create database if not exists proiect\_BDIE\_Ilies\_Alin\_IOan;

USE proiect\_BDIE\_Ilies\_Alin\_IOan;

select database();

create table if not exists dispozitiv

(nr\_crt integer NOT NULL auto\_increment,

ID\_dispozitiv varchar(100) NOT NULL,

producator varchar(100) NULL,

data\_garantie date,

NR\_device integer,

Pret\_buc integer,

cost integer,

dulap integer,

Primary key(nr\_crt),

FOREIGN key (dulap) references dulap(nr\_crt));

create table if not exists dulap

(nr\_crt integer NOT NULL auto\_increment,

ID\_dulap varchar(100) NOT NULL,

producator varchar(100) NULL,

data\_garantie date,

cost integer,

Primary key(nr\_crt),

zona integer,

FOREIGN key (zona) references zona(nr\_crt));

create table if not exists masina\_electrica

(nr\_crt integer NOT NULL auto\_increment,

ID\_masina varchar(100) NULL,

zona integer null,

tip varchar(20) NULL,

cod varchar(20) NULL,

producator varchar(100) NULL,

alimentare\_faza\_U\_freq varchar(20) NULL,

randament float,

factor\_putere float,

factor\_cerere float,

Curent\_nominal float,

Curent\_cerut float,

P\_nominal float,

putere\_electrica float,

data\_garantie date,

cost integer,

control enum('convertor','contactor'),

Primary key(nr\_crt),

FOREIGN key (zona) references zona(nr\_crt));

create table if not exists cablu

(nr\_crt integer NOT NULL auto\_increment,

ID\_cablu varchar(100) NOT NULL,

utilizare enum('forta','semnal','internet'),

caracteristici enum('ecranat','neecranat'),

sectiune varchar(20) NULL,

lungime\_metri float,

cost\_metri integer,

cost integer,

cod varchar(20) NULL,

producator varchar(100) NULL,

Primary key(nr\_crt));

create table if not exists lampa

(nr\_crt integer NOT NULL auto\_increment,

ID\_lampa varchar (20),

NR\_lampa integer,

Putere\_buc\_W integer,

Pret\_buc integer,

cost\_lampa integer,

Putere\_lampa\_W integer,

zona integer,

Primary key(nr\_crt),

FOREIGN key (zona) references zona(nr\_crt));

create table if not exists zona

(ID\_zona varchar(100) NOT NULL,

nr\_crt integer NOT NULL auto\_increment,

suprafata INTEGER,

Primary key(nr\_crt)

);

create table if not exists cost\_total

(ID\_cost integer NOT NULL auto\_increment,

lampa integer,

lampa\_cost integer,

lampa\_putere integer,

masina integer,

masina\_cost integer,

masina\_putere float,

putere\_total float,

pret\_energie float,

dispozitiv integer,

dispozitiv\_cost integer,

dulap integer,

dulap\_cost integer,

cablu integer,

cablu\_cost integer,

cost\_fix float,

cost\_variabil float,

Primary key(ID\_cost),

FOREIGN key (lampa) references lampa(nr\_crt),

FOREIGN key (masina) references masina\_electrica(nr\_crt),

FOREIGN key (dispozitiv) references dispozitiv(nr\_crt),

FOREIGN key (dulap) references dulap(nr\_crt),

FOREIGN key (cablu) references cablu(nr\_crt));

select \* from dispozitiv;

select \* from dulap;

select \* from cablu;

select \* from zona;

select \* from cost\_total;

alter table cablu modify column lungime\_metri integer null;

alter table cost\_total drop foreign key masina\_putere;

alter table cost\_total add foreign key(masina\_putere) references masina\_electrica(putere\_electrica);

insert into dulap (ID\_dulap, producator, data\_garantie, cost, zona)

values ('Dulap Oxygaz','Electro Global','2015-1-11',100000,2),

('Dulap birou','Electro','2019-1-11',11000,2),

('Dulap electric 1','Electric Grup','2020-1-1',10000,3),

('tablou general','elektro','2020-10-11',700000,3),

('tablou testare','elektro','2020-1-11',55000,4),

('tablou local masina 1','electro grup SEDO','2022-1-11',8000,4),

('tablou local masina 2','electro grup SEDO','2022-2-11',7999,1),

('tablou local masina 3','electro grup SEDO','2022-3-11',6000,1),

('pupitru comanda 1','energobit','2023-1-11',4000,5),

('pupitru comanda 2','energobit','2023-1-11',5000,5)

