# CREATE SCHEMA

**1.**
create schema `sadarangani_akshay_spring_2018`

**2.**
CREATE TABLE `sadarangani_akshay_spring_2018`.`Person` (

 `id` INT NOT NULL AUTO_INCREMENT,

 `firstName` VARCHAR(45) NULL,

 `lastName` VARCHAR(45) NULL,

 `username` VARCHAR(45) NOT NULL,

 `password` VARCHAR(45) NOT NULL,

 `email` VARCHAR(45) NULL,

 `dob` DATE NULL,

 PRIMARY KEY (`id`));


CREATE TABLE `sadarangani_akshay_spring_2018`.`Developer` (

 `id` INT NOT NULL,

 `developerKey` VARCHAR(45) NOT NULL,

 PRIMARY KEY (`id`),

 CONSTRAINT `developer_person_generalization`

  FOREIGN KEY (`id`)

  REFERENCES `sadarangani_akshay_spring_2018`.`Person` (`id`)

  ON DELETE NO ACTION

  ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`User` (

 `id` INT NOT NULL,

 `userAgreement` TINYINT,

 `key` VARCHAR(45),

```
  PRIMARY KEY (`id`),

  CONSTRAINT `user_person_generalization`

   FOREIGN KEY (`id`)

   REFERENCES `sadarangani_akshay_spring_2018`.`Person` (`id`)

   ON DELETE NO ACTION

   ON UPDATE NO ACTION);
```

3.
```
CREATE TABLE `sadarangani_akshay_spring_2018`.`Website` (

 `id` INT NOT NULL AUTO_INCREMENT,

 `name` VARCHAR(45) NOT NULL,

 `description` VARCHAR(1000) NULL,

 `created` DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,

 `updated` DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,

 `visits` INT NULL,

 `developerID` INT NULL,

 PRIMARY KEY (`id`),

 INDEX `developerID_fk_idx` (`developerID` ASC),

 CONSTRAINT `developerID_fk`

  FOREIGN KEY (`developerID`)

  REFERENCES `sadarangani_akshay_spring_2018`.`Developer` (`id`)

  ON DELETE NO ACTION

  ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`Page` (

 `id` INT NOT NULL AUTO_INCREMENT,

 `websiteID` INT NOT NULL,

 `title` VARCHAR(45) NOT NULL,

 `description` VARCHAR(1000) NULL,
```

```
  `created` DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP,

  `updated` DATETIME NOT NULL DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP,

  `visits` INT NULL,

  PRIMARY KEY (`id`),

  INDEX `website_id_fk_idx` (`websiteID` ASC),

  CONSTRAINT `website_id_fk`

    FOREIGN KEY (`websiteID`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Website` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`WidgetType` (

  `type` VARCHAR(45) NOT NULL,

  PRIMARY KEY (`type`));


INSERT INTO `sadarangani_akshay_spring_2018`.`WidgetType`

(`type`)

VALUES

("Html");


INSERT INTO `sadarangani_akshay_spring_2018`.`WidgetType`

(`type`)

VALUES

("Heading");


INSERT INTO `sadarangani_akshay_spring_2018`.`WidgetType`

(`type`)

VALUES
```

```
("YouTube");

INSERT INTO `sadarangani_akshay_spring_2018`.`WidgetType`
(`type`)
VALUES
("Image");

CREATE TABLE `sadarangani_akshay_spring_2018`.`Widget` (
 `id` INT NOT NULL AUTO_INCREMENT,
 `pageID` INT NOT NULL,
 `name` VARCHAR(45) NULL,
 `width` INT NULL,
 `height` INT NULL,
 `cssClass` VARCHAR(45) NULL,
 `cssStyle` VARCHAR(45) NULL,
 `text` VARCHAR(45) NULL,
 `order` INT NULL,
 `size` INT NULL DEFAULT 2,
 `html` VARCHAR(45) NULL,
 `src` VARCHAR(45) NULL,
 `url` VARCHAR(45) NULL,
 `sharable` TINYINT NULL,
 `expandable` TINYINT NULL,
 `type` VARCHAR(45) NOT NULL,
 PRIMARY KEY (`id`),
 INDEX `type_fk_idx` (`type` ASC),
 CONSTRAINT `widgettype_widget_generalization`
  FOREIGN KEY (`type`)
  REFERENCES `sadarangani_akshay_spring_2018`.`WidgetType` (`type`)
```

```
  ON DELETE NO ACTION

  ON UPDATE NO ACTION);
```

