**Universidade Federal de Itajubá UNIFEI**



**Trabalho final de COM 231 (Banco de dados II)**

**Prof(a). Vanessa Souza**

**Tema: Sistema de Gerenciamento de Acidentes**

**Equipe:**

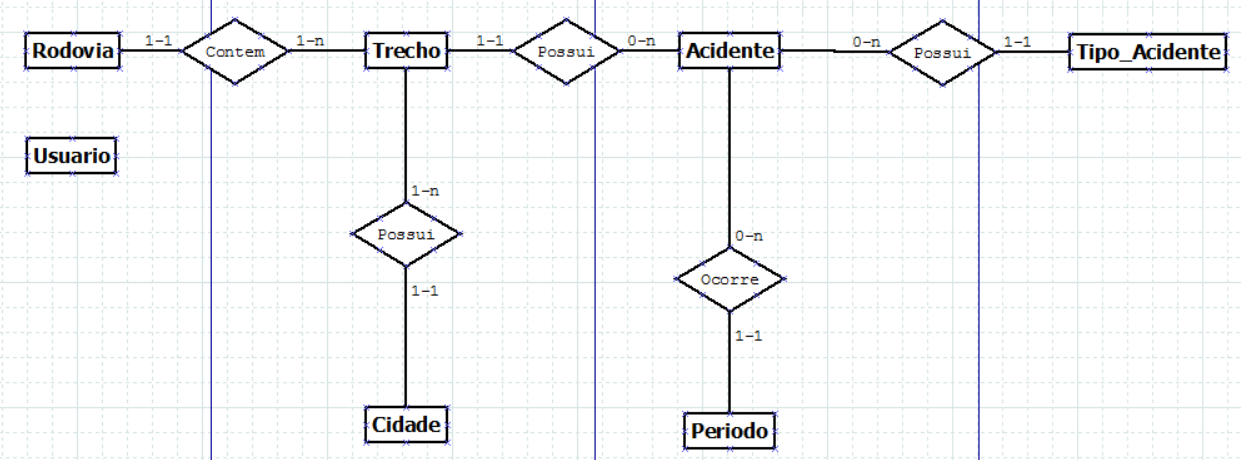
**Alifi Cleiton da Silva - 31412**

**Edmar José Benini - 28971**

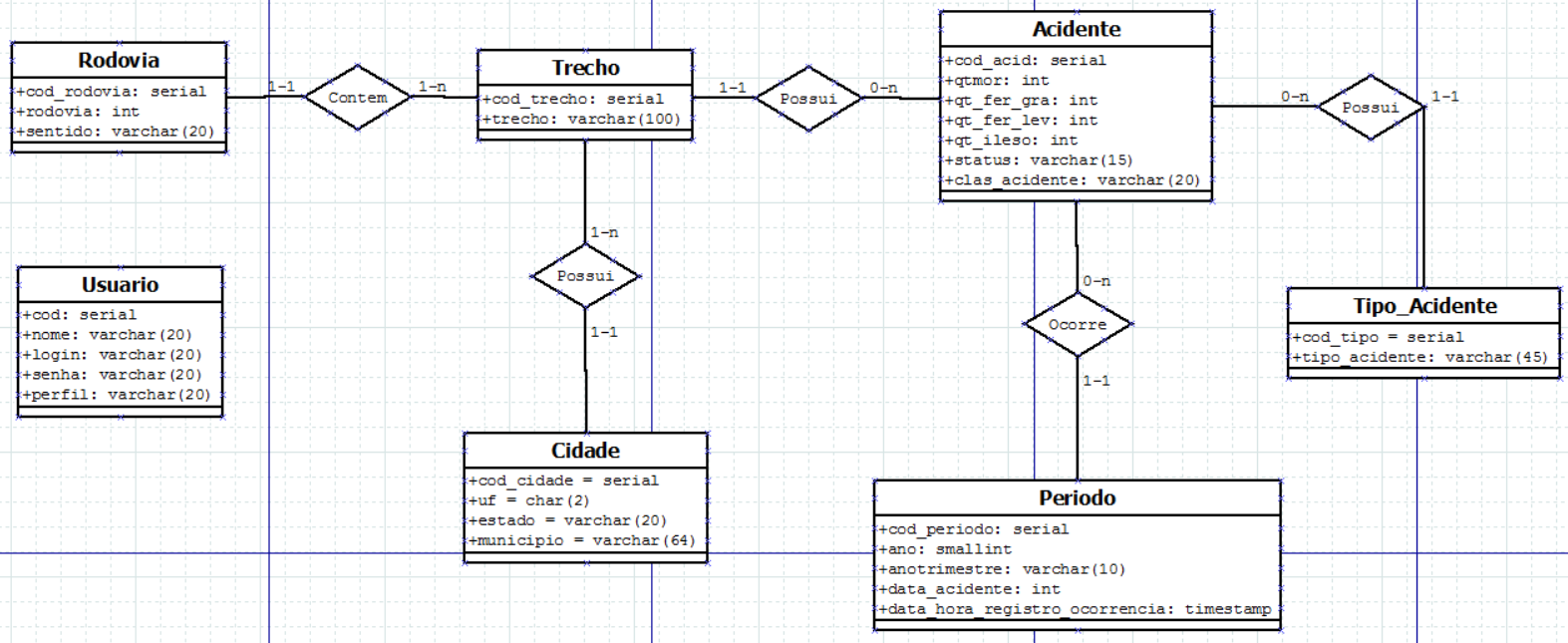
**Natan Barbosa de Morais - 30517**

**Vinicius Eiji Horiguchi - 28836**

1. **Relatório do Banco de Dados**
   1. **Diagrama de Entidade e Relacionamento**



**(Sem atributos)**

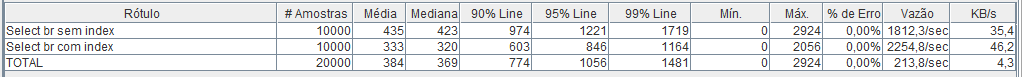


**(Com atributos)**

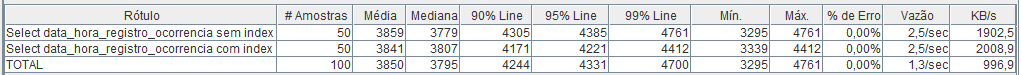
* 1. **Definição de índices e suas justificativas.**
  2. **Definição de views, triggers, procedures, funções e suas justificativas.**

