema>.<table>
PSQL
Python
PostresDB.
select_bow
in
string: <table name>,
dict: <{field_name: value, ..}>,
string: <optional: AND | or>
returns
Ordered Dict: <record result(s)>

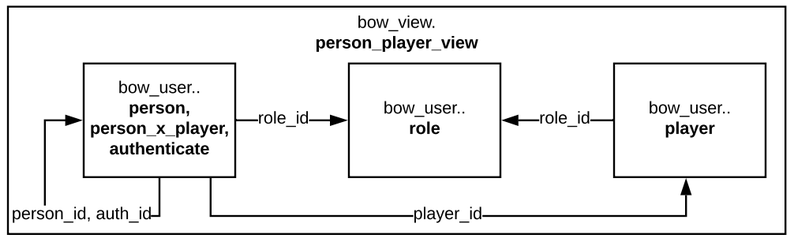
Views

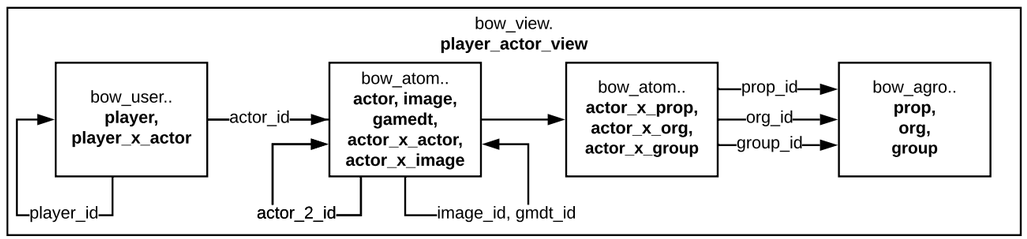

bow_view.
api_view
bow_tech..
api,
node,
api_x_node
api.uri_id
bow_atom..
uri,
hint,
sound
api_id, node_id
uri.hint_id
hnt.snd_id

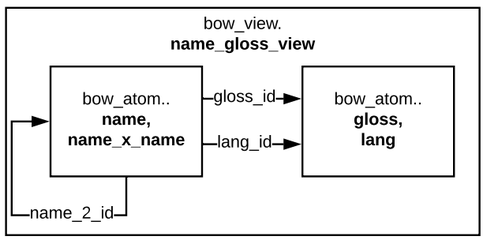

bow_view.
connect_state_view
bow_sess..
connect,
state,
connect_x_state
connect_id, state_id

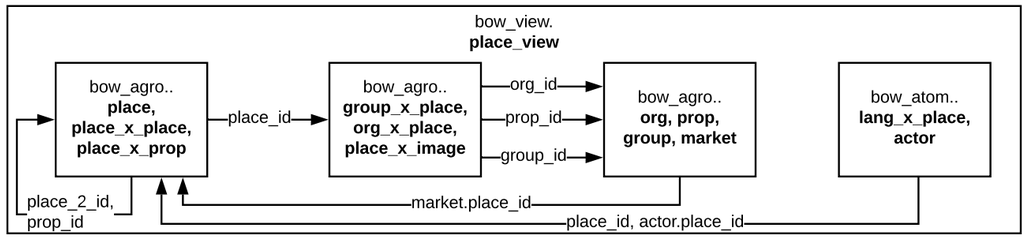

bow_view.
playback_uri_view
bow_sess..
playback
uri_id
archive_
uri_id
bow_atom..
uri