4.
```
CREATE TABLE `sadarangani_akshay_spring_2018`.`Phone` (

 `id` INT NOT NULL AUTO_INCREMENT,

 `phone` VARCHAR(45) NOT NULL,

 `primary` BOOLEAN NOT NULL DEFAULT FALSE,

 `personID` INT NOT NULL,

 PRIMARY KEY (`id`),

 CONSTRAINT `personID_fk`

  FOREIGN KEY (`personID`)

  REFERENCES `sadarangani_akshay_spring_2018`.`Person` (`id`)

  ON DELETE CASCADE

  ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`Address` (

 `id` INT NOT NULL AUTO_INCREMENT,

 `street1` VARCHAR(45) NULL,

 `street2` VARCHAR(45) NULL,

 `city` VARCHAR(45) NULL,

 `state` VARCHAR(45) NULL,

 `zip` VARCHAR(45) NULL,

 `primary` BOOLEAN NOT NULL DEFAULT FALSE,

 `personID` INT NOT NULL,

 PRIMARY KEY (`id`),

 CONSTRAINT `person_id_fk`

  FOREIGN KEY (`personID`)

  REFERENCES `sadarangani_akshay_spring_2018`.`Person` (`id`)

  ON DELETE CASCADE
```

```
  ON UPDATE NO ACTION);
```

