

## Group: Cockatiel

### Group Members:

Şimal Yücel 29420

Tolga Başak 29074

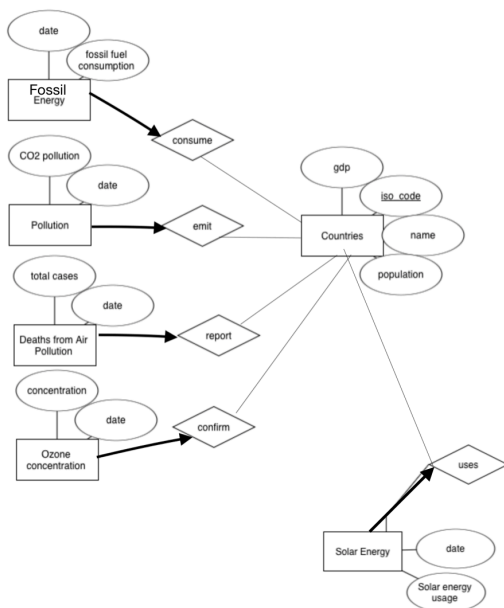
Ulaş Meriç 29244

Arif Kemal Sarı 28999

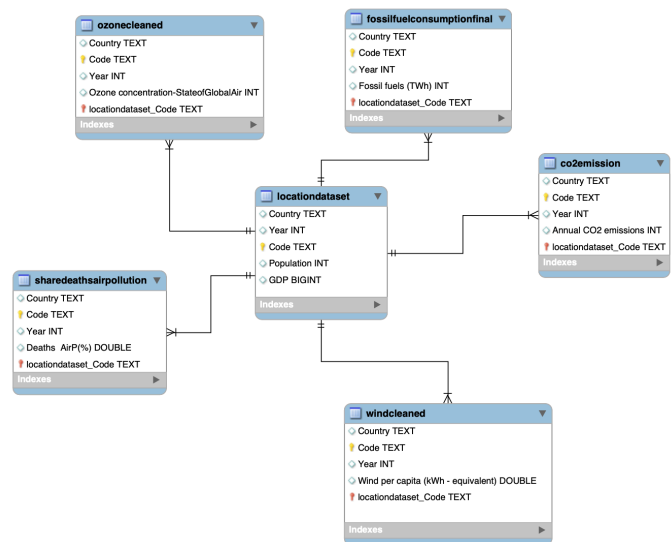
Emre Bülbül 28882

**GITHUB LINK:** <https://github.com/tolgabasak/cs306>

### ER CHARTS:



(Old ER Chart)



(Revised ER Chart)

We updated our ER chart because we realized we needed one more table. We decided on to look at wind energy usage of the countries. If solar energy usage dominates fossil fuel usage, there should be less air pollution.

## Errors:

While trying to import our tables from excel to mysql to create our relational models, we only faced a “utf-8 encoding error”. We solved this by doing research in the internet. Downloaded an app called “Cot Editor” and turned our utf-8 BOM files to utf-8, which easily solved the problem and we imported our tables from excel to mysql.