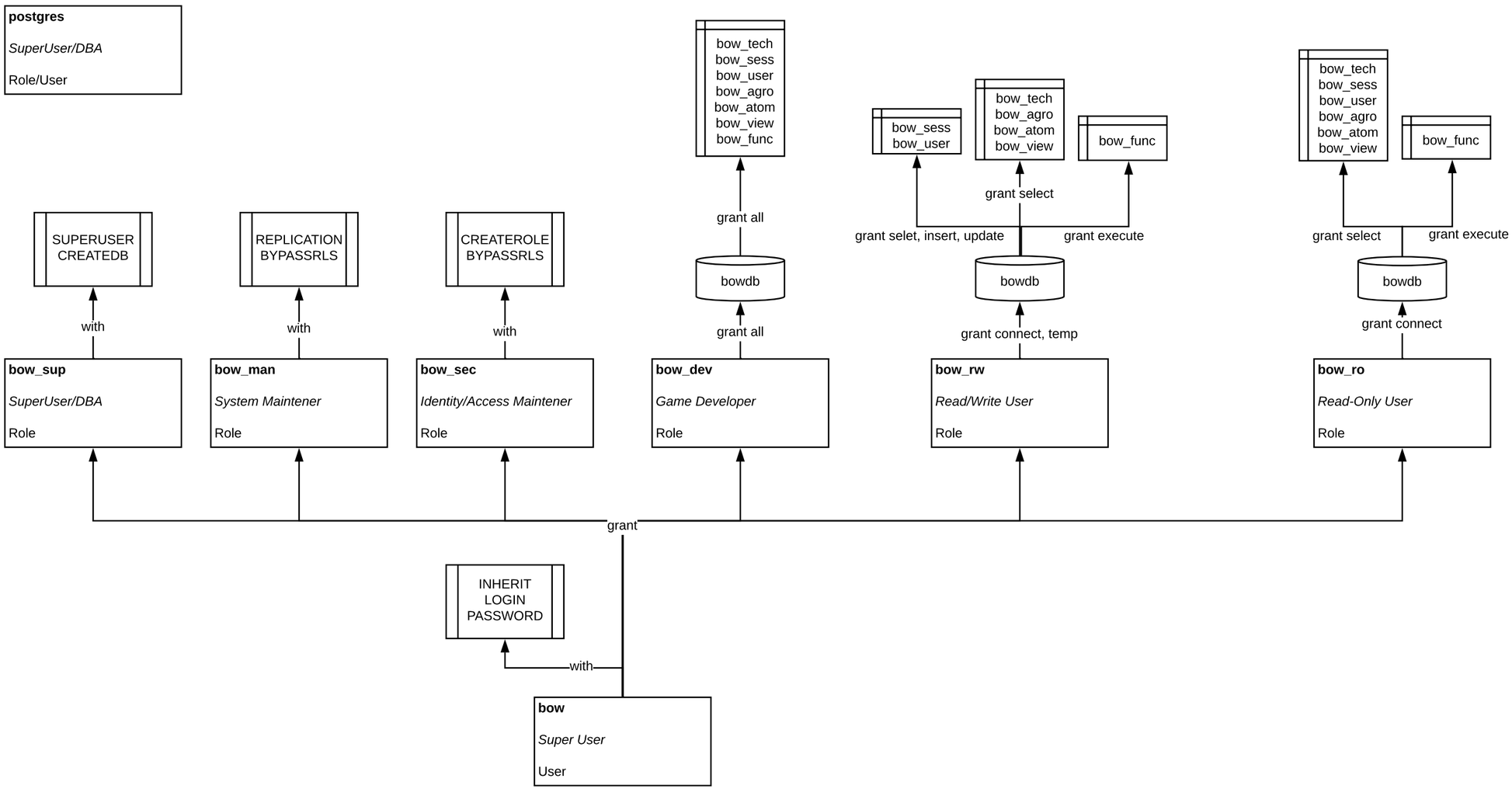

bow_view.
pay_tran_view
bow_user..
person
payment_id
bow_user..
payment,
tran,
pay_x_tran
payment_id, tran_id

