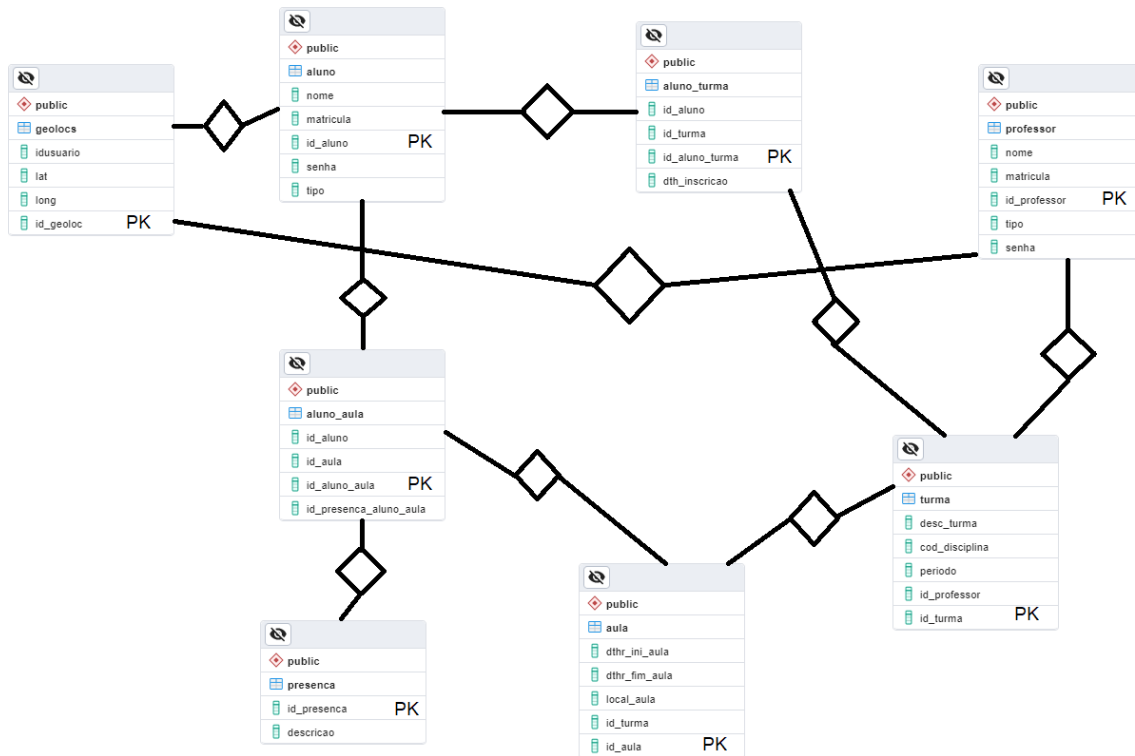


Banco de Dados

- Diagrama Entidade-Relacionamento



- Script SQL

```
--
-- PostgreSQL database dump
--

-- Dumped from database version 15.4
-- Dumped by pg_dump version 15.4

-- Started on 2023-11-22 22:57:48

SET statement_timeout = 0;
SET lock_timeout = 0;
SET idle_in_transaction_session_timeout = 0;
SET client_encoding = 'UTF8';
SET standard_conforming_strings = on;
SELECT pg_catalog.set_config('search_path', '', false);
SET check_function_bodies = false;
SET xmloption = content;
SET client_min_messages = warning;
SET row_security = off;
```

```

--
-- TOC entry 247 (class 1255 OID 16665)
-- Name: criar_aula(date, integer); Type: FUNCTION; Schema: public;
Owner: doadmin
--

CREATE FUNCTION public.criar_aula(data_p date, id_turma_p integer)
RETURNS void
    LANGUAGE plpgsql
    AS $$
DECLARE
    id_aula_v INT;
    aluno_rec RECORD;
BEGIN
    -- Inserir um novo registro na tabela Aula
    INSERT INTO Aula (dthr_ini_aula, id_turma) VALUES (data_p,
id_turma_p);

    SELECT id_aula INTO id_aula_v FROM Aula WHERE dthr_ini_aula =
data_p AND id_turma_p = id_turma_p;

    -- Inserir um novo registro na tabela aluno_aula para cada aluno
    FOR aluno_rec IN (SELECT id_aluno FROM Aluno)
    LOOP
        INSERT INTO aluno_aula (id_aula, id_presenca_aluno_aula,
id_aluno)
        VALUES (id_aula_v, 0, aluno_rec.id_aluno);
    END LOOP;

END;
$$;

ALTER FUNCTION public.criar_aula(data_p date, id_turma_p integer) OWNER
TO doadmin;

--
-- TOC entry 245 (class 1255 OID 16527)
-- Name: inscrevealunoturma(integer, integer); Type: PROCEDURE; Schema:
public; Owner: doadmin
--

CREATE PROCEDURE public.inscrevealunoturma(IN num_aluno integer, IN
num_turma integer)
    LANGUAGE plpgsql
    AS $$
declare

    status int;
    existeAluno int;
    existeTurma int;

