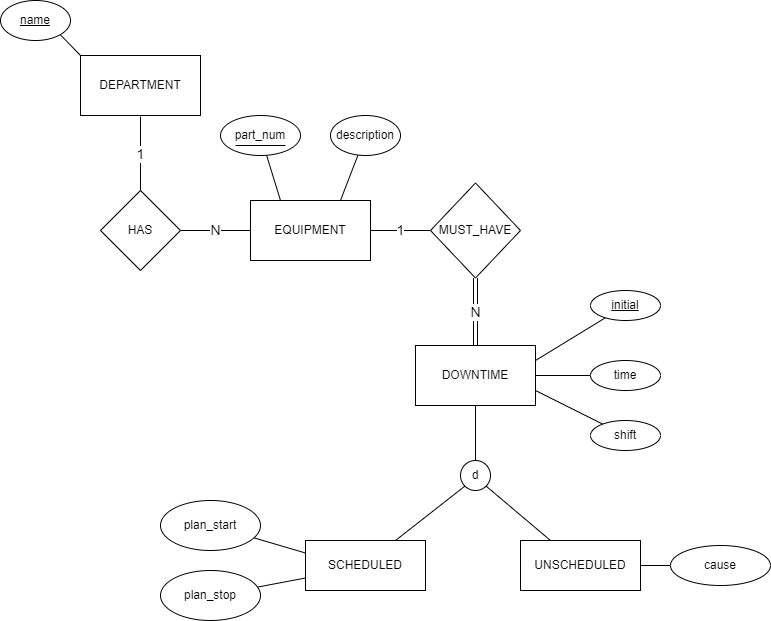
Group: Project 12

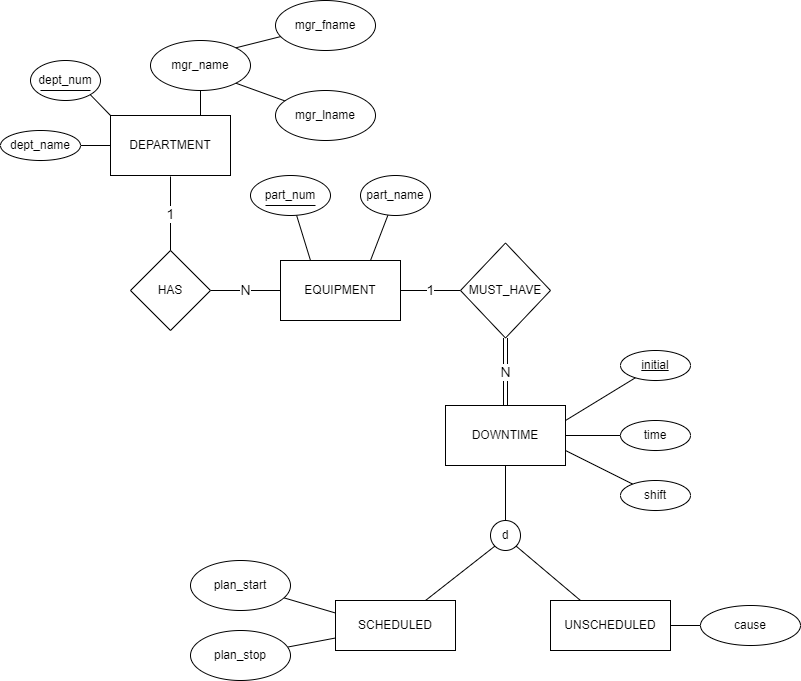
Member: Leo Puso

**EER Diagram**

(Original)



(Updated)



**Relational Diagram**

DOWNTIME

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| initial | time | shift | downtime\_type | plan\_start | plan\_stop | cause | equipment\_num |

EQUIPMENT

|  |  |  |
| --- | --- | --- |
| part\_num | part\_name | dept\_num |

DEPARTMENT

|  |  |  |  |
| --- | --- | --- | --- |
| dept\_name | dept\_num | mgr\_fname | mgr\_lname |

**SQL Statements:**

/\*\*\*\* MySQL 5.7.38 \*\*\*\*/

create table DEPARTMENT

(

dept\_num int not null,

dept\_name varchar(10),

mgr\_fname varchar(30),

mgr\_lname varchar(30),

primary key(dept\_num)

);

create table EQUIPMENT

(

part\_num int not null,

part\_name varchar(30),

dept\_num int,

primary key(part\_num),

foreign key(dept\_num) references DEPARTMENT(dept\_num)