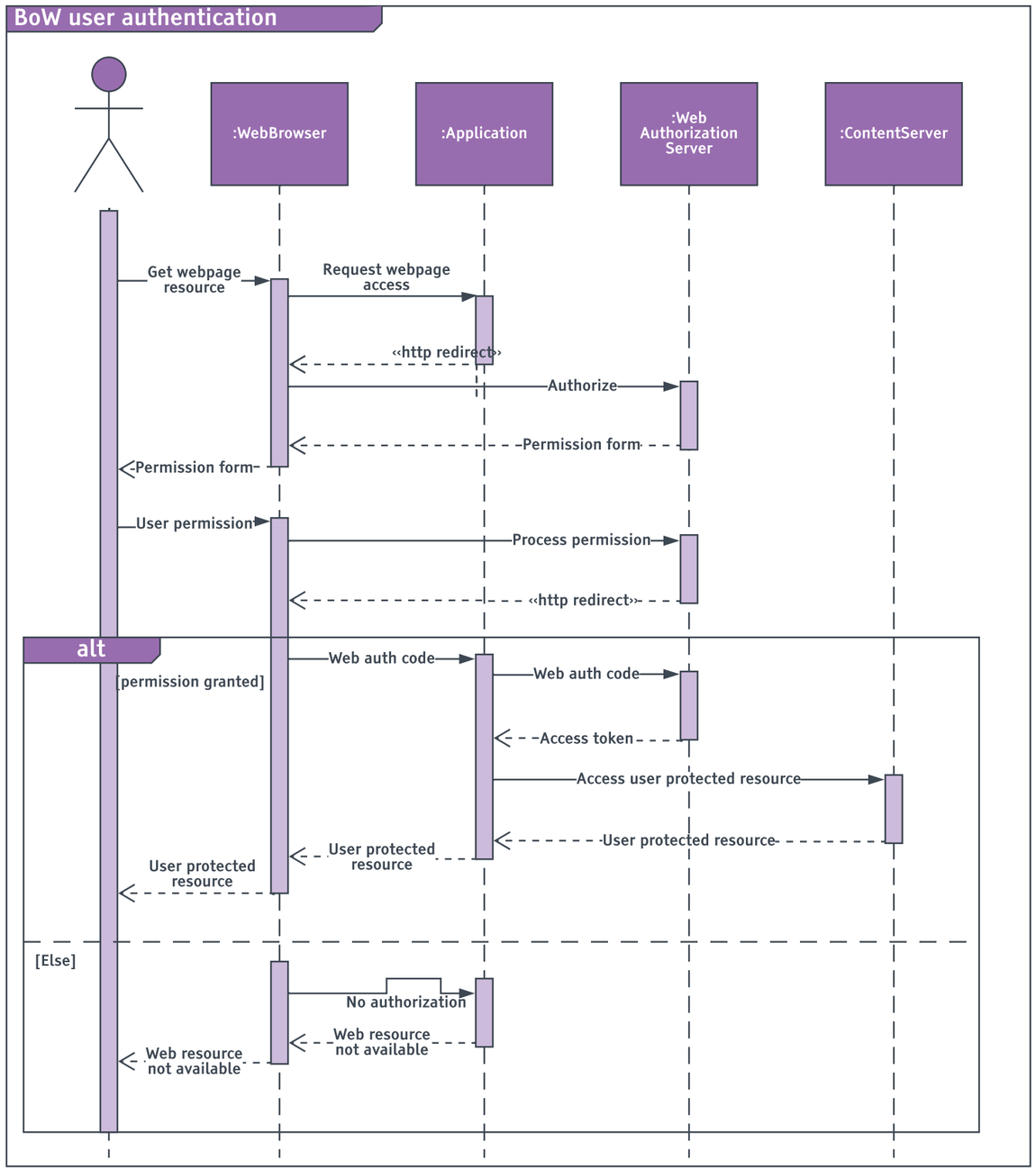

bow_view.
person_player_view
bow_user..
person,
person_x_player,
authenticate
role_id
bow_user..
role
role_id
bow_user..
player
person_id, auth_id
player_id


bow_view.
player_actor_view
bow_user..
player,
player_x_actor
actor_id
bow_atom..
actor, image,
gamedt,
actor_x_actor,
actor_x_image
bow_atom..
actor_x_prop,
actor_x_org,
actor_x_group
prop_id
org_id
group_id
bow_agro..
prop,
org,
group
player_id
actor_2_id
image_id, gmdt_id


bow_view.
name_gloss_view
bow_atom..
name,
name_x_name
gloss_id
lang_id
bow_atom..
gloss,
lang
name_2_id


bow_view.
place_view
bow_agro..
place,
place_x_place,
place_x_prop
place_id
bow_agro..
group_x_place,
org_x_place,
place_x_image
org_id
prop_id
group_id
bow_agro..
org, prop,
group, market
bow_atom..
lang_x_place,
actor
place_2_id,
prop_id
market.place_id
place_id, actor.place_id


postgres
SuperUser/DBA
Role/User
SUPERUSER
CREATEDB
REPLICATION
BYPASSRLS
CREATEROLE
BYPASSRLS
with
with
with
bow_sup
SuperUser/DBA
Role
bow_man
System Maintener
Role
bow_sec
Identity/Access Maintener
Role
bow_tech
bow_sess
bow_user
bow_agro
bow_atom
bow_view
bow_func
grant all
bowdb
grant all
bow_dev
Game Developer
Role
bow_sess
bow_user
bow_tech
bow_agro
bow_atom
bow_view
bow_func
grant select
grant selet, insert, update
grant execute
bowdb
grant connect, temp
bow_rw
Read/Write User
Role
bow_tech
bow_sess
bow_user
bow_agro
bow_atom
bow_view
bow_func
grant select
grant execute
bowdb
grant connect
bow_ro
Read-Only User
Role
grant
INHERIT
LOGIN
PASSWORD
with
bow
Super User
User


BoW user authentication
:WebBrowser
:Application
:Web Authorization Server
:ContentServer
Get webpage resource
Request webpage access
‹‹http redirect››
Authorize
Permission form
Permission form
User permission
Process permission
‹‹http redirect››
alt
[permission granted]
Web auth code
Web auth code
Access token
Access user protected resource
User protected resource
User protected resource
User protected resource
[Else]
No authorization
Web resource not available
Web resource not available