

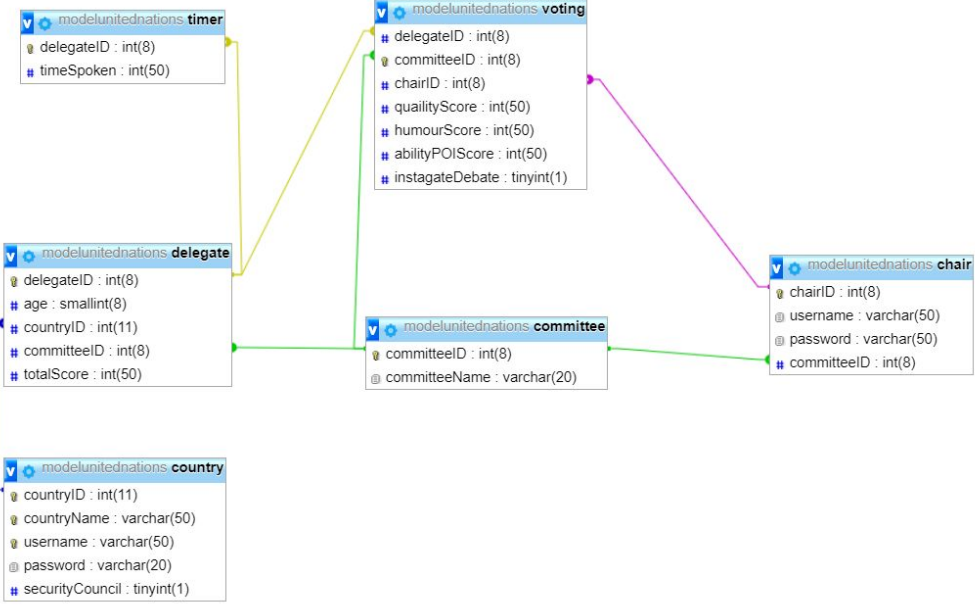
Record of Progress Computing

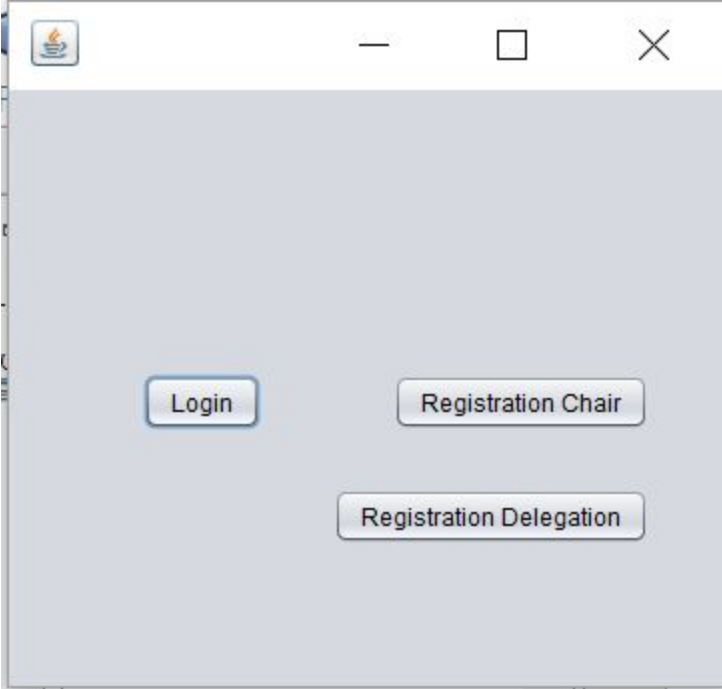
Research	
Date:	24th August 2018
Description of work completed	I told the teacher my project idea and she approved it. I later developed my plan and wrote up my project proposal.
What help I needed today	Checked in with assessor
Evidence	See project Proposal
Research	
Date:	3rd September 2018
Description of work completed	I researched existing technologies for my proposed idea. And found enough evidence that there wasn't a product with the same features and functions that I wanted to have.
What help I needed today	
Evidence	See Existing technologies section.
Research	
Date:	10th September 2018
Description of work completed	Checked in with my teacher and she helped suggest ways in which I could make my program more complex. This meant that I updated my project proposal. I also started and completed my survey questions.
What help I needed today	Checked in with my teacher.
Evidence	See project proposal and survey.
Research	
Date:	14th September 2018

Description of work completed	Released my survey out to people whom the project would most likely apply to. I will wait until I get a decent number of responses before I screenshot and analysis my results.
What help I needed today	
Evidence	
Research	
Date:	17th September 2018
Description of work completed	Sorted out the presentation of previously typed up research section and re-read through what I have so far. I needed to expand on a lot more on this section and at times wasn't clear on what I wanted to do.
What help I needed today	Had a check in with my teacher.
Evidence	
Research	
Date:	18th September 2018
Description of work completed	Completed the corrections I got from my teacher in my research section of my project. I however still don't think it reads nice or clearly and so will re-read over it and make sure I am being consistent in my terms and ideas used. I also started and nearly completed the resources section of my report.
What help I needed today	
Evidence	
Design	
Date:	24th September 2018
Description of work completed	Drew three of my wireframes. Wrote about what was expected in each wireframe.
What help I needed today	