## Create Table Statements:

```
CREATE TABLE IF NOT EXISTS `CS306Project`.`locationdataset` (  
  `Country` TEXT NULL DEFAULT NULL,  
  `Year` INT NULL DEFAULT NULL,  
  `Code` TEXT NOT NULL,  
  `Population` INT NULL DEFAULT NULL,  
  `GDP` BIGINT NULL DEFAULT NULL,  
  PRIMARY KEY (`Code`));
```

```
CREATE TABLE IF NOT EXISTS `CS306Project`.`sharedethsairpollution` (  
  `Country` TEXT NULL DEFAULT NULL,  
  `Code` TEXT NOT NULL,  
  `Year` INT NULL DEFAULT NULL,  
  `Deaths AirP(%)` DOUBLE NULL DEFAULT NULL,  
  `locationdataset_Code` TEXT NOT NULL,  
  PRIMARY KEY (`Code`, `locationdataset_Code`),  
  INDEX `fk_sharedethsairpollution_locationdataset1_idx` (`locationdataset_Code` ASC) VISIBLE,  
  CONSTRAINT `fk_sharedethsairpollution_locationdataset1`  
    FOREIGN KEY (`locationdataset_Code`)  
    REFERENCES `CS306Project`.`locationdataset` (`Code`)  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION);
```

```
CREATE TABLE IF NOT EXISTS `CS306Project`.`windcleaned` (  
  `Country` TEXT NULL DEFAULT NULL,  
  `Code` TEXT NOT NULL,  
  `Year` INT NULL DEFAULT NULL,  
  `Wind per capita (kWh - equivalent)` DOUBLE NULL DEFAULT NULL,  
  `locationdataset_Code` TEXT NOT NULL,  
  PRIMARY KEY (`Code`, `locationdataset_Code`),  
  INDEX `fk_windcleaned_locationdataset1_idx` (`locationdataset_Code` ASC) VISIBLE,  
  CONSTRAINT `fk_windcleaned_locationdataset1`  
    FOREIGN KEY (`locationdataset_Code`)  
    REFERENCES `CS306Project`.`locationdataset` (`Code`)  
    ON DELETE NO ACTION  
    ON UPDATE NO ACTION);
```

```
CREATE TABLE IF NOT EXISTS `CS306Project`.`co2emission` (  
  `Country` TEXT NULL DEFAULT NULL,  
  `Code` TEXT NOT NULL,  
  `Year` INT NULL DEFAULT NULL,  
  `Annual CO2 emissions` INT NULL DEFAULT NULL,  
  `locationdataset_Code` TEXT NOT NULL,  
  PRIMARY KEY (`Code`, `locationdataset_Code`),
```

```

INDEX `fk_co2emission_locationdataset_idx` (locationdataset_Code` ASC) VISIBLE,
CONSTRAINT `fk_co2emission_locationdataset`
  FOREIGN KEY (locationdataset_Code`)
  REFERENCES `CS306Project`.`locationdataset` (Code`)
  ON DELETE NO ACTION
  ON UPDATE NO ACTION);

```

```

CREATE TABLE IF NOT EXISTS `CS306Project`.`fossilfuelconsumptionfinal` (
  `Country` TEXT NULL DEFAULT NULL,
  `Code` TEXT NOT NULL,
  `Year` INT NULL DEFAULT NULL,
  `Fossil fuels (TWh)` INT NULL DEFAULT NULL,
  `locationdataset_Code` TEXT NOT NULL,
  PRIMARY KEY (Code`, `locationdataset_Code`),
  INDEX `fk_fossilfuelconsumptionfinal_locationdataset1_idx` (locationdataset_Code` ASC) VISIBLE,
  CONSTRAINT `fk_fossilfuelconsumptionfinal_locationdataset1`
    FOREIGN KEY (locationdataset_Code`)
    REFERENCES `CS306Project`.`locationdataset` (Code`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);

```

```

CREATE TABLE IF NOT EXISTS `CS306Project`.`ozonecleaned` (
  `Country` TEXT NULL DEFAULT NULL,
  `Code` TEXT NOT NULL,
  `Year` INT NULL DEFAULT NULL,
  `Ozone concentration-StateofGlobalAir` INT NULL DEFAULT NULL,
  `locationdataset_Code` TEXT NOT NULL,
  PRIMARY KEY (Code`, `locationdataset_Code`),
  INDEX `fk_ozonecleaned_locationdataset1_idx` (locationdataset_Code` ASC) VISIBLE,
  CONSTRAINT `fk_ozonecleaned_locationdataset1`
    FOREIGN KEY (locationdataset_Code`)
    REFERENCES `CS306Project`.`locationdataset` (Code`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);

```

**Explanations for the table statements  
(Datasets are inside Github [tolgabasak/cs306/group1cs306cleaneddatasets](https://github.com/tolgabasak/cs306_group1cs306cleaneddatasets)):**

**“locationdataset” table -> countries entity**

**“shareddeathsairpollution” table -> deaths from air pollution entity**

**“windcleaned” table -> wind energy entity**

**“co2emission” table -> pollution entity**

**“fossilfuelconsumptionfinal” table -> fossil energy entity**

**“ozonecleaned” -> ozone concentration table**

### **Notes on MYSQLFiles on Github:**

**CS306SQLModelER.mwb -> ER Model for SQL Workbench**

**CS306SQLModelER.mwb.bak -> ER Model for SQL Workbench**

**CS306SQLModelER.mwb.beforefix -> ER Model for SQL Workbench before fix**

**CS306TablesSQL.sql -> SQL script**

### **Notes on MySQLLogs on Github:**

**sql\_actions\_Local\_instance\_3306.log -> Log of implementation of scheme on SQL, editing variable/data names and setting PK and FKs**

**sql\_actions\_local.log -> Log of editing SQL code/variable and data names**

**wb.log -> Log of importing data**