5.
```
CREATE TABLE `sadarangani_akshay_spring_2018`.`Priviledge` (
  `type` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`type`));


INSERT INTO `sadarangani_akshay_spring_2018`.`Priviledge`

(`type`)

VALUES

("create");


INSERT INTO `sadarangani_akshay_spring_2018`.`Priviledge`

(`type`)

VALUES

("read");


INSERT INTO `sadarangani_akshay_spring_2018`.`Priviledge`

(`type`)

VALUES

("update");


INSERT INTO `sadarangani_akshay_spring_2018`.`Priviledge`

(`type`)

VALUES

("delete");


CREATE TABLE `sadarangani_akshay_spring_2018`.`Role` (
  `type` VARCHAR(45) NOT NULL,
  PRIMARY KEY (`type`));
```

```
INSERT INTO `sadarangani_akshay_spring_2018`.`Role`

(`type`)

VALUES

("owner");


INSERT INTO `sadarangani_akshay_spring_2018`.`Role`

(`type`)

VALUES

("admin");


INSERT INTO `sadarangani_akshay_spring_2018`.`Role`

(`type`)

VALUES

("writer");


INSERT INTO `sadarangani_akshay_spring_2018`.`Role`

(`type`)

VALUES

("editor");


INSERT INTO `sadarangani_akshay_spring_2018`.`Role`

(`type`)

VALUES

("reviewer");


CREATE TABLE `sadarangani_akshay_spring_2018`.`WebsitePriviledge` (

  `id` INT NOT NULL,

  `websiteID` INT NOT NULL,
```

```
  `developerID` INT NOT NULL,

  `priviledge` VARCHAR(45) NOT NULL,

  PRIMARY KEY (`id`),

  INDEX `website_fk_idx` (`websiteID` ASC),

  INDEX `developer_fk_idx` (`developerID` ASC),

  INDEX `priviledgeType_fk_idx` (`priviledge` ASC),

  CONSTRAINT `website_fk`

    FOREIGN KEY (`websiteID`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Website` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION,

  CONSTRAINT `developer_fk`

    FOREIGN KEY (`developerID`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Developer` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION,

  CONSTRAINT `priviledgeType_fk`

    FOREIGN KEY (`priviledge`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Priviledge` (`type`)

    ON DELETE NO ACTION

    ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`WebsiteRole` (

  `id` INT NOT NULL AUTO_INCREMENT,

  `websiteID` INT NOT NULL,

  `role` VARCHAR(45) NOT NULL,

  `developerID` INT NOT NULL,

  PRIMARY KEY (`id`),

  INDEX `dev_id_fk_idx` (`developerID` ASC),
```

```
  INDEX `roleType_fk_idx` (`role` ASC),

  INDEX `webID_fk_idx` (`websiteID` ASC),

  CONSTRAINT `devID_fk`

   FOREIGN KEY (`developerID`)

   REFERENCES `sadarangani_akshay_spring_2018`.`Developer` (`id`)

   ON DELETE CASCADE

   ON UPDATE NO ACTION,

  CONSTRAINT `roleType_fk`

   FOREIGN KEY (`role`)

   REFERENCES `sadarangani_akshay_spring_2018`.`Role` (`type`)

   ON DELETE NO ACTION

   ON UPDATE NO ACTION,

  CONSTRAINT `webID_fk`

   FOREIGN KEY (`websiteID`)

   REFERENCES `sadarangani_akshay_spring_2018`.`Website` (`id`)

   ON DELETE CASCADE

   ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`PagePriviledge` (

 `id` INT NOT NULL AUTO_INCREMENT,

 `pageID` INT NOT NULL,

 `developerID` INT NOT NULL,

 `priviledge` VARCHAR(45) NOT NULL,

 PRIMARY KEY (`id`),

 INDEX `page_fk_idx` (`pageID` ASC),

 INDEX `dev_fk_idx` (`developerID` ASC),

 INDEX `priviledge_fk_idx` (`priviledge` ASC),

 CONSTRAINT `page_fk`

  FOREIGN KEY (`pageID`)
```

```
    REFERENCES `sadarangani_akshay_spring_2018`.`Page` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION,

  CONSTRAINT `dev_fk`

    FOREIGN KEY (`developerID`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Developer` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION,

  CONSTRAINT `priviledge_fk`

    FOREIGN KEY (`priviledge`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Priviledge` (`type`)

    ON DELETE NO ACTION

    ON UPDATE NO ACTION);


CREATE TABLE `sadarangani_akshay_spring_2018`.`PageRole` (

  `id` INT NOT NULL AUTO_INCREMENT,

  `pageID` INT NOT NULL,

  `developerID` INT NULL,

  `role` VARCHAR(45) NULL,

  PRIMARY KEY (`id`),

  INDEX `page_id_fk_idx` (`pageID` ASC),

  INDEX `dev_id_fk_idx` (`developerID` ASC),

  INDEX `role_fk_idx` (`role` ASC),

  CONSTRAINT `page_id_fk`

    FOREIGN KEY (`pageID`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Page` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION,

  CONSTRAINT `dev_id_fk`
```

```
    FOREIGN KEY (`developerID`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Developer` (`id`)

    ON DELETE CASCADE

    ON UPDATE NO ACTION,

  CONSTRAINT `role_fk`

    FOREIGN KEY (`role`)

    REFERENCES `sadarangani_akshay_spring_2018`.`Role` (`type`)

    ON DELETE NO ACTION

    ON UPDATE NO ACTION);
```

## IMPLEMENT INSERTS

1.
```
INSERT INTO `sadarangani_akshay_spring_2018`.`Person`

(`id`,

`firstName`,

`lastName`,

`username`,

`password`,

`email`)

VALUES

("12",

"Alice",

"Wonder",

"alice",

"alice",

"alice@wonder.com");


INSERT INTO `sadarangani_akshay_spring_2018`.`Person`
```

```
(`id`,

`firstName`,

`lastName`,

`username`,

`password`,

`email`)

VALUES

("23",

"Bob",

"Marley",

"bob",

"bob",

"bob@marley.com");


INSERT INTO `sadarangani_akshay_spring_2018`.`Person`

(`id`,

`firstName`,

`lastName`,

`username`,

`password`,

`email`)

VALUES

("34",

"Charles",

"Garcia",

"charlie",

"charlie",

"chuch@garcia.com");
```

```sql
INSERT INTO `sadarangani_akshay_spring_2018`.`Person`

(`id`,

`firstName`,

`lastName`,

`username`,

`password`,

`email`)

VALUES

("45",

"Dan",

"Martin",

"dan",

"dan",

"dan@martin.com");


INSERT INTO `sadarangani_akshay_spring_2018`.`Person`

(`id`,

`firstName`,

`lastName`,

`username`,

`password`,

`email`)

VALUES

("56",

"Ed",

"Karaz",

"ed",

"ed",

"ed@kar.com");
```

```
INSERT INTO `sadarangani_akshay_spring_2018`.`Developer`

(`id`,

`developerKey`)

VALUES

("12",

"4321rewq");


INSERT INTO `sadarangani_akshay_spring_2018`.`Developer`

(`id`,

`developerKey`)

VALUES

("23",

"5432trew");


INSERT INTO `sadarangani_akshay_spring_2018`.`Developer`

(`id`,

`developerKey`)

VALUES

("34",

"6543ytre");


INSERT INTO `sadarangani_akshay_spring_2018`.`User`

(`id`,

`key`)

VALUES

("45",

"7654fda");
```

```sql
INSERT INTO `sadarangani_akshay_spring_2018`.`User`
(`id`,
`key`)
VALUES
("56",
"5678dfgh");
```