;

select \* from dulap;

insert into dispozitiv (ID\_dispozitiv, producator, data\_garantie, NR\_device, Pret\_buc,dulap)

values ('Priza 2P+T 32A','Schuko','2018-1-1',50,27,2),

('Priza trifazata 32A','Schuko','2018-12-21',50,78,2),

('PLC','Siemens','2019-1-1',5,4000,3),

('Multimetru digital','Bosch','2013-12-24',25,150,5),

('Switch\_boards','Texas instruments','2020-12-24',15,200,4),

('Transformator 20/0.4kV ','Energobit','2025-12-12',5,80000,4),

('Contactor 32A','Siemens','2020-12-1',10,100,6),

('releu termic 32A','Siemens','2018-12-1',50,99,7),

('siguranta automata 32A','Schneider','2018-12-24',5,50,8),

('întreruptor automat 160A','Schneider','2025-12-24',5,800,1),

('sursa 24V 20A ','Schneider','2018-12-12',2,70,9);

select \* from dispozitiv;

update dispozitiv set cost = Pret\_buc \* NR\_device where ID\_dispozitiv !='';

insert into lampa (ID\_lampa, NR\_lampa, Putere\_buc\_W, Pret\_buc,zona)

values ('incadescenta 100',19,100,10,1),

('incadescenta 200',4,200,20,2),

('incadescenta 300',5,300,50,2),

('incadescenta 500',7,500,100,2),

('fluorescent 200',11,200,89,3),

('fluorescent 300',3,300,99,4),

('fluorescent 50',1,50,29,4),

('LED 50',40,50,289,5),

('LED 110',2,110,199,4),

('LED 35',20,35,29,5),

('fluorescent 500',10,500,200,4);

select \* from lampa;

update lampa set Putere\_lampa\_W = Putere\_buc\_W \* NR\_lampa where ID\_lampa !='';

update lampa set cost\_lampa = Pret\_buc \* NR\_lampa where ID\_lampa !='';

insert into masina\_electrica (ID\_masina, tip, cod, producator,alimentare\_faza\_U\_freq,data\_garantie,control,P\_nominal,randament,factor\_putere,factor\_cerere,cost,zona)

values

('Colector iesire','asincronă scurt','B3.2.55','UMEB','3/400/50','2018-11-30','contactor',3200,0.82,0.79,0.5,4000,1),

('masina presare','sincronă MP','HZ.x.xx','Siemens','3/400/50','2018-12-31','convertor',33000,0.99,0.99,0.5,100000,2),

('masina frezare','asincronă scurt','HZ.c.ab','Siemens','3/400/50','2018-12-31','convertor',63000,0.89,0.909,0.4,8001,3),

('masina taiere','asincronă scurt','HZ.2.aa','Siemens','3/400/50','2018-12-31','convertor',35000,0.79,0.79,1,8000,4),

('Ajustare verticala 1','asincronă scurt','B3.2.15','UMEB','3/400/50','2020-11-30','contactor',1500,0.67,0.7,0.9,2000,1),

('Ajustare verticala 2','asincronă scurt','B3.2.15','UMEB','3/400/50','2020-11-30','contactor',1501,0.67,0.7,0.8,1999,1),

('Ajustare orizontala 1','asincronă scurt','B3.2.15','UMEB','3/400/50','2020-11-30','contactor',1502,0.671,0.71,0.85,2001,5),

('Ajustare orizontala 2','asincronă scurt','B3.2.15','UMEB','3/400/50','2020-11-30','contactor',1503,0.672,0.7,0.72,2002,5),

('Ajustare unghiulara 1','asincronă scurt','G1.1.25','UMEB','3/400/50','2021-11-30','contactor',501,0.6,0.71,1,1404,5),

('Ajustare unghiulara 2','asincronă scurt','G1.1.25','UMEB','3/400/50','2021-11-30','contactor',502,0.61,0.711,1,1401,5)

;

select \* from masina\_electrica;

update masina\_electrica set Curent\_nominal = P\_nominal/

(sqrt(CONVERT (SUBSTRING(alimentare\_faza\_U\_freq, 1, 1),UNSIGNED INTEGER))\*

CONVERT (SUBSTRING(alimentare\_faza\_U\_freq, 3, 3), UNSIGNED INTEGER)\*factor\_putere\*randament)

where ID\_masina !='';

update masina\_electrica set Curent\_cerut=Curent\_nominal\*factor\_cerere where ID\_masina !='';

update masina\_electrica set putere\_electrica = P\_nominal/(factor\_putere\*randament) where ID\_masina !='';

insert into cablu (ID\_cablu, cod, producator, utilizare, caracteristici,sectiune,lungime\_metri,cost\_metri)

values ('cablu masina frezare','NYY 1','IPROEB','forta','ecranat','4X40',19,500),

('cablu colector','NYY 0','IPROEB','forta','ecranat','4X2.5',100,50),

('cablu masina presare','NYY 3','IPROEB','forta','ecranat','4X60',20,800),

('cablu masina ajustare','NAY 2','IPROEB','forta','neecranat','4X1.5',200,49),

('comanda masina ajustare','OSN 2','IPROEB','semnal','neecranat','16X1.5',100,39),