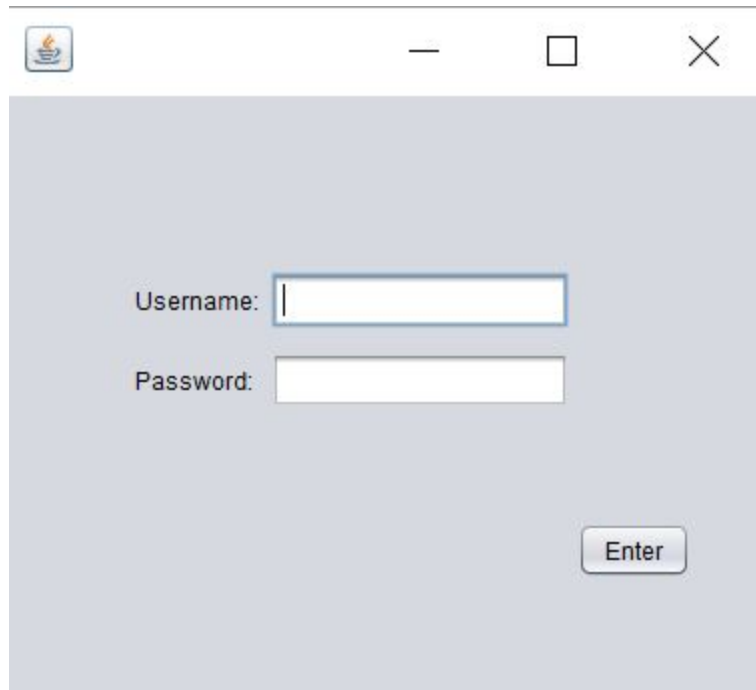
Evidence	
Design	
Date:	7th October 2018
Description of work completed	Drew the rest of my wireframes and wrote my Use Case scenarios. I also wrote some of my class diagrams (person, chairs and delegate). I know i'll need to write more however I want to check in with my teacher first. I also started my Data Dictionary.
What help I needed today	I want to check in with my teacher to check I am on the right path to my solution
Evidence	
Design	
Date:	8th October 2018
Description of work completed	Updated my data dictionary.
What help I needed today	My teacher helped me think through my idea of how I could implement my solution.
Evidence	
Design	
Date:	9th October 2018
Description of work completed	Drew my ER diagram.
What help I needed today	
Evidence	
Design	
Date:	11th October 2018
Description	Started and completed my sequence diagram, use case diagrams and conceptual

of work completed	models.
What help I needed today	
Evidence	
Design	
Date:	12th October 2018
Description of work completed	
What help I needed today	Checked in with my teacher and got given more tasks to do and was helped with what to update and change slightly to my project.
Evidence	
Design	
Date:	21st October 2018
Description of work completed	Making the changes that the teacher gave me to correct. As well as started and completed my user stories. I also started my selection strategies.
What help I needed today	
Evidence	
Design	
Date:	26th October 2018
Description of work completed	Completed my selection strategies.
What help I needed today	
Evidence	
Implementation Database	
Date:	10th January 2018

Description of work completed	Completed the implementation for my database however I will expect this to change once I start implementing the program.
What help I needed today	
Evidence	<p>This is my current ERD diagram.</p>  <pre> erDiagram modelunitednations { timer { delegatID int(8) PK timeSpoken int(50) } voting { delegatID int(8) PK committeelD int(8) PK chairID int(8) PK qualityScore int(50) humourScore int(50) abilityPOIScore int(50) instagateDebate tinyint(1) } delegate { delegatID int(8) PK age smallint(8) countryID int(11) PK committeelD int(8) PK totalScore int(50) } committee { committeelD int(8) PK committeeName varchar(20) } country { countryID int(11) PK countryName varchar(50) username varchar(50) password varchar(20) securityCouncil tinyint(1) } chair { chairID int(8) PK username varchar(50) password varchar(50) committeelD int(8) PK } timer --o{ voting : "uses" delegate --o{ voting : "votes" delegate --o{ committee : "belongs to" country --o{ delegate : "represents" chair --o{ committee : "chairs" </pre>
Implementation (First Sprint)	
Date:	11th of January 2019
Description of work completed	<p>Started thinking about and looking at ways to complete my Login and Registration page. I got the login to work with manually provided passwords and have started looking at how my program will connect to my database.</p> <p>I know I would need to have a query which selected records of matching passwords and usernames to complete this.</p>
What help I needed today/ Any errors I had and how I dealt with them	<p>Looked at potential ways I could complete this and given some possible websites to look at and things to consider when building my login page.</p> <p>I looked at how I could use buttons and what help I how to build an interface for my program since I haven't used Swing GUI format before.</p>

Evidence	<p>1. https://netbeans.org/kb/articles/gui-functionality.html</p> <p>When building my login page I looked at many different ways of how a connection to a database could be achieved. My own way I coded this connection was using different parts from each source:</p> <p>https://blog.eduonix.com/java-programming-2/learn-create-login-page-class-form-java-using-netbeans/</p> <p>http://www.mysqltutorial.org/connecting-to-mysql-using-jdbc-driver/</p>
Implementation (First Sprint)	
Date:	13th of January 2019
Description of work completed	<p>Continued with the login and registration of the page. I decided to change my original design and have one login page for both the chairs and the delegation. After I got the login to work for the chairs I added an additional query and an 'If' statement to get the login to work for both and for the user to be taken to the next appropriate page depending on whether they are a chair or delegate</p> <p>I created a home page:</p>  <p>The screenshot shows a Java Swing window with a title bar containing a logo, a minus button, a maximize button, and a close button. The window has a light gray background. In the center, there are three buttons with rounded corners and a slight shadow. The first button is labeled 'Login'. The second button is labeled 'Registration Chair'. The third button is labeled 'Registration Delegation'.</p>

And the login page:



Username:

Password:



Enter

My designs are currently very simple and no design to how they look was thought of as I want the main programming of the project completed before I focus on the actual design aspect.