2.
```sql
INSERT INTO `sadarangani_akshay_spring_2018`.`Website`
(`id`,
`name`,
`description`,
`visits`)
VALUES
("123",
"Facebook",
"an online social media and social networking service",
"1234234");
```


```sql
INSERT INTO `sadarangani_akshay_spring_2018`.`Website`
(`id`,
`name`,
`description`,
`visits`)
VALUES
("234",
"Twitter",
"an online news and social networking service",
"4321543");
```

```
INSERT INTO `sadarangani_akshay_spring_2018`.`Website`

(`id`,

`name`,

`description`,

`visits`)

VALUES

("345",

"Wikipedia",

"a free online encyclopedia",

"3456654");


INSERT INTO `sadarangani_akshay_spring_2018`.`Website`

(`id`,

`name`,

`description`,

`visits`)

VALUES

("456",

"CNN",

"an American basic cable and satellite television news channel",

"6543345");


INSERT INTO `sadarangani_akshay_spring_2018`.`Website`

(`id`,

`name`,

`description`,

`visits`)

VALUES
```

```
("567",

"CNET",

"an American media website that publishes reviews, news, articles, blogs, podcasts and
videos on technology and consumer electronics",

"5433455");


INSERT INTO `sadarangani_akshay_spring_2018`.`Website`

(`id`,

`name`,

`description`,

`visits`)

VALUES

("678",

"Gizmodo",

"a design, technology, science and science fiction website that also writes articles on
politics",

"4322345");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("123",

@id,

"owner");
```

```
Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("234",

@id,

"owner");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("345",

@id,

"owner");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("456",
```

```
@id,

"owner");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("567",

@id,

"owner");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("678",

@id,

"owner");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,
```

```sql
`role`)

VALUES

("123",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("234",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("345",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");
```

```
INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("456",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("567",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("678",

@id,
```

```
"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("123",

@id,

"admin");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("234",

@id,

"admin");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)
```

```sql
VALUES

("345",

@id,

"admin");

Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("456",

@id,

"admin");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,

`developerID`,

`role`)

VALUES

("567",

@id,

"admin");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`WebsiteRole`

(`websiteID`,
```

```
`developerID`,

`role`)

VALUES

("678",

@id,

"admin");
```

