Database setup.

Our database will have three key databases that our client has asked for: a personnel database, student database, and event database. Our client wants it so that personnel have the ability to update both the student and event information. We want it so that a personnel has mutable control over the student and personnel database.

Example of the database query:

```
1  Drop database if exists Personnel;
2  Open a script file in this editor sonnel;
3  use Personnel;
4
5  #done
6  create table Personnel(
7      Person_id   INT     primary key     UNIQUE,
8      Person_fn   varchar(45)     NOT Null,
9      Person_ln   varchar(45)     NOT Null,
10     Discord_N   Varchar(255)    NOT Null
11 );
12 #done
13 create table PersonnelContact (
14     Person_id   INT     NOT NULL,
15     contact_id  INT     NOT NULL,
16     contact_desc Varchar(45)    NOT NULL,
17
18     foreign key(Person_id)
19     references Personnel (Person_id),
20     foreign key(contact_id)
21     references contactType(contact_id)
22
23 );
```

Each table will have

Personal:

- Basic information
    - id
    - Fname,
    - Lname,
    - Discord Name
- Contact information
    - Email
    - phone number
- Role (event coordinator, CEO, sensei)
- address

Students:

- Basic information
    - Id
    - Fname
    - Lname
    - Discord Name
- Contact information
    - EM contact(parental contact)
    - Email
    - Phone number
- Grades
- Homework
- https://stackoverflow.com/questions/2024988/mysql-rating-database-structure
- Games played
    - Games
    - Time played
    - Instructor

Events

- Datetime of event(day, month, year, time EST)
- Participate who came
    - Name
    - Discord name
    - Place in event (1st,3rd…..16th
    -

Because we don't have access to the actual data we are just building the skeleton for the data grant wants to have inserted. He will be providing us the fields and we will build it using MYSQL as the database need to be robust enough for a place like WNFC that just one place but doesn't need to be scaled outward like a lot of companies because it's on the smaller scale

View/Webpage Querying:

Step 1: use the command statement CREATE VIEW

Do databases hold most of the necessary information to display that on to our webpage? A necessary step is to create a view of the information that we want to be seen on that particular page. For instance we might have a query saying this on the student profile

Student Profile:

```
Unset
table student (
  id int (primary key)
  fname varchar
  lname varchar
  ...                          // other student attributes (e.g.
phone number)
)

table grade (
  id int (primary key)
  grade varchar                 // e.g. "A+", "B-", etc.
  points float                 // grade value in points
)

table assignment (
  id int (primary key)
  assign_name varchar                  // assignment name
  student_id int (foreign key)  // student that completed the
particular assignment
  grade_id int (foreign key)    // grade achieved in particular
assignment
  ...                          // other assignment attributes
(e.g. due date)
)
```

Create view student_profile as Stu_pro
Select stu.fname, Stu.lname, grd.grd_name, .assign.assignment
From student as stu
Left Join grade as grd
On stu.id = grd.id
Left join assignment as assign
On grd.grade_id = assign.grade_id
Where fname = “Ethan”
Where lname = “Doe”

Node.JS

Node.js is a widely used tool for frontend devops, from connecting to a database, running task async and reading and updating part of the web server..

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Game tracking:
with Node.js there can be tracking of events through the webserver. Through the use of NPM package manager these run a tasks that can be found in the https://www.npmjs.com/package/package or can be made through the use of a json file to package event and then run them using node.js

What we want to do here is make or find a package that collect the data of student playtime, game they played, score(best on what grant is measuring this by).so example of this would be

```
Unset
$ npm install package
```

```
Unset
var package = require('package')(module); // contains
package.json data.
var yourAwesomeModule = {};
yourAwesomeModule.version = package.version;
```

Updating event:
We want to be able to read, write and update events so the use of Node.js will come in key as that is one of the features that we can update from the web server to the database and then show it in the view. An example of this would look something like this

```
var mysql = require('mysql');

var con = mysql.createConnection({
  host: "localhost",
  user: "yourusername",
  password: "yourpassword",
  database: "mydb"
});

con.connect(function(err) {
  if (err) throw err;
  var sql = "UPDATE customers SET address = 'Canyon 123' WHERE address = 'Valley 345'";
  con.query(sql, function (err, result) {
```

```
        if (err) throw err;
        console.log(result.affectedRows + " record(s) updated");
  });
});
```