When looking through my code for how to connect to the database I wasn't really sure what the *ResultSet* predefined actually did and so I looked it up₁.

<p>What help I needed today/ Any errors I had and how I dealt with them</p>	<p>When completing the login section of my program I kept getting unsuccessful login and I thought it was because of my query and that the program wasn't comparing the right variables. It decided to put a 'try and catch' statement in the connection section to my database in case that had any errors.</p> <pre> try{ if(connection == null) { connection.close(); } } catch(SQLException ex){ System.out.println(ex.getMessage()); } </pre> <p>I then started getting the message this message printed to me when I tried to run the program and so I realised that my program wasn't connecting to mySQL database.</p> <p>I then looked at various different people's version of connecting a mySQL database in Java Netbeans and edited it to suit my own program.</p> <p>At first I realised that I didn't ever specify which database my program was to connect to on the localhost. After I realised this I added the '/modelunitednations' to this section of code below.</p> <pre> String url = "jdbc:mysql://localhost:3306/modelunitednations"; </pre> <p>After I stopped getting the error message that the connection to my database failed I realised my results still weren't working. I common problem I normally have during coding is spelling and so I checked the spelling of my variable and table names. It was then that I realised in the query I created I was calling the non-existent table 'chairs' instead of 'chair'.</p> <pre> String sql_chair = "SELECT 'username', 'password' FROM 'chair' WHERE 'username' = ? AND 'password' = ?"; </pre>
<p>Evidence</p>	<p>1. https://www.cs.mun.ca/java-api-1.5/guide/jdbc/getstart/resultset.html</p>
<p>Implementation (First Sprint)</p>	
<p>Date:</p>	<p>14th January 2019</p>

Description of work completed	<p>I updated my database and changed some of the relationships between the tables. I still need to update the design section of my report to reflect the changes made.</p> <p>I decided it would be efficient If I had a connection method or function so that I could call upon it whenever I was connecting to the database as I realised I would more or less have to use this connection in every page.</p>
What help I needed today/ Any errors I had and how I dealt with them	<p>I'm finding it difficult to create this database connection method as the parameter of connection isn't being passed byReference in the program whenever it is called upon. The value of <i>connection</i> needs to be used again after the connection is completed.</p> <div data-bbox="467 709 669 814" data-label="Image"> </div> <pre data-bbox="738 709 1458 781">// connect to database connectToDatabase.connectToDatabase();</pre> <p>This error is saying how the non-static method of connectToDatabase() cannot be accessed from a static class. I couldn't work out how to solve this problem today.</p>
Evidence	
Implementation (First Sprint)	
Date:	15th January 2019
Description of work completed	<p>I continued and solved the error about the method not working when being called on.</p> <p>After the correct username and password of one of the chairs enters this message appears:</p> <div data-bbox="472 1377 1016 1692" data-label="Image"> </div> <p>After a delegate enters the correct username and password this message appears:</p>

	<div data-bbox="475 210 1066 516"><p>Message</p><div> Login Successful. Welcome delegate</div><div>OK</div></div> <p>And then carried on with the registration portion of the login section. I completed the registration for the chairs however I currently have no validation.</p> <p>The registration for the chairs currently looks like this:</p> <div data-bbox="475 747 1167 1587"><div> — □ ×</div><div><p>Username</p><div>jTextField1</div><p>Password (must be at least 5 characters)</p><div>*****</div><p>Please ReEnter Password</p><div>*****</div><p>Committee</p><div><div><input type="radio"/> Disarmament</div><div><input type="radio"/> Environment</div><div><input type="radio"/> EcoSoc</div><div><input type="radio"/> Secuirty Council</div></div><div>Submit Registration</div></div></div>
<p>What help I needed today/ Any errors I had and how I dealt with them</p>	<p>In the error shown in the 14th of January of the method not working when called upon I realised To make this connection work, since this was a non-static method, I needed to create an object of the class as shown below.</p>

```
//connect to database
connectToDatabase Test = new connectToDatabase();
Test.connectToDatabase();
```

The connection now worked. However the *connection* variable still wasn't being updated. I decided to put a accessor into the 'connectToDatabase' class so as to access the *connection* variable which was a global variable in that class, this means it would be updated after the first connection process.

```
public Connection getConnectionVariable(Connection connction){
    this.connection = connection;
    return connection;
}
```

I then updated the connection variable in the login class by setting the *connection* variable equal to the *Test* object and the accessor (as shown below);

```
//update connection variable
connection = Test.getConnectionVariable(connection);
```

Breakpoints were used throughout the process of solving the problem to see if the connection variable was being updated.