Para o desenvolvimento desta aplicação não foram utilizados views, triggers, procedures ou funções, todas as permissões de consultas foram tratadas a nível de aplicação.

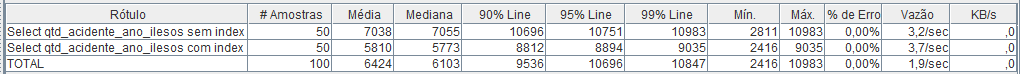
1. **Resultado do teste de performance**
   1. **Rodovia**

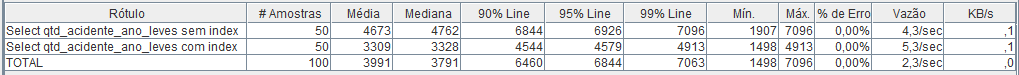


* 1. **Data hora registro ocorrência**

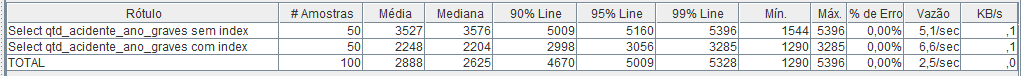


* 1. **Quantidade acidente ano** 
     1. **Ilesos**

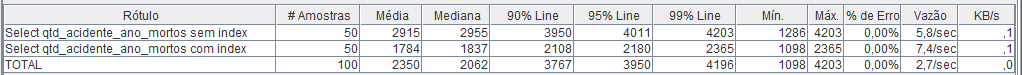
**Feridos Leves**



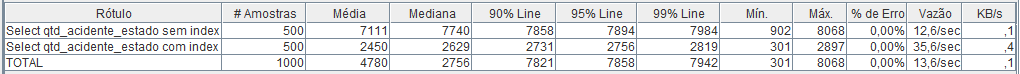
* + 1. **Feridos Graves**

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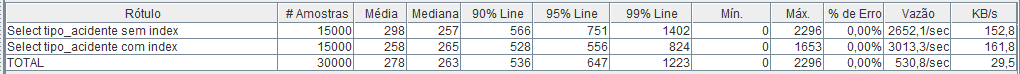
* + 1. **Mortos**



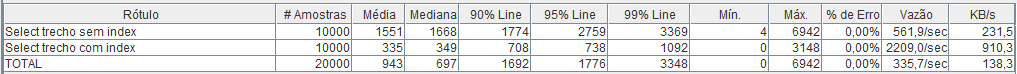
* 1. **Quantidade acidentes por estado**