);

create table DOWNTIME

(

-- technicians will each have unique three letter initials

initial char(3) not null,

-- time in minutes

time int,

-- there are three shifts: day, swing, grave

shift varchar(5),

downtime\_type enum('Scheduled', 'Unscheduled'),

-- no downtime, make downtime\_type null

-- if downtime\_type is null make plan\_start/stop and cause into null

-- if downtime\_type is ‘Scheduled’ then cause is null

-- if downtime\_type is “Unscheduled’ then plan\_start/stop are both nulll

-- plan\_start/stop format is HH:MM:SS

plan\_start time,

plan\_stop time,

cause varchar(30),

equipment\_num int,

primary key(initial),

foreign key(equipment\_num) references EQUIPMENT(part\_num)

);

/\*\*\*\* Named Query \*\*\*\*/

create view SCHEDULED as

select initial, time, shift, plan\_start, plan\_stop

from DOWNTIME

where downtime\_type = 'Scheduled';

/\*\*\*\* Materialized View \*\*\*\*/

create table UNSCHEDULED

(

Select initial, time, shift, cause

from DOWNTIME

where downtime\_type='Unscheduled'

);

/\*\*\*\*\*\*\*\*\* Triggers \*\*\*\*\*\*\*\*\*/

--------- insert ---------

delimiter $$

create trigger after\_insert\_unscheduled

after insert on DOWNTIME

for each row

begin

if new.downtime\_type='Unscheduled'

and new.plan\_start is not null

then

signal sqlstate '45000'

set message\_text ='Invalid entry.';

elseif new.downtime\_type='Unscheduled'

and new.plan\_stop is not null

then

signal sqlstate '45000'

set message\_text ='Invalid entry.';

end if;

if new.downtime\_type='Unscheduled'

and new.plan\_start is null

and new.plan\_stop is null

then

insert into UNSCHEDULED

values(new.initial, new.time, new.shift, new.cause);

end if;

end $$

delimiter ;

--------- update ---------

delimiter $$

create trigger after\_update\_unscheduled

after update on DOWNTIME

for each row

begin

if new.downtime\_type='Unscheduled'

and new.plan\_start is not null

then

signal sqlstate '45000'

set message\_text =

'Cannot update: plan\_start has to be null for Unscheduled';

elseif new.downtime\_type='Unscheduled'

and new.plan\_stop is not null

then

signal sqlstate '45000'

set message\_text =

'Cannot update: plan\_stop has to be null for Unscheduled';

elseif new.downtime\_type='Unscheduled'

then

delete from UNSCHEDULED where initial=old.initial;

insert into UNSCHEDULED

values(new.initial, new.time, new.shift, new.cause);

end if;

end $$

delimiter ;

--------- delete ---------

delimiter $$

create trigger after\_delete\_unscheduled

after delete on DOWNTIME

for each row

begin

if old.downtime\_type='Unscheduled'

then

delete from UNSCHEDULED

where initial=old.initial;

end if;

end $$

delimiter ;

/\*\*\*\*\*\*\*\*\*\* Function \*\*\*\*\*\*\*\*\*\*/

-- get total down time for each shift

delimiter &&

create function shift\_total\_downtime(shift varchar(5))

returns int

begin

declare num int default 0;

if shift='day' then

select sum(time) into num

from DOWNTIME

where DOWNTIME.shift='Day';

elseif shift='swing' then

select sum(time) into num

from DOWNTIME

where DOWNTIME.shift='Swing';

elseif shift='Grave' then

select sum(time) into num

from DOWNTIME

where DOWNTIME.shift='Grave';

end if;

return num;

end &&

delimiter ;

**URL/Source Code:**

<https://ecs-pw-proj-web.ecs.csus.edu/~lpuso/front.php>

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* front.php \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

<html>

<body>

Type in your unscheduled downtime:<br><br>

<form action="end.php" method="get">

Initial (3 letters): <input type="text" name="initial"><br>

Time(minutes): <input type="text" name="time"><br>

Shift: <input type="text" name="shift"><br>

Cause: <input type="text" name="cause"><br>

<input type="submit">

</form>

</body>

</html>

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* end.php \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

<html>

<body>

Here is the UNSCHEDULED table <br><br>

</body>

</html>

<?php

$servername = "ecs-pd-proj-db.ecs.csus.edu";

$username = "CSC174143";

$password = "Csc134\_998570202";

$dbname = "CSC174143";

// Create connection

$conn = new mysqli($servername, $username, $password, $dbname);

// Check connection

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

$sql = "SELECT \* FROM UNSCHEDULED";

$result = $conn->query($sql);

if ($result->num\_rows > 0) {

// output data of each row

while($row = $result->fetch\_assoc()) {

echo "initial: " . $row["initial"]. " - time: " . $row["time"]. " - shift: " . $row["shift"] . " - cause: " . $row["cause"] . "<br>";

}

} else {

echo "0 results";

}

$conn->close();

?>