Another error I encountered was that when I was comparing the first password the user entered to the other password I used this statement (shown below):

```
if(inputPassword == inputPassword2)
```

However this wasn't given the expected results. When I set the password equal to the same I would still get the message that the passwords aren't equal. To make sure that I was inputting the same correct passwords I even used breakpoints to check the variable values of the first and second password:

```
String inputUsername = jTextFieldUsername.getText();
String inputPassword = String.valueOf(jPasswordField_1.getPassword());
String inputPassword2 = String.valueOf(jPasswordField_Again.getPassword());
```

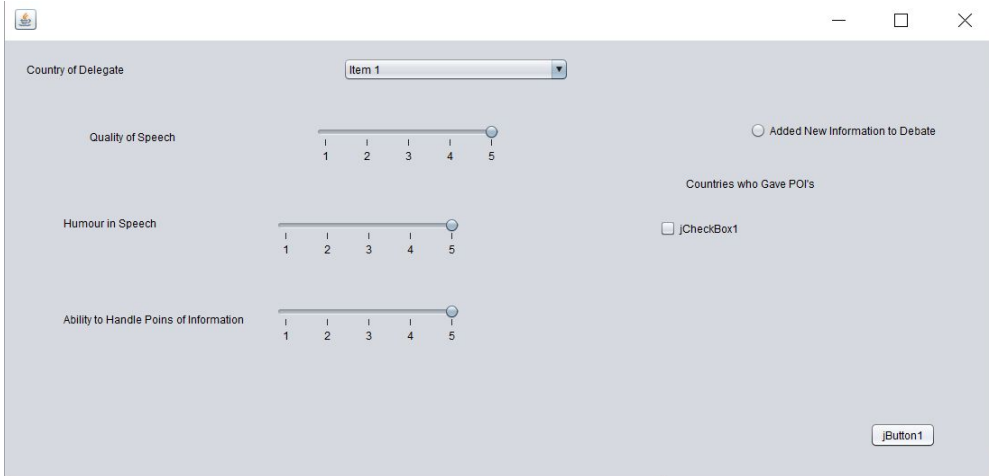
I then decided to change my opporate to use the equal predefined function

```
if(inputPassword.equals(inputPassword2))
```

This then gave me my expected results.

Evidence

Implementation (First Sprint)	
Date:	16th January 2019 2019
Description of work completed	Started the registration for the delegation. Got the input into the database to work however need to work on the validation of the inputs.
What help I needed today/ Any errors I had and how I dealt with them	<p>I am trying to validate the countries selected by the delegation when registering. This means that only one delegation can be a country.</p> <pre> .68 //make sure country is unique .69 String sql_country = "SELECT `countryName` FROM `country` WHERE `username` = " + country + "; .70 .71 try { .72 //creating chair query .73 ps = connection.prepareStatement(sql_country); .74 .75 rs_country = ps.executeQuery(); .76 int rowCount = 0; .77 while (rs_country.next()) .78 { .79 // Process the row. .80 rowCount++; .81 } .82 .83 System.out.println("There were " + rowCount + " records."); .84 .85 } catch (SQLException e) { .86 JOptionPane.showMessageDialog(null, e); .87 } </pre> <p>This line of code isn't working as expect as through the use of breakpoints I am noticing that the code is running to the catch section and not completing the try.</p>
Evidence	
Implementation (First Sprint)	
Date:	18th January 2019
Description of work completed	I continued with the registration of the delegates. I solved the issue mentioned previously. I also completed the validation on both the Chairs and delegations registration. I finished the validation of the fields required for the registration of both the chairs and the delegations.
What help I needed today/ Any errors I had and how I dealt with them	The error of the code jumping to the catch section was solved. I realised through the use of breakpoints that my code kept jumping after the executeQuery() method. I realised that since the chosen country was defined as a unique key in my database. I didn't need to have an error message in my code since the SQL server will create an error message automatically that the countryName isn't unique. The same can be said for the username.
Evidence	

Implementation (Second Sprint)	
Date:	21st January 2019
Description of work completed	<p>I started working on my voting page. I firstly created the interface of this page.</p>  <p>When creating the slider I noticed the function for the slider to snap on place of the closest major tick line. This is beneficial for the functionality so that there is no half marks or quarter marks awarded and is user friendly as the chair won't have to be there forever trying to mach the marker directly above the major tick line. It is also very good that the slider has numbers below the slide line as this will make sure there is no discretion between the chairs in where the numbers are on the line, it is clear.</p> <p>The interface for the voting page still needs to be worked on but this is the minimum required for coding.</p> <p>I am currently working on getting all the information needed to create a SQL to insert a new record into the <i>voting</i> table within the <i>modelunitednations</i> database.</p> <p>I am working on trying to update the Combobox automatically depending on what countries are in the committee's.</p>
What help I needed today/ Any errors I had and how I dealt with them	<p>I wanted to use a slider as this would be a welcome difference compared to using checkboxes or comboboxes. I had difficulty working out how to use this however after doing some research I got the slider working.^{1 and 2}</p> <p>A problem I faced was that to create a new record in the <i>voting</i> table I would need a delegateID, committeeID and chairID along with the other values inputted on the screen by the user. The values inputted on screen by the user wasn't hard to</p>

achieve and neither was the delegateID as that will just be achieved by looking at what committee and country the delegate is from.