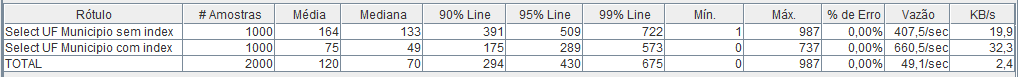
* 1. **Tipo de acidente**



* 1. **Trecho**



* 1. **Município**



1. **Documento de Requisitos**
2. **Backup do Schema.**
   1. **Usuário**

CREATE TABLE usuario (

cod serial NOT NULL, nome character varying(20) NOT NULL,

login character varying(20) NOT NULL,

senha character varying(20) NOT NULL,

perfil character varying(20) NOT NULL,

CONSTRAINT usuario\_pkey PRIMARY KEY (cod) ) WITH ( OIDS=FALSE );

ALTER TABLE usuario OWNER TO postgres;

GRANT ALL ON TABLE usuario TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE usuario TO aplicacao;

* 1. **Trecho**

CREATE TABLE trecho (

id\_trecho serial NOT NULL,

id\_cidade\_fk integer,

id\_rodovia\_fk integer,

trecho character varying(128),

CONSTRAINT id\_trecho\_pk PRIMARY KEY (id\_trecho),

CONSTRAINT trecho\_id\_cidade\_fk\_fkey FOREIGN KEY (id\_cidade\_fk) REFERENCES cidade (id\_cidade) MATCH SIMPLE ON UPDATE NO ACTION ON DELETE NO ACTION,

CONSTRAINT trecho\_id\_rodovia\_fk\_fkey FOREIGN KEY (id\_rodovia\_fk) REFERENCES rodovia (id\_rodovia) MATCH SIMPLE ON UPDATE NO ACTION ON DELETE NO ACTION ) WITH ( OIDS=FALSE );

ALTER TABLE trecho OWNER TO postgres;

GRANT ALL ON TABLE trecho TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE trecho TO aplicacao;

-- Index: log\_trecho

-- DROP INDEX log\_trecho;

CREATE INDEX log\_trecho ON trecho USING btree (trecho COLLATE pg\_catalog."default");

* 1. **Tipo Acidente**

CREATE TABLE tipoacidente (

id\_tipoacidente serial NOT NULL,

tipo\_acidente character varying(45),

CONSTRAINT id\_tipoacidente\_pk PRIMARY KEY (id\_tipoacidente) ) WITH ( OIDS=FALSE );

ALTER TABLE tipoacidente OWNER TO postgres;

GRANT ALL ON TABLE tipoacidente TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE tipoacidente TO aplicacao;

-- Index: log\_tipo\_acidente

-- DROP INDEX log\_tipo\_acidente;

CREATE INDEX log\_tipo\_acidente ON tipoacidente USING btree ( tipo\_acidente COLLATE pg\_catalog."default");

* 1. **Rodovia**

CREATE TABLE rodovia (

id\_rodovia serial NOT NULL,

br smallint,

CONSTRAINT id\_rodovia\_pk PRIMARY KEY (id\_rodovia) ) WITH ( OIDS=FALSE );

ALTER TABLE rodovia OWNER TO postgres;

GRANT ALL ON TABLE rodovia TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE rodovia TO aplicacao;

-- Index: log\_br

-- DROP INDEX log\_br;

CREATE INDEX log\_br ON rodovia USING btree (br);

* 1. **Período**

CREATE TABLE periodo (

id\_periodo serial NOT NULL,

ano smallint,

ano\_trimestre character varying(10),

data\_acidente integer,

data\_hora\_registro\_ocorrencia timestamp without time zone,

CONSTRAINT id\_periodo\_pk PRIMARY KEY (id\_periodo) ) WITH ( OIDS=FALSE );

ALTER TABLE periodo OWNER TO postgres;

GRANT ALL ON TABLE periodo TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE periodo TO aplicacao;

-- Index: log\_data\_acidente\_data\_hora\_registro\_ocorrencia

-- DROP INDEX log\_data\_acidente\_data\_hora\_registro\_ocorrencia;

CREATE INDEX log\_data\_acidente\_data\_hora\_registro\_ocorrencia ON periodo USING btree (data\_acidente, data\_hora\_registro\_ocorrencia);

* 1. **Cidade**

CREATE TABLE cidade (

id\_cidade serial NOT NULL,

uf character varying(2),

estado character varying(20),

municipio character varying(64),

CONSTRAINT id\_cidade\_pk PRIMARY KEY (id\_cidade) ) WITH ( OIDS=FALSE );

ALTER TABLE cidade OWNER TO postgres;

GRANT ALL ON TABLE cidade TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE cidade TO aplicacao;

-- Index: log\_uf\_municipio

-- DROP INDEX log\_uf\_municipio;

CREATE INDEX log\_uf\_municipio ON cidade USING btree (uf COLLATE pg\_catalog."default", municipio COLLATE pg\_catalog."default");