3.
```
Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Website` where name = "CNET");

INSERT INTO `sadarangani_akshay_spring_2018`.`Page`

(`id`,

`websiteID`,

`title`,

`description`,

`visits`)

VALUES

("123",

@id,

"Home",

"Landing page",

"123434");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Website` where name = "Gizmodo");

INSERT INTO `sadarangani_akshay_spring_2018`.`Page`

(`id`,

`websiteID`,

`title`,

`description`,
```

```
`visits`)

VALUES

("234",

@id,

"About",

"Website description",

"234545");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Website` where name =
"Wikipedia");

INSERT INTO `sadarangani_akshay_spring_2018`.`Page`

(`id`,

`websiteID`,

`title`,

`description`,

`visits`)

VALUES

("345",

@id,

"Contact",

"Addresses, phones, and contact info",

"345656");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Website` where name =
"CNN");

INSERT INTO `sadarangani_akshay_spring_2018`.`Page`

(`id`,

`websiteID`,

`title`,
```

```
`description`,

`visits`)

VALUES

("456",

@id,

"Preferences",

"Where users can configure their preferences",

"456776");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Website` where name =
"CNET");

INSERT INTO `sadarangani_akshay_spring_2018`.`Page`

(`id`,

`websiteID`,

`title`,

`description`,

`visits`)

VALUES

("567",

@id,

"Profile",

"Users can configure their personal information",

"567878");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,
```

```
`role`)

VALUES

("123",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("234",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("345",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "alice");
```

```sql
INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("456",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("567",

@id,

"editor");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("123",

@id,
```

```
"reviewer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");
INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`
(`pageID`,
`developerID`,
`role`)
VALUES
("234",
@id,
"reviewer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");
INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`
(`pageID`,
`developerID`,
`role`)
VALUES
("345",
@id,
"reviewer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");
INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`
(`pageID`,
`developerID`,
`role`)
```

```
VALUES

("456",

@id,

"reviewer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("567",

@id,

"reviewer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("123",

@id,

"writer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`
```

```sql
(`pageID`,

`developerID`,

`role`)

VALUES

("234",

@id,

"writer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("345",

@id,

"writer");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("456",

@id,

"writer");
```

```
Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`PageRole`

(`pageID`,

`developerID`,

`role`)

VALUES

("567",

@id,

"writer");
```

4.
```
Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Page` where title =
"Home");

INSERT INTO `sadarangani_akshay_spring_2018`.`Widget`

(`id`,

`pageID`,

`name`,

`width`,

`height`,

`text`,

`order`,

`html`,

`src`,

`url`,

`type`)

VALUES

("123",

@id,
```

```
"head123",

null,

null,

"welcome",

"0",

null,

null,

null,

"heading");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Page` where title =
"About");

INSERT INTO `sadarangani_akshay_spring_2018`.`Widget`

(`id`,

`pageID`,

`name`,

`width`,

`height`,

`text`,

`order`,

`html`,

`src`,

`url`,

`type`)

VALUES

("234",

@id,

"post234",

null,
```

```
null,

null,

"0",

"<p>Lorem</p>",

null,

null,

"html");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Page` where title = "Contact");

INSERT INTO `sadarangani_akshay_spring_2018`.`Widget`

(`id`,

`pageID`,

`name`,

`width`,

`height`,

`text`,

`order`,

`html`,

`src`,

`url`,

`type`)

VALUES

("345",

@id,

"head345",

null,

null,

"Hi",
```

```
"1",

null,

null,

null,

"heading");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Page` where title =
"Contact");

INSERT INTO `sadarangani_akshay_spring_2018`.`Widget`

(`id`,

`pageID`,

`name`,

`width`,

`height`,

`text`,

`order`,

`html`,

`src`,

`url`,

`type`)

VALUES

("456",

@id,

"intro456",

null,

null,

null,

"2",

"<h1>Hi</h1>",
```

```
null,

null,

"html");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Page` where title = "Contact");

INSERT INTO `sadarangani_akshay_spring_2018`.`Widget`

(`id`,

`pageID`,

`name`,

`width`,

`height`,

`text`,

`order`,

`html`,

`src`,

`url`,

`type`)

VALUES

("567",

@id,

"image345",

"50",

"100",

null,

"3",

null,

"/img/567.png",

null,
```

```
"image");


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Page` where title =
"Preferences");

INSERT INTO `sadarangani_akshay_spring_2018`.`Widget`

(`id`,

`pageID`,

`name`,

`width`,

`height`,

`text`,

`order`,

`html`,

`src`,

`url`,

`type`)

VALUES

("678",

@id,

"video456",

"400",

"300",

null,

"0",

null,

null,

"https://youtu.be/h67VX51QXiQ",

"youtube");
```