I knew the only time I could get the committeeID and chairID was after the login phase. I changed my query on the *rs_chair* variable at the initial login to include the values of *chairID* and *committeeID* (not just password and username).

```
//checking username and password match
if(rs_chair.next()) //if match and login is a chair
{
    committeeID = rs_chair.getInt("committeeID");
    chairID = rs_chair.getInt("chairID");

    JOptionPane.showMessageDialog(null,"Login Successful. Welcome chair");
}
```

The committeeID was then found by looking at the result set for the chair and using the *getInt* pre-defined function. The same was done for the chairID.

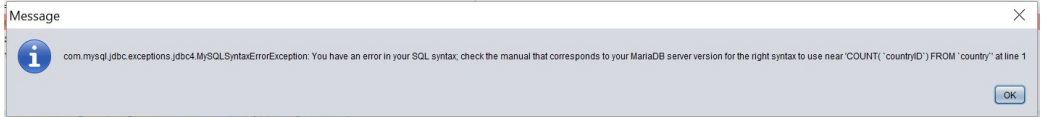
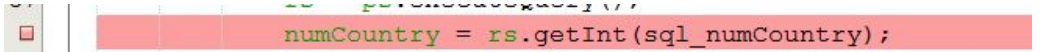
I however found problems accessing these variables as it was in a private method due to the piece of code running only after the 'Enter' button was pressed. After looking this problem up I realized I could make use of getters. This would mean I could access the *committeeID* and *chairID* variables in the voting page.

```
//getter to access committeeID variable from votingPage, encapsulation also offers security
public int getCommitteeID()
{
    return this.committeeID;
}
//getter to access committeeID variable from votingPage, encapsulation also offers security
public int getChairID()
{
    return this.chairID;
}
```

I then accessed these getters in the voting page by creating objects of the login class.

```
//committeeID found using getter in login1 class
login1 committeeID = new login1(); //creating new object
committeeID.getCommitteeID();
//chairID found using getter in login1 class
login1 chairID = new login1(); //creating new object
chairID.getChairID();
```

I am finding it challenging to update the combobox automatically depending what delegates are in the committee. However I watched a youtube video and this provided useful advice. ⁴

	<p>While I was completed this task I was wondering if I could create the countryID and countryName as a 2D-array in the program. I decided to create this 2D array. This will hold the value of the delegate ID.</p>
Evidence	<ol style="list-style-type: none"> 1. http://www.java2s.com/Tutorial/Java/0240_Swing/JSliderIntroduction.htm 2. https://www.youtube.com/watch?v=4g1kklQGMXQ 3. https://stackoverflow.com/questions/30278578/getting-values-from-a-sql-table-in-netbeans 4. https://www.youtube.com/watch?v=xQ7Z5m-zh9k
Implementation (Second Sprint)	
Date:	22nd January 2019
Description of work completed	<p>I was trying to implement a function of a 2D array so as to hold the information of a delegateID based off of their committeeID and countryID. This would be useful when trying to find a particular delegateID for SQL queries.</p>
What help I needed today/ Any errors I had and how I dealt with them	<p>While trying to run the query statement to count the number of country rows, the catch exception ran which means that there is a problem with the query statement.</p>  <p>The current query statement is:</p> <pre>//read maximum number of countries registered String sql_numCountry = "SELECT * COUNT(`countryID`) FROM `country`";</pre> <p>I tested the new class of <i>CommitteeCountry2DArray</i> by creating a test object from the home page</p> <pre>public void run() { CommitteeCountry2DArray test = new CommitteeCountry2DArray(); test.CommitteeCountry2DArray(); new HomePage().setVisible(true); }</pre> <p>and then was going to use the use of breakpoints to observe what value the variable <i>numCountry</i> held to compare it to my actual table and see if the value was the same.</p>  <p>To solve this problem I decided to just select the whole table and then find the last row and get the number of the last row. I used the code found on a chat forum</p>

and changed the variable names to suit my code. I knew this code worked as I again used breakpoints

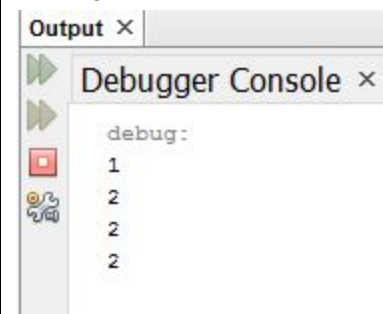
My new SQL statement is:

```
String sql_numCountry = "SELECT * FROM `country`";
```

When trying to insert the *countryID* values into the 2D array I used this code:

```
int j = 0;
try{
    rs.first();
    committeeCountryArray[0][j] = rs.getInt("countryID");
    System.out.println(committeeCountryArray[0][j]);
    while(rs.next())
    {
        for( j = 1; j < numCountry; j++)
        {
            committeeCountryArray[0][j] = rs.getInt("countryID");
            System.out.println(committeeCountryArray[0][j]);
        }
    }
}
```