```

```

        jaInscrito int;

BEGIN
    existeAluno := COUNT(*) FROM aluno a where a.id_aluno =
num_aluno;
    existeTurma := COUNT(*) FROM turma a where a.id_turma =
num_turma;
    jaInscrito := COUNT(*) FROM aluno_turma a where a.id_turma =
num_turma and a.id_aluno = num_aluno;

    RAISE NOTICE 'testando:% e % e
%', existeAluno, existeTurma, jaInscrito;


--Aluno nao encontrado
IF existeAluno = 0 THEN
    RAISE exception 'Aluno não encontrado';
END IF;

-- Turma não encontrada
IF existeTurma = 0 THEN
    RAISE exception 'Turma não encontrada';
END IF;

-- Já inscrito
IF jaInscrito > 0 THEN
    RAISE notice 'Já cadastrado';
else
    insert into aluno_turma (id_aluno, id_turma, dth_inscricao)
values (num_aluno, num_turma, CURRENT_TIMESTAMP::timestamp);
END IF;

RAISE NOTICE '1';

EXCEPTION
    WHEN OTHERS THEN
        -- Handle exceptions here if needed
        RAISE NOTICE '0';

END $$;


ALTER PROCEDURE public.inscrevealunoturma(IN num_aluno integer, IN
num_turma integer) OWNER TO doadmin;

--
-- TOC entry 250 (class 1255 OID 16697)

```

```
-- Name: lista_alunos_turma(integer); Type: FUNCTION; Schema: public;  
Owner: doadmin  
--
```

```
CREATE FUNCTION public.lista_alunos_turma(num_turma integer) RETURNS  
TABLE(nome character varying, desc_turma character varying, matricula  
character varying, id_aluno integer)
```

```
LANGUAGE plpgsql
```

```
AS $$
```

```
declare
```

```
status int;
```

```
BEGIN
```

```
RETURN QUERY
```

```
select a.nome, c.desc_turma ,a.matricula,a.id_aluno from aluno a
```

```
inner join aluno_turma b on a.id_aluno = b.id_aluno
```

```
inner join turma c on b.id_turma = c.id_turma
```

```
where b.id_turma = num_turma order by a.nome;
```

```
/*inner join turma c on b.id_turma = c.id_turma
```

```
inner join aluno_aula d on a.id_aluno = d.id_aluno and d.id_aula  
= num_aula;*/
```

```
END $$;
```

```
ALTER FUNCTION public.lista_alunos_turma(num_turma integer) OWNER TO  
doadmin;
```

```
--
```

```
-- TOC entry 251 (class 1255 OID 16713)
```

```
-- Name: listaalunoscompresenca(integer); Type: FUNCTION; Schema:  
public; Owner: doadmin
```

```
--
```

```
CREATE FUNCTION public.listaalunoscompresenca(num_aula integer) RETURNS  
TABLE(nome character varying, matricula character varying, id_aluno  
integer, presenca text)
```

```
LANGUAGE plpgsql
```

```
AS $$
```

```
declare
```

```
status int;
```

```
BEGIN
```

```
return query
```

```
select b.nome,b.matricula,a.id_aluno ,concat(presenca_aluno
```

```
(a.id_aluno,d.id_turma),'%') as presenca from aluno_aula a
```

```
inner join aluno b on a.id_aluno = b.id_aluno
```

```
inner join aula c on a.id_aula = c.id_aula
```

```

        inner join turma d on c.id_turma = d.id_turma
        where a.id_aula = num_aula;

END
$$;

ALTER FUNCTION public.listaalunoscompresenca(num_aula integer) OWNER TO
doadmin;

--
-- TOC entry 249 (class 1255 OID 16694)
-- Name: listaalunoscompresenca(integer, integer); Type: FUNCTION;
Schema: public; Owner: doadmin
--

CREATE FUNCTION public.listaalunoscompresenca(num_aula integer,
num_disciplina integer) RETURNS TABLE(nome character varying, matricula
character varying, id_aluno integer, presenca double precision)
    LANGUAGE plpgsql
    AS $$
declare

BEGIN

    RETURN QUERY
        select a.nome,a.matricula,a.id_aluno, cast(presenca_aluno
(a.id_aluno,b.id_turma) as char(3))+ '%' as presenca from aluno a
        inner join aluno_turma b on a.id_aluno = b.id_aluno
        inner join turma c on b.id_turma = c.id_turma
        inner join aluno_aula d on a.id_aluno = id_aluno and a.id_aula =
num_aula;

END $$;

ALTER FUNCTION public.listaalunoscompresenca(num_aula integer,
num_disciplina integer) OWNER TO doadmin;

--
-- TOC entry 248 (class 1255 OID 16692)
-- Name: presenca_aluno(integer, integer); Type: FUNCTION; Schema:
public; Owner: doadmin
--

CREATE FUNCTION public.presenca_aluno(num_aluno integer, num_turma
integer) RETURNS double precision
    LANGUAGE plpgsql
    AS $$