5.

```
Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`Phone`

(`phone`,

`primary`,

`personID`)

VALUES

("123-234-3456",

true,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`Phone`

(`phone`,

`primary`,

`personID`)

VALUES

("234-345-4566",

false,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username
= "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`Phone`

(`phone`,

`primary`,

`personID`)

VALUES
```

```
("345-456-5677",

true,

@id);



Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`Phone`

(`phone`,

`primary`,

`personID`)

VALUES

("321-432-5435",

true,

@id);



Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`Phone`

(`phone`,

`primary`,

`personID`)

VALUES

("432-432-5433",

false,

@id);



Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`Phone`

(`phone`,
```

```
`primary`,

`personID`)

VALUES

("543-543-6544",

false,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`Address`

(`street1`,

`city`,

`zip`,

`primary`,

`personID`)

VALUES

("123 Adam St.",

"Alton",

"01234",

true,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "alice");

INSERT INTO `sadarangani_akshay_spring_2018`.`Address`

(`street1`,

`city`,

`zip`,

`primary`,
```

```
`personID`)

VALUES

("234 Birch St.",

"Boston",

"02345",

false,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`Address`

(`street1`,

`city`,

`zip`,

`primary`,

`personID`)

VALUES

("345 Charles St.",

"Chelms",

"03455",

true,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`Address`

(`street1`,

`city`,

`zip`,
```

```sql
`primary`,

`personID`)

VALUES

("456 Down St.",

"Dalton",

"04566",

false,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "bob");

INSERT INTO `sadarangani_akshay_spring_2018`.`Address`

(`street1`,

`city`,

`zip`,

`primary`,

`personID`)

VALUES

("543 East St",

"Everett",

"01112",

false,

@id);


Set @id = (SELECT `id` from `sadarangani_akshay_spring_2018`.`Person` where username = "charlie");

INSERT INTO `sadarangani_akshay_spring_2018`.`Address`

(`street1`,

`city`,
```

`zip`,

`primary`,

`personID`)

VALUES

("654 Frank St.",

"Foulton",

"04322",

true,

@id);


## IMPLEMENT QUERIES


### 1. Retrieve Developers
a. SELECT `id` FROM Developer;

b. SELECT `username` FROM Developer JOIN Person ON Developer.id = Person.id WHERE Developer.`id` = "34";        // NOTE: I could simply put Person.id = "34" because we have a 1:1 relationship with Developer table

c. SET @id = (SELECT `id` from Website WHERE `name` = "Twitter");

SELECT `username` FROM Person JOIN

(SELECT `developerID` FROM WebsiteRole WHERE websiteID = @id AND `role` <> "owner") AS Q1

ON developerID = Person.id

d. SELECT username from Person JOIN

(SELECT developerID from PageRole JOIN Page ON PageRole.pageID = Page.id WHERE Page.visits < 300000 AND role = "reviewer") AS Q1

ON Person.id = developerID;

e. SELECT username FROM Person JOIN

(SELECT PageRole.developerID FROM PageRole JOIN

(SELECT * FROM Website JOIN

(SELECT pageID, websiteID, title FROM Page JOIN Widget ON pageID = Page.id WHERE type = "heading") AS Q1

ON websiteID = Website.id

WHERE title = "Home") AS Q2

ON PageRole.pageID = Q2.pageID

WHERE role = "writer") AS Q3

ON developerID = Person.id;


## 2. Retrieve Websites

a. SELECT * FROM Website WHERE visits = (SELECT MIN(visits) FROM Website);

b. SELECT name FROM Website WHERE id = "678";

c. SELECT * FROM Website JOIN

(SELECT websiteID FROM Page JOIN

(SELECT * FROM Person JOIN

(SELECT PageRole.pageID, developerID FROM PageRole JOIN

(SELECT pageID FROM Widget WHERE type = "youtube") AS Q1

ON Q1.pageID = PageRole.pageID

WHERE role = "reviewer") AS Q2

ON developerID = Person.id

WHERE username = "bob") AS Q3

ON pageID = Page.id) AS Q4

ON websiteID = Website.id;

d. SELECT * FROM Website JOIN

(SELECT websiteID FROM WebsiteRole JOIN

(SELECT Person.id FROM Person WHERE username = "alice") AS Q1

ON developerID = Q1.id

WHERE role = "owner") AS Q2

ON websiteID = Website.id;

e. SELECT * FROM Website JOIN

(SELECT websiteID FROM WebsiteRole JOIN

(SELECT Person.id FROM Person WHERE username = "charlie") AS Q1

ON developerID = Q1.id

WHERE role = "admin") AS Q2

ON websiteID = Website.id

WHERE visits > 6000000;


