Cadet Database & Visualization

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Overview

- Background

- Design Goals

- Detailed Description of Project
    - Setup
    - Database
    - Forms
    - Queries
    - Graphs

- Questions

Background

- January 27, 1919 the Army Reserve Officers Training Corps

- day-to-day operations and company planning is conducted by the juniors (MS IIIs) and seniors (MS IVs)

- backbone of the planning is data:
  - Army Physical Fitness Test (APFT) scores
  - Absences
  - Grade Point Averages (GPAs)
  - Volunteer hours

- Officer Merit List (OML)

Design Goals

- Central Location for Storage

- Mobility

- Quick Visualization

- Security

Setup

- MAMP
  - Explanation of mamp
  - Apache - web server
  - MySQL - database management system
  - PHP, HTML, CSS – webpages

- Security
  - Family Educational Right and Privacy Act(FERPA)
  - Privacy Act of 1974

Data Base

- five tables:
  - Person
  - APFT
  - Absences
  - GPA
  - Volunteer Hours

Homepage

- HTML homepage that displays a brief history of ROTC

- CSS
  - Theme
    - Army
  - Colors
    - black, white, gray, green and yellow

Forms

- PHP

- Required

- Max and Min

- Date

- Submission
  - PHP to Store

```html
<div class="form">
    <form action = "form.php" method="post"  />
    <!-- onsubmit="return validateForm()" -->
    <table class="formContent">
        <tr>
        <td>ID:</td>
        <td><input type="number" name="personId" maxlength="4" required/> </td>
        </tr>
        <tr>
        <td> Company:</td>
        <td><input type="number" name="company" maxlength="2" required /></td>
        </tr>
        <tr>
        <td>Platoon:</td>
        <td><input type="number" min="0"  name="platoon" maxlength="2" required/></td>
        </tr>
         <tr>
        <td>Squad:</td>
        <td><input type="number" min="0"  name="squad" maxlength="2" required/></td>
        </tr>
         <tr>
        <td>MS Year:</td>
        <td><input type="number" min="0"  name="msYear" maxlength="1" required /></td>
        </tr>
        <tr>
        <td>  </td>
        </tr>
         <tr>
        <td><input type="submit" value="Store Person" id= "submit" /></td>
        <td><input type="reset" value="Clear" id= "reset" onClick="this.form.reset()"/></td>
        </tr>

    </table>
</form>
<script>
    $(window).load(function() {
    $('form').children('input:not(#submit)').val('')
    }
</script>
```

Form Submission

- Connect to MySql

- Select Database

- INSERT INTO table

```php
<?php

define('DB_NAME','test');
define('DB_USER','root');
define('DB_PASSWORD','root');
define('DB_HOST','localhost');

$link=mysql_connect(DB_HOST, DB_USER, DB_PASSWORD);

if(!$link){
die('Could not connect:' . mysql.error());
}

$db_selected = mysql_select_db(DB_NAME, $link);
if (!$db_selected)
{
die('Can\'t use' . DB_NAME . ': ' . mysql_error() );

echo 'Input Successful.  Click the back arrow to input more data.';

$value1= $_POST['personId'];
$value2= $_POST['company'];
$value3= $_POST['platoon'];
$value4= $_POST['squad'];
$value5= $_POST['msYear'];

$sql = "INSERT INTO Person ( personId, company, platoon, squad, msYear )
VALUES ('$value1' , '$value2' , '$value3', '$value4' , '$value5')";
if (!mysql_query($sql)){
die ('Error: ' . mysql_error());
}

mysql_close();


?>
```