('comanda masina frezare','OSCE2','IPROEB','semnal','ecranat','16X1.5',110,59),

('comanda masina','OSN 2','IPROEB','semnal','neecranat','4X1.5',45,19),

('internet 1','eth 2','Romtelecom','internet','neecranat','4X1.5',99,9),

('internet 2','cat 7','Romtelecom','internet','ecranat','4X1.5',299,38),

('internet birou','cat 6','UPC','internet','ecranat','4X1.5',150,25);

select \* from cablu;

update cablu set cost=cost\_metri\*lungime\_metri where ID\_cablu !='';

drop table cost\_total;

insert into zona (ID\_zona, suprafata)

values ('laminor',900),

('tregătorie',500),

('sectia topire',800),

('sectia finisare',800),

('sectia forjare',1000);

select \* from zona;

insert into cost\_total (lampa,masina,dulap,cablu,dispozitiv,pret\_energie)

values (1,1,1,1,1,0.46656),(2,2,2,2,2,0.46656),(3,3,3,3,3,0.46656),(4,4,4,4,4,0.46656),(5,5,5,5,5,0.46656),

(6,6,6,6,6,0.46656),(7,7,7,7,7,0.46656),(8,8,8,8,8,0.46656),(9,9,9,9,9,0.46656),(10,10,10,10,10,0.46656);

update cost\_total set dispozitiv=1

where ID\_cost=1;

update cost\_total set putere\_total=masina\_putere+lampa\_putere;

update cost\_total set cost\_variabil=putere\_total\*365\*24\*pret\_energie/1000;

update cost\_total set cost\_fix=lampa\_cost+masina\_cost+dispozitiv\_cost+dulap\_cost+cablu\_cost;

select \* from dispozitiv;

select \* from dulap;

select \* from lampa;

select \* from masina\_electrica;

select \* from zona;

select \* from cost\_total;

update cost\_total inner join lampa set

cost\_total.lampa\_cost=lampa.cost\_lampa, cost\_total.lampa\_putere=lampa.Putere\_lampa\_W

where ID\_cost=10 and nr\_crt=10;

update cost\_total inner join masina\_electrica set

cost\_total.masina\_putere=masina\_electrica.putere\_electrica, cost\_total.masina\_cost=masina\_electrica.cost

where ID\_cost=10 and nr\_crt=10;

update cost\_total inner join dulap set cost\_total.dulap\_cost=dulap.cost

where ID\_cost=1 and dulap.nr\_crt=1;

update cost\_total inner join cablu set cost\_total.cablu\_cost=cablu.cost

where ID\_cost=10 and nr\_crt=10;

update cost\_total inner join dispozitiv set cost\_total.dispozitiv\_cost=dispozitiv.cost

where ID\_cost=10 and dispozitiv.nr\_crt=10;

select MAX(cost\_total.lampa\_cost),lampa.ID\_lampa from cost\_total, lampa where lampa.nr\_crt=cost\_total.lampa;

select MAX(cost\_total.masina\_cost),masina\_electrica.ID\_masina

from cost\_total, masina\_electrica where masina\_electrica.nr\_crt=cost\_total.masina;

select MAX(cost\_total.dulap\_cost),dulap.ID\_dulap

from cost\_total, dulap where dulap.nr\_crt=cost\_total.dulap;

select MAX(cost\_total.dispozitiv\_cost),dispozitiv.ID\_dispozitiv

from cost\_total, dispozitiv where dispozitiv.nr\_crt=cost\_total.dispozitiv;

select MAX(cost\_total.cablu\_cost),cablu.ID\_cablu

from cost\_total, cablu where cablu.nr\_crt=cost\_total.cablu;

select SUM(cost\_fix) from cost\_total;

select SUM(cost\_variabil) from cost\_total;

select ID\_dispozitiv, data\_garantie from dispozitiv where data\_garantie<='2018-12-21';

select ID\_dulap, data\_garantie from dulap where data\_garantie<='2018-12-21';

select ID\_masina, data\_garantie from masina\_electrica where data\_garantie<='2018-12-21';

select ID\_masina,putere\_electrica from masina\_electrica where ID\_masina like 'Ajustare%'

order by putere\_electrica ASC;

select dispozitiv.ID\_dispozitiv, dulap.ID\_dulap from dulap, dispozitiv

where dispozitiv.nr\_crt=1 and dulap.nr\_crt=1;

select masina\_electrica.ID\_masina, zona.ID\_zona

from zona, masina\_electrica where zona.ID\_zona= 'laminor'

and masina\_electrica.zona=zona.nr\_crt;

create view date\_tehnice as select ID\_masina,tip,

alimentare\_faza\_U\_freq,randament,factor\_putere,Curent\_nominal from masina\_electrica;

select \* from date\_tehnice;

create index lampa on lampa(nr\_crt,ID\_lampa,Putere\_buc\_W,Pret\_buc);

show index from lampa;

call puteri();