## 3. Retrieve Pages

a. SELECT * FROM Page WHERE visits = (SELECT MAX(visits) FROM Page);

b. SELECT * FROM Page WHERE id = "234";

c. SELECT * FROM Page JOIN

(SELECT pageID from PageRole JOIN

(SELECT Person.id FROM Person WHERE username = "alice") AS Q1

ON developerID = Q1.id

WHERE role = "editor") AS Q2

ON pageID = Page.id;

d. SELECT SUM(visits) FROM Page JOIN

(SELECT id FROM Website WHERE name = "CNET") AS Q1

ON Q1.id = websiteID;

e. SELECT AVG(visits) FROM Page JOIN

(SELECT id FROM Website WHERE name = "Wikipedia") AS Q1

ON Q1.id = websiteID;


## 4. Retrieve Widgets

a. SELECT * FROM Widget JOIN

(SELECT Page.id FROM Page JOIN Website

ON websiteID = Website.id

WHERE Website.name = "CNET" AND Page.title = "Home") AS Q1

ON Q1.id = pageID;

b. SELECT * FROM Widget JOIN

(SELECT Page.id FROM Page JOIN Website

ON websiteID = Website.id

WHERE Website.name = "CNN") AS Q1

ON Q1.id = pageID

WHERE type = "youtube";

c. SELECT * FROM Widget JOIN

(SELECT pageID from PageRole JOIN

(SELECT id from Person WHERE username = "alice") AS Q1

ON developerID = Q1.id

WHERE role = "reviewer") AS Q2

ON Widget.pageID = Q2.pageID

WHERE Widget.type = "image";

d. SELECT COUNT(*) FROM Widget JOIN

(SELECT Page.id FROM Page JOIN Website

ON websiteID = Website.id

WHERE name = "Wikipedia") AS Q1

ON Q1.id = Widget.pageID;


## IMPLEMENT UPDATES


1.
UPDATE Phone SET phone = "333-444-5555" WHERE personID = (SELECT id FROM Person
WHERE username = "charlie") AND `primary` = true;

2.
UPDATE Widget SET `order` = CASE `order`

WHEN (SELECT `order` FROM Widget WHERE name = "head345") THEN 3

ELSE `order` - 1

END

WHERE pageID =

(SELECT id FROM Widget WHERE name = "head345")

AND `order` < 4;

3.

UPDATE Page SET title = CONCAT("CNET - ", title) WHERE id in

(SELECT id FROM (SELECT * FROM Page) AS Q WHERE websiteID = (SELECT id FROM Website WHERE name = "CNET"));

4.

UPDATE PageRole t1 INNER JOIN PageRole t2

ON (t1.developerID, t2.developerID) IN

(((SELECT id FROM Person WHERE username = "bob"),(SELECT id FROM Person WHERE username = "charlie")),

((SELECT id FROM Person WHERE username = "charlie"),(SELECT id FROM Person WHERE username = "bob")))

SET t1.role = t2.role

WHERE t1.pageID =

(SELECT Page.id from Page JOIN Website ON websiteID = Website.id

WHERE name = "CNET" and title = "CNET - Home") AND

t2.pageID =

(SELECT Page.id from Page JOIN Website ON websiteID = Website.id

WHERE name = "CNET" and title = "CNET - Home");

## IMPLEMENT DELETES

1.

DELETE FROM Address WHERE personID = (SELECT id FROM Person WHERE username = "alice") AND `primary` = true;

2.

DELETE FROM Widget WHERE `order` =

(SELECT MAX(`order`) FROM Widget JOIN Page

ON pageID = Page.id

WHERE Page.title = "Contact");

3.

DELETE FROM Page WHERE id =

(SELECT Q.id FROM

(SELECT MAX(Page.updated), Page.id FROM Page JOIN Website

ON websiteID = Website.id

WHERE Website.name = "Wikipedia") AS Q)

4.

DELETE FROM Page WHERE id =

(SELECT Q.id FROM

(SELECT MAX(Page.updated), Page.id FROM Page JOIN Website

ON websiteID = Website.id

WHERE Website.name = "Wikipedia") AS Q)


5.

DELETE FROM Website WHERE name = "CNET"

// Cascading takes care of removing WebsiteRole, Website Priviledge, Page, PageRole and PagePriviledge