```

```

declare
    quantidade_aulas float;
    quantidade_presencas float;
    porcentagem float;
    status int;

BEGIN
    quantidade_aulas := COUNT(*) FROM aula a where a.id_turma =
num_turma;

    quantidade_presencas := COUNT(*) FROM aluno_aula a
    inner join aula b on a.id_aula = b.id_aula
    where b.id_turma = num_turma and a.id_aluno = num_aluno
    and a.id_presenca_aluno_aula != 0;

    porcentagem := (quantidade_presencas/quantidade_aulas)*100;

    return porcentagem;

END $$;

ALTER FUNCTION public.presenca_aluno(num_aluno integer, num_turma
integer) OWNER TO doadmin;

--
-- TOC entry 246 (class 1255 OID 16549)
-- Name: relatorio_de_turma(integer); Type: FUNCTION; Schema: public;
Owner: doadmin
--

CREATE FUNCTION public.relatorio_de_turma(ident_turma integer) RETURNS
TABLE(id_aula integer, data_aula timestamp without time zone, id_turma
integer)
    LANGUAGE plpgsql
    AS $$
BEGIN
    --tabelas temporarias necessarias:
    CREATE TEMPORARY TABLE alunos(ident_aluno int);
    CREATE TEMPORARY TABLE aulas(id_aula int, data_aula timestamp,
id_turma int);

    --pegando os alunos
    insert into alunos select a.id_aluno from aluno_turma a where
a.id_turma = ident_turma;
    insert into aulas select a.id_aula, a.dthr_ini_aula, a.id_turma
from aula a where a.id_turma = ident_turma;

```

```

-- Retornar um conjunto de resultados no final
RETURN QUERY
SELECT a.id_aula, a.data_aula , a.id_turma
FROM aulas a;

    drop table alunos;
    drop table aulas;
-- Mais operações, se necessário
-- ...
END;
$$;

ALTER FUNCTION public.relatorio_de_turma(ident_turma integer) OWNER TO
doadmin;

SET default_tablespace = '';

SET default_table_access_method = heap;

--
-- TOC entry 221 (class 1259 OID 16466)
-- Name: aluno; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.aluno (
    nome character varying(100),
    matricula character varying(20),
    id_aluno integer NOT NULL,
    senha character varying(20),
    tipo character varying(1)
);

ALTER TABLE public.aluno OWNER TO doadmin;

--
-- TOC entry 229 (class 1259 OID 16483)
-- Name: aluno_aula; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.aluno_aula (
    id_aluno integer,
    id_aula integer,
    id_aluno_aula integer NOT NULL,
    id_presenca_aluno_aula integer
);

ALTER TABLE public.aluno_aula OWNER TO doadmin;