Queries

```php
<?php
    //connect
    mysql_connect('localhost', 'root', 'password');

    //db connect
    mysql_select_db('test');

    $indiv = $_POST['personId'];
    $date = 'Date';
    $situps = 'SitUps';
    $pushups = 'PushUps';
    $run = 'Run';
    $platoon = $_POST['platoon'];

    $sql = "SELECT MAX(VolunteerHours.date), AVG(VolunteerHours.hours) FROM Person INNER JOIN VolunteerHours
    ON VolunteerHours.personId=Person.personId WHERE Person.platoon=$platoon";
    $records = mysql_query($sql);

        while ($cdt=mysql_fetch_assoc($records)){
        echo "['".$cdt['MAX(VolunteerHours.date)']."'" , ".$cdt['AVG(VolunteerHours.hours)']." ], " ;

        }
    ?>
```
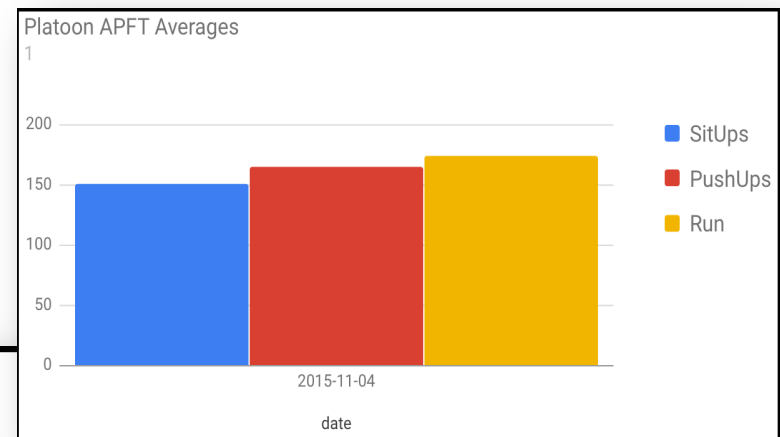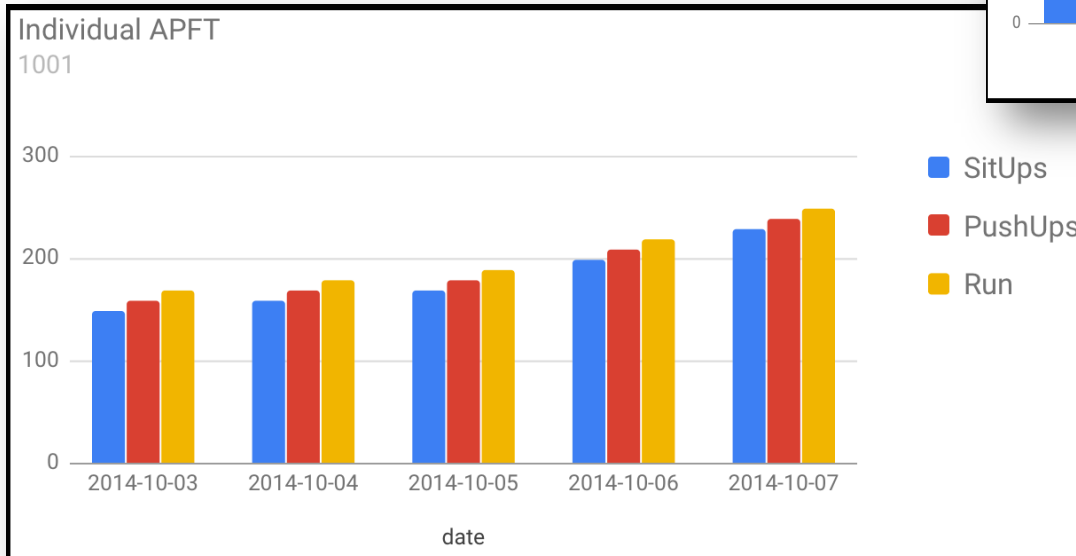
Graphs

☐ Google Charts

☐ Bar vs. Line Graph

Platoon APFT Averages

General Uses

- Track

- Cross-Country

- National Honor Society

- Physical Therapists

Expansion

- Army server

- Common Access Card (CAC)

- Graphs

- Personal Profiles

Conclusion

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Questions

Bibliography

"Family Educational Rights and Privacy Act (FERPA)." *Family Educational Rights and Privacy Act (FERPA)*. Regulations.gov, 05 Feb. 2015. Web. 30 Feb. 2015. <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html>.

"Google Charts — Google Developers." *Google Developers*. Google, 25 Feb. 2015. Web. 30 Feb. 2015. <https://developers.google.com/chart/>.

"MAMP & MAMP PRO." *MAMP & MAMP PRO*. Appsolute GmbH, 2015. Web. 30 Feb. 2015. <https://www.mamp.info/en/>.

"MySQL :: The World's Most Popular Open Source Database." *MySQL :: The World's Most Popular Open Source Database*. Oracle Corporation, 2015. Web. 30 Feb. 2015. <https://www.mysql.com/>.

"Privacy Act of 1974." *Privacy Act of 1974*. United States Department of Justice, 02 Feb. 2015. Web. 30 Feb. 2015. <http://www.justice.gov/opcl/privacy-act-1974>.