**TABLE GENERATION**

-- MySQL Workbench Forward Engineering

SET @OLD\_UNIQUE\_CHECKS=@@UNIQUE\_CHECKS, UNIQUE\_CHECKS=0;

SET @OLD\_FOREIGN\_KEY\_CHECKS=@@FOREIGN\_KEY\_CHECKS, FOREIGN\_KEY\_CHECKS=0;

SET @OLD\_SQL\_MODE=@@SQL\_MODE, SQL\_MODE='ONLY\_FULL\_GROUP\_BY,STRICT\_TRANS\_TABLES,NO\_ZERO\_IN\_DATE,NO\_ZERO\_DATE,ERROR\_FOR\_DIVISION\_BY\_ZERO,NO\_ENGINE\_SUBSTITUTION';

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-- Schema handson2

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-- Schema handson2

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CREATE SCHEMA IF NOT EXISTS `handson2` DEFAULT CHARACTER SET utf8 ;

USE `handson2` ;

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-- Table `handson2`.`electricity\_connection\_type`

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DROP TABLE IF EXISTS `handson2`.`electricity\_connection\_type` ;

CREATE TABLE IF NOT EXISTS `handson2`.`electricity\_connection\_type` (

`id` INT(11) NOT NULL,

`connection\_name` VARCHAR(20) NULL,

PRIMARY KEY (`id`))

ENGINE = InnoDB;

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-- Table `handson2`.`slab`

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DROP TABLE IF EXISTS `handson2`.`slab` ;

CREATE TABLE IF NOT EXISTS `handson2`.`slab` (

`id` INT(11) NOT NULL,

`from\_unit` INT(11) NULL,

`to\_unit` INT(11) NULL,

`rate` DOUBLE NULL,

`connection\_type\_id` INT(11) NOT NULL,

PRIMARY KEY (`id`),

INDEX `fk\_slab\_electricity\_connection\_type\_idx` (`connection\_type\_id` ASC) VISIBLE,

CONSTRAINT `fk\_slab\_electricity\_connection\_type`

FOREIGN KEY (`connection\_type\_id`)

REFERENCES `handson2`.`electricity\_connection\_type` (`id`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `handson2`.`building\_type`

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DROP TABLE IF EXISTS `handson2`.`building\_type` ;

CREATE TABLE IF NOT EXISTS `handson2`.`building\_type` (

`id` INT(11) NOT NULL,

`name` VARCHAR(100) NULL,

`connection\_type\_id` INT(11) NOT NULL,

PRIMARY KEY (`id`),

INDEX `fk\_building\_type\_electricity\_connection\_type1\_idx` (`connection\_type\_id` ASC) VISIBLE,

CONSTRAINT `fk\_building\_type\_electricity\_connection\_type1`

FOREIGN KEY (`connection\_type\_id`)

REFERENCES `handson2`.`electricity\_connection\_type` (`id`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `handson2`.`building`

-- -----------------------------------------------------

DROP TABLE IF EXISTS `handson2`.`building` ;

CREATE TABLE IF NOT EXISTS `handson2`.`building` (

`id` INT(11) NOT NULL,

`owner\_name` VARCHAR(100) NULL,

`address` VARCHAR(100) NULL,

`contact\_number` VARCHAR(100) NULL,

`email\_address` VARCHAR(100) NULL,

`building\_type\_id` INT(11) NOT NULL,

PRIMARY KEY (`id`),

INDEX `fk\_building\_building\_type1\_idx` (`building\_type\_id` ASC) VISIBLE,

CONSTRAINT `fk\_building\_building\_type1`

FOREIGN KEY (`building\_type\_id`)

REFERENCES `handson2`.`building\_type` (`id`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `handson2`.`meter`

-- -----------------------------------------------------

DROP TABLE IF EXISTS `handson2`.`meter` ;

CREATE TABLE IF NOT EXISTS `handson2`.`meter` (

`id` INT(11) NOT NULL,

`meter\_number` VARCHAR(45) NULL,

`building\_id` INT(11) NOT NULL,

PRIMARY KEY (`id`),

INDEX `fk\_meter\_building1\_idx` (`building\_id` ASC) VISIBLE,

CONSTRAINT `fk\_meter\_building1`

FOREIGN KEY (`building\_id`)

REFERENCES `handson2`.`building` (`id`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `handson2`.`bill`

-- -----------------------------------------------------

DROP TABLE IF EXISTS `handson2`.`bill` ;

CREATE TABLE IF NOT EXISTS `handson2`.`bill` (

`id` INT(11) NOT NULL,

`month` INT(11) NULL,

`year` INT(11) NULL,

`due\_date` DATE NULL,

`total\_units` INT(11) NULL,

`payable\_amount` DOUBLE NULL,

`is\_paid` TINYINT(1) NULL,

`payment\_date` DATE NULL,

`fine\_amount` DOUBLE NULL,

`meter\_id` INT(11) NOT NULL,

PRIMARY KEY (`id`),

INDEX `fk\_bill\_meter1\_idx` (`meter\_id` ASC) VISIBLE,

CONSTRAINT `fk\_bill\_meter1`

FOREIGN KEY (`meter\_id`)