* 1. **Acidente**

CREATE TABLE acidente (

id\_acidente serial NOT NULL,

id\_tipoacidente\_fk integer,

id\_trecho\_fk integer,

id\_periodo\_fk integer,

status character varying(15),

classificacao\_acidente character varying(20),

sentido character varying(20),

qtd\_mortos smallint,

qtd\_feridos\_graves smallint,

qtd\_feridos\_leves smallint,

qtd\_ilesos smallint,

CONSTRAINT id\_acidente\_pk PRIMARY KEY (id\_acidente), CONSTRAINT acidente\_id\_periodo\_fk\_fkey FOREIGN KEY (id\_periodo\_fk) REFERENCES periodo (id\_periodo) MATCH SIMPLE ON UPDATE NO ACTION ON DELETE NO ACTION,

CONSTRAINT acidente\_id\_tipoacidente\_fk\_fkey FOREIGN KEY (id\_tipoacidente\_fk) REFERENCES tipoacidente (id\_tipoacidente) MATCH SIMPLE ON UPDATE NO ACTION ON DELETE NO ACTION,

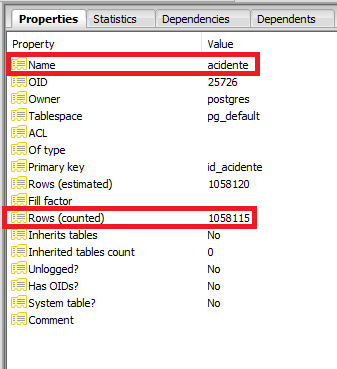
CONSTRAINT acidente\_id\_trecho\_fk\_fkey FOREIGN KEY (id\_trecho\_fk) REFERENCES trecho (id\_trecho) MATCH SIMPLE ON UPDATE NO ACTION ON DELETE NO ACTION ) WITH ( OIDS=FALSE );

ALTER TABLE acidente OWNER TO postgres;

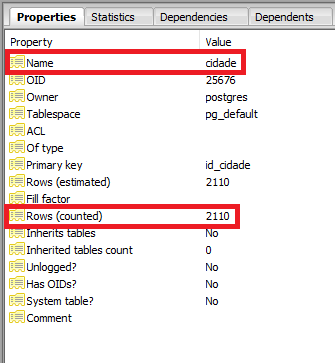
GRANT ALL ON TABLE acidente TO postgres;

GRANT SELECT, UPDATE, INSERT, DELETE ON TABLE acidente TO aplicacao;

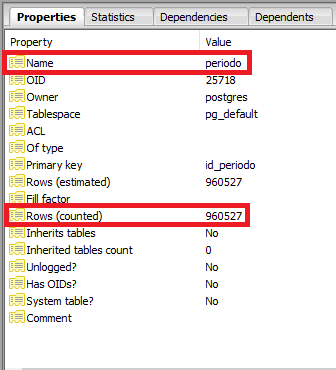
1. **Count das tabelas**
   1. **Tabela Acidente – 1058115**

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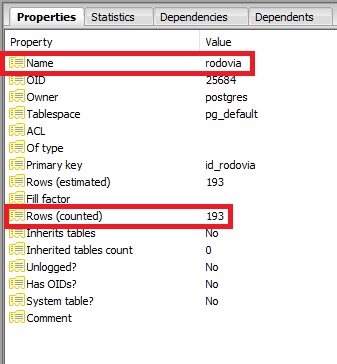
* 1. **Tabela Cidade – 2110**

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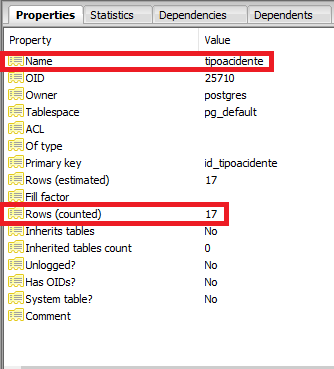
* 1. **Tabela Periodo – 960527**

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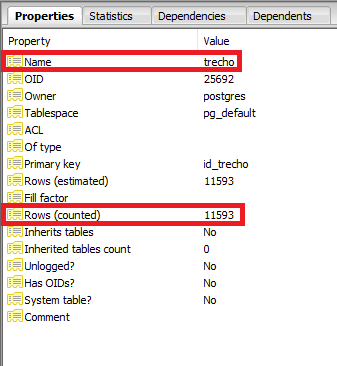
* 1. **Tabela Rodovia - 193**

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* 1. **Tabela Tipoacidente – 17**

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* 1. **Tabela Trecho – 11593**

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