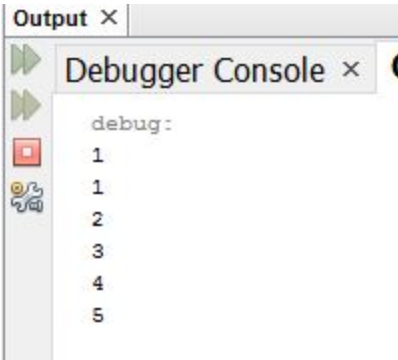
Through the use of breakpoints I noticed the output looking like this:

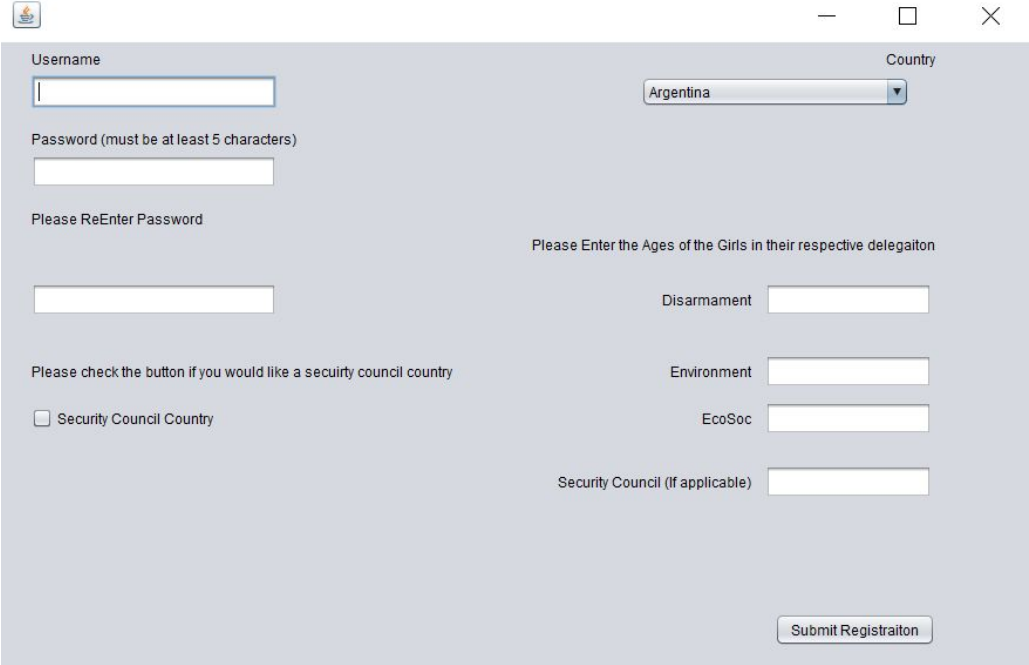



This shows that although the array column is changing but the result set isn't. The value from the second result set is continuously getting put into different array columns. To solve this I removed the '*While(rs.next())*' loop and instead put the *rs.next()* method to inside the for loop.:

```
int j = 0;
try{
    rs.first();
    committeeCountryArray[0][j] = rs.getInt("countryID");
    System.out.println(committeeCountryArray[0][j]);

    for( j = 1; j < numCountry; j++)
    {
        committeeCountryArray[0][j] = rs.getInt("countryID");
        System.out.println(committeeCountryArray[0][j]);
        rs.next();
    }
}
```


	<p>This however presented another problem in that my results showed:</p>  <p>I quickly realised that this was due to the fact that I had a <code>rs.getInt("countryID")</code> before the for loop. Once that is removed the code looks like this:</p> <pre> int j = 0; try{ rs.first(); System.out.println(committeeCountryArray[0][j]); for(j = 0; j < numCountry; j++) { committeeCountryArray[0][j] = rs.getInt("countryID"); System.out.println(committeeCountryArray[0][j]); rs.next(); } } </pre> <p>This code gave me the desired results.</p> <p>I noticed that in order for me to put the committeeID and country ID in one table I would need to create a query that data came from a single table and then use a group by function on the committeeID.</p>
Evidence	1. https://stackoverflow.com/questions/7886462/how-to-get-row-count-using-result-set-in-java
Implementation (First Sprint and Second Sprint)	
Date:	23rd January 2019
Description of work completed	<p>I solved the problem of the 2D array and got this working. However. while working on my voting page I noticed that I didn't have any delegate ID values. I realised that I hadn't completed my registration of delegations correctly. I had created the row in the country table but I never created the actually delegates records.</p> <p>I changed the registration of the delegations to include inputs for the age of the delegates in each committee within the delegation.</p>

	 <p>After I was able to get the value for the age of each delegate and their committee I was able to create a record for the delegate. The main problem I faced was also getting the countryID from the selected country at the same time as needing to insert the delegate records.</p>
<p>What help I needed today/ Any errors I had and how I dealt with them</p>	<p>My program wasn't working as the country record for the delegate was being created however the delegate record wasn't being updated. I decided to use breakpoints to find out where the error was and at what point the code was jumping to the catch. I realised something was wrong with this line:</p> <pre>return rs_countryID.getInt("countryID");</pre> <p>I also got this error message:</p>  <p>It was then that I realised that I needed to put in an initial total Score of '0' in my</p>

query statement. This solved my problem and allowed the program to run.