REFERENCES `handson2`.`meter` (`id`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

-- -----------------------------------------------------

-- Table `handson2`.`electricity\_reading`

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DROP TABLE IF EXISTS `handson2`.`electricity\_reading` ;

CREATE TABLE IF NOT EXISTS `handson2`.`electricity\_reading` (

`id` INT(11) NOT NULL,

`day` DATE NULL,

`h1` INT(11) NULL,

`h2` INT(11) NULL,

`h3` INT(11) NULL,

`h4` INT(11) NULL,

`h5` INT(11) NULL,

`h6` INT(11) NULL,

`h7` INT(11) NULL,

`h8` INT(11) NULL,

`h9` INT(11) NULL,

`h10` INT(11) NULL,

`h11` INT(11) NULL,

`h12` INT(11) NULL,

`h13` INT(11) NULL,

`h14` INT(11) NULL,

`h15` INT(11) NULL,

`h16` INT(11) NULL,

`h17` INT(11) NULL,

`h18` INT(11) NULL,

`h19` INT(11) NULL,

`h20` INT(11) NULL,

`h21` INT(11) NULL,

`h22` INT(11) NULL,

`h23` INT(11) NULL,

`h24` INT(11) NULL,

`total\_units` INT(11) NULL,

`meter\_id` INT(11) NOT NULL,

PRIMARY KEY (`id`),

INDEX `fk\_electricity\_reading\_meter1\_idx` (`meter\_id` ASC) VISIBLE,

CONSTRAINT `fk\_electricity\_reading\_meter1`

FOREIGN KEY (`meter\_id`)

REFERENCES `handson2`.`meter` (`id`)

ON DELETE NO ACTION

ON UPDATE NO ACTION)

ENGINE = InnoDB;

SET SQL\_MODE=@OLD\_SQL\_MODE;

SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS;

SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS;

**QUERIES**

use handson2;

insert into electricity\_connection\_type(id,connection\_name) values (1,'Home'),(2,'Office'),(3,'School'),(4,'Hospital');

select \* from electricity\_connection\_type;

select \* from electricity\_connection\_type order by connection\_name;

insert into building\_type(id,name,connection\_type\_id) values (1,'Apartment',1),(2,'HCL',2),(3,'KV',3),(4,'Appolo',4);

select \* from building\_type;

select \* from building\_type order by building\_type.name;

insert into building(id,owner\_name,address,contact\_number,email\_address,building\_type\_id) values (1,'harsha','nlr','9807','har@mail',1),(2,'rahul','chennai','9393','rah@mail',3),(3,'nadar','chennai','8392','nadar@mail',2),(4,'upasana','hyd','8332','upasan@mail',4);

select \* from building;

select \* from building order by building.owner\_name;

insert into meter(id,meter\_number,building\_id) values (1,'abcd1111',1),(2,'hcl2222',2),(3,'kv3333',3),(4,'appolo4444',4);

insert into electricity\_reading(id,day,h1,h2,h3,h4,h5,h6,h7,h8,h9,h10,h11,h12,h13,h14,h15,h16,h17,h18,h19,h20,h21,h22,h23,h24, total\_units,meter\_id) values (1,'2020-09-23',1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,1000,1),(2,'2020-09-22',11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,1500,2),(3,'2020-09-21',3,1,2,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,800,3),(4,'2020-09-20',4,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,1250,4);

select \* from electricity\_reading order by electricity\_reading.total\_units desc;

select meter\_number from meter;

select owner\_name,contact\_number from building order by building.owner\_name;

delete from bill where bill.id>0;

insert into bill(id,month,year,due\_date,total\_units,payable\_amount,is\_paid,payment\_date,fine\_amount,meter\_id) values (1,09,2020,'2020-09-23',1000,6700,1,'2020-09-30',50,1),(2,09,2020,'2020-09-22',1200,7700,1,'2020-09-29',100,2),(3,09,2020,'2020-09-20',1500,7500,1,'2020-09-30',111,3),(4,09,2020,'2020-09-23',2000,2500,1,'2020-09-29',100,4);

select total\_units, payable\_amount, fine\_amount from bill order by total\_units;

desc slab;

delete from slab where slab.id>0;

insert into slab(id,from\_unit,to\_unit,rate,connection\_type\_id) values (1,10,250,50,1),(2,5,60,75,2),(3,30,75,55,3),(4,5,75,35,4);

select \* from slab order by slab.from\_unit;

select \* from building where owner\_name='harsha';

select \* from bill where total\_units>1200 order by total\_units desc;

select \* from bill where due\_date='2020-09-23' order by payable\_amount desc;

update building set email\_address='' where id=3;

select owner\_name,address,contact\_number from building where email\_address='' order by owner\_name;

update building set owner\_name='mohon' where id=4;

select \* from building where owner\_name like '%m%' order by owner\_name;

update building set building\_type\_id=2 where id=2;

select \* from building where building\_type\_id=2 order by owner\_name;

select \* from electricity\_reading where total\_units between 1200 and 1500 order by total\_units;

select meter\_id,total\_units from electricity\_reading where h13<h14 order by total\_units desc;