```

```

--
-- TOC entry 228 (class 1259 OID 16482)
-- Name: aluno_aula_id_aluno_aula_seq; Type: SEQUENCE; Schema: public;
Owner: doadmin
--

ALTER TABLE public.aluno_aula ALTER COLUMN id_aluno_aula ADD GENERATED
BY DEFAULT AS IDENTITY (
    SEQUENCE NAME public.aluno_aula_id_aluno_aula_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);

--
-- TOC entry 220 (class 1259 OID 16465)
-- Name: aluno_id_aluno_seq; Type: SEQUENCE; Schema: public; Owner:
doadmin
--

ALTER TABLE public.aluno ALTER COLUMN id_aluno ADD GENERATED BY DEFAULT
AS IDENTITY (
    SEQUENCE NAME public.aluno_id_aluno_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);

--
-- TOC entry 231 (class 1259 OID 16487)
-- Name: aluno_turma; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.aluno_turma (
    id_aluno integer,
    id_turma integer,
    id_aluno_turma integer NOT NULL,
    dth_inscricao timestamp without time zone
);

ALTER TABLE public.aluno_turma OWNER TO doadmin;

--

```



```

-- TOC entry 230 (class 1259 OID 16486)
-- Name: aluno_turma_id_aluno_turma_seq; Type: SEQUENCE; Schema:
public; Owner: doadmin
--

ALTER TABLE public.aluno_turma ALTER COLUMN id_aluno_turma ADD
GENERATED BY DEFAULT AS IDENTITY (
    SEQUENCE NAME public.aluno_turma_id_aluno_turma_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);

--

-- TOC entry 227 (class 1259 OID 16479)
-- Name: aula; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.aula (
    dthr_ini_aula timestamp without time zone,
    dthr_fim_aula timestamp without time zone,
    local_aula point,
    id_turma integer,
    id_aula integer NOT NULL
);

ALTER TABLE public.aula OWNER TO doadmin;

--

-- TOC entry 226 (class 1259 OID 16478)
-- Name: aula_id_aula_seq; Type: SEQUENCE; Schema: public; Owner:
doadmin
--

ALTER TABLE public.aula ALTER COLUMN id_aula ADD GENERATED BY DEFAULT
AS IDENTITY (
    SEQUENCE NAME public.aula_id_aula_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);

--

-- TOC entry 232 (class 1259 OID 16500)

```

```

-- Name: geolocs; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.geolocs (
    idusuario integer,
    lat double precision,
    long double precision,
    id_geoloc integer
);

ALTER TABLE public.geolocs OWNER TO doadmin;

--
-- TOC entry 233 (class 1259 OID 16684)
-- Name: presenca; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.presenca (
    id_presenca integer,
    descricao character varying(50)
);

ALTER TABLE public.presenca OWNER TO doadmin;

--
-- TOC entry 223 (class 1259 OID 16471)
-- Name: professor; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.professor (
    nome character varying(100),
    matricula character varying(20),
    id_professor integer NOT NULL,
    tipo character varying(1),
    senha character varying(20)
);

ALTER TABLE public.professor OWNER TO doadmin;

--
-- TOC entry 222 (class 1259 OID 16470)
-- Name: professor_id_professor_seq; Type: SEQUENCE; Schema: public;
Owner: doadmin
--

ALTER TABLE public.professor ALTER COLUMN id_professor ADD GENERATED BY
DEFAULT AS IDENTITY (
    SEQUENCE NAME public.professor_id_professor_seq

```

```

        START WITH 1
        INCREMENT BY 1
        NO MINVALUE
        NO MAXVALUE
        CACHE 1
    );

--
-- TOC entry 225 (class 1259 OID 16475)
-- Name: turma; Type: TABLE; Schema: public; Owner: doadmin
--

CREATE TABLE public.turma (
    desc_turma character varying(100),
    cod_disciplina character varying(10),
    periodo character(6),
    id_professor integer,
    id_turma integer NOT NULL
);

ALTER TABLE public.turma OWNER TO doadmin;

--
-- TOC entry 224 (class 1259 OID 16474)
-- Name: turma_id_turma_seq; Type: SEQUENCE; Schema: public; Owner:
doadmin
--

ALTER TABLE public.turma ALTER COLUMN id_turma ADD GENERATED BY DEFAULT
AS IDENTITY (
    SEQUENCE NAME public.turma_id_turma_seq
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1
);

-- Completed on 2023-11-22 22:58:01

--
-- PostgreSQL database dump complete
--

```