When I went back to working on the committee and country 2D array I decided to draw out the structure of my 2D array and what it would look like:

CommitteeID	Country ID		
	Delegate ID	Delegate ID	Delegate ID
	Delegate ID	Delegate ID	Delegate ID
	Delegate ID	Delegate ID	Delegate ID

I realised I needed to include the delegateID in my SQL statement as this was the actual value that would be held in the array and the columns and rows were determined by the committeeID and countryID.

I thought that I could solve the problem by using this query:

Showing rows 0 - 7 (8 total, Query took 0.0008 seconds.) [committeeID: 1... - 4...]

```
SELECT `countryID`, `committeeID`, `delegateID` FROM `delegate` ORDER BY `delegate`.`committeeID` ASC
```

Profiling

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by k

+ Options

	countryID	committeeID	1	delegateID
<input type="checkbox"/> Edit Copy Delete	19	1		2
<input type="checkbox"/> Edit Copy Delete	20	1		6
<input type="checkbox"/> Edit Copy Delete	19	2		4
<input type="checkbox"/> Edit Copy Delete	20	2		8
<input type="checkbox"/> Edit Copy Delete	19	3		3
<input type="checkbox"/> Edit Copy Delete	20	3		7
<input type="checkbox"/> Edit Copy Delete	19	4		5
<input type="checkbox"/> Edit Copy Delete	20	4		9

I tested the SQL statement in *PHPMysqlAdmin* as this would mean I could see my result set and I knew what I was working with. I initially thought that I could use a for loop to set the values for my 2D array however after consideration and

considering how not all countries have a security council country (resulting in only three used committees) I thought it would be easier to just use a while loop and set each loop individually as it goes through the record, using the *resultSet.next()* function:

```
private void setArray(){ //private so that no sensitive data can be accessed.
    //get committeeID and countrys from delegates table
    try {
        String sql_array = "SELECT `countryID`, `committeeID`, `delegateID` FROM `delegate`";
        ps = connection.prepareStatement(sql_array);
        rs = ps.executeQuery();

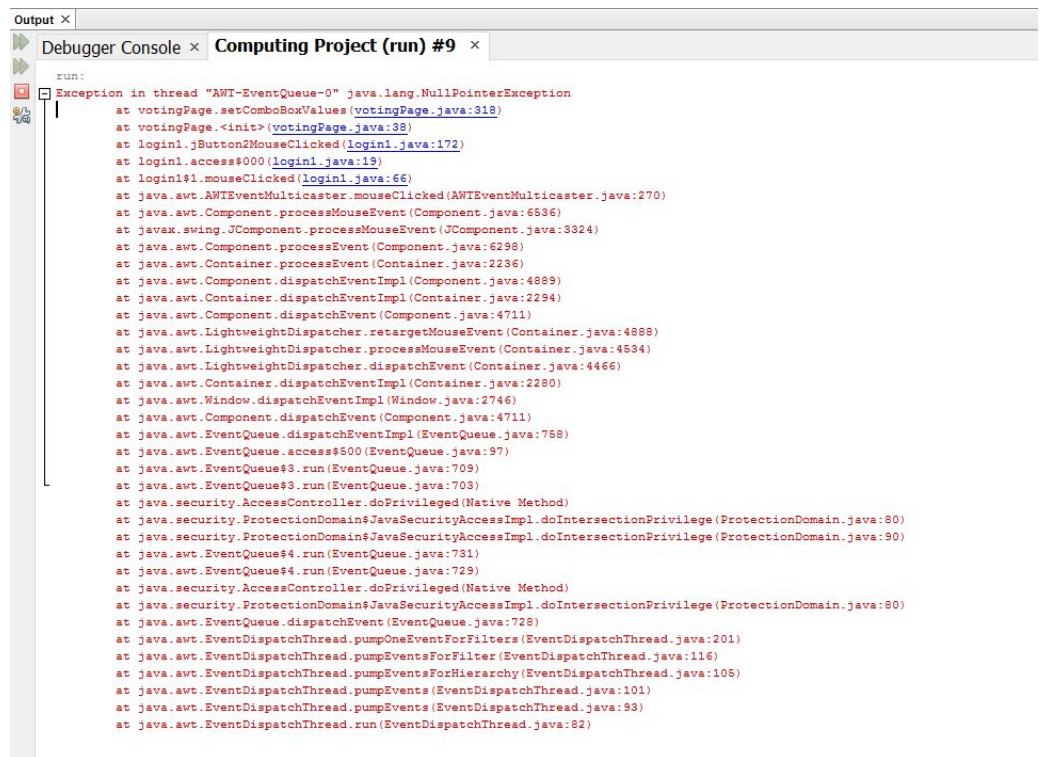
        while (rs.next())
        {
            int committeeID = rs.getInt("committeeID");
            int countryID = rs.getInt("countryID");
            int delegateID = rs.getInt("delegateID");

            committeeCountry[committeeID][countryID] = delegateID;

            //committeeCountry[committeeID][countryID] = delegateID; //setting 2D array
        }
    }
    catch(Exception ex) {
        JOptionPane.showMessageDialog(null, ex, "I am sorry. The query to find the countryID and committeeID fr
```

This solved my problem for my 2D array and all the correct values were displayed while I was testing the array.

When going back to my voting page every time I tried to run the page I would get this error.



```
run:
Exception in thread "AWT-EventQueue-0" java.lang.NullPointerException
    at votingPage.setComboBoxValues(votingPage.java:318)
    at votingPage.<init>(votingPage.java:38)
    at login1.jButton2MouseClicked(login1.java:172)
    at login1.access$000(login1.java:19)
    at login1.j1MouseClicked(login1.java:66)
    at java.awt.AWTEventMulticaster.mouseClicked(AWTEventMulticaster.java:270)
    at java.awt.Component.processMouseEvent(Component.java:6536)
    at javax.swing.JComponent.processMouseEvent(JComponent.java:3324)
    at java.awt.Component.processEvent(Component.java:6298)
    at java.awt.Container.processEvent(Container.java:2236)
    at java.awt.Component.dispatchEventImpl(Component.java:4889)
    at java.awt.Container.dispatchEventImpl(Container.java:2294)
    at java.awt.Component.dispatchEvent(Component.java:4711)
    at java.awt.LightweightDispatcher.retargetMouseEvent(Container.java:4888)
    at java.awt.LightweightDispatcher.processMouseEvent(Container.java:4534)
    at java.awt.LightweightDispatcher.dispatchEvent(Container.java:4466)
    at java.awt.Container.dispatchEventImpl(Container.java:2280)
    at java.awt.Window.dispatchEventImpl(Window.java:2746)
    at java.awt.Component.dispatchEvent(Component.java:4711)
    at java.awt.EventQueue.dispatchEventImpl(EventQueue.java:758)
    at java.awt.EventQueue.access$500(EventQueue.java:97)
    at java.awt.EventQueue$3.run(EventQueue.java:709)
    at java.awt.EventQueue$3.run(EventQueue.java:703)
    at java.security.AccessController.doPrivileged(Native Method)
    at java.security.ProtectionDomain$JavaSecurityAccessImpl.doIntersectionPrivilege(ProtectionDomain.java:80)
    at java.security.ProtectionDomain$JavaSecurityAccessImpl.doIntersectionPrivilege(ProtectionDomain.java:90)
    at java.awt.EventQueue$4.run(EventQueue.java:731)
    at java.awt.EventQueue$4.run(EventQueue.java:729)
    at java.security.AccessController.doPrivileged(Native Method)
    at java.security.ProtectionDomain$JavaSecurityAccessImpl.doIntersectionPrivilege(ProtectionDomain.java:80)
    at java.awt.EventQueue.dispatchEvent(EventQueue.java:728)
    at java.awt.EventDispatchThread.pumpOneEventForFilters(EventDispatchThread.java:201)
    at java.awt.EventDispatchThread.pumpEventsForFilter(EventDispatchThread.java:116)
    at java.awt.EventDispatchThread.pumpEventsForHierarchy(EventDispatchThread.java:105)
    at java.awt.EventDispatchThread.pumpEvents(EventDispatchThread.java:101)
    at java.awt.EventDispatchThread.pumpEvents(EventDispatchThread.java:93)
    at java.awt.EventDispatchThread.run(EventDispatchThread.java:82)
```

	<p>I realised that while trying to change the country names automatically in the comboBox I instead created these many errors. I decided to isolate this process and have put it in its own separate testing class so I can solve the issue. I also realised there was an issue with this specific part of the code because when I used breakpoints the SQLException was always set off during this part of the code:</p> <pre> try{ //get list of countries so that combobox can update automatically depending on the committee String sql_countryList = "SELECT 'countryID' FROM 'delegate' WHERE 'committeeID' = "+ committeeID +""; ps = connection.prepareStatement(sql_countryList); rs = ps.executeQuery(); while (rs.next()) { countryID = rs.getInt("countryID"); //match countryID to countryName so that countryName is displayed since it is a more meaningful data value; String sql_countryName = "SELECT 'countryName' FROM 'country' WHERE 'countryID' = "+ countryID +""; ps = connection.prepareStatement(sql_countryName); rs = ps.executeQuery(); String countryNameAdd = rs.getString("countryName"); System.out.println(countryNameAdd); } } catch (SQLException e) { JOptionPane.showMessageDialog(null, e); } </pre> <p>I used mutator to access the committeeID variable from the chairs however don't think this is working and the value isn't carrying on in the program as that page that I am accessing it from is closed by the time the voting page is opened.</p> <pre> //committeeID found using getter in login1 class login1 committeeID = new login1(); //creating new object committeeID.getCommitteeID(); //chairID found using getter in login1 class login1 chairID = new login1(); //creating new object chairID.getChairID(); </pre> <p>After using breakpoints I noticed that the <i>committeeID</i> login class Getter has gone wrong since I am receiving a null value which is causing the errors. The value of committeeID isn't staying once page closes.</p>
Evidence	
Implementation (Second Sprint)	
Date:	24th January 2019
Description of work completed	I continued looking at the voting page and the problem that I have with the voting page, trying to update the comboBox depending on the committee and what countries are present.

What help I needed today/ Any errors I had and how I dealt with them

When thinking about the problem of how the committeeID isn't staying in the login class once the program stops running the idea of placing a Setter mutator for committeeID and loginID in the voting Page class seemed like it could work.

```
public void setCommitteeID(int committeeIDFromLogin)
{
    committeeID = committeeIDFromLogin;
}
```

Errors were still coming up after doing this however I was also getting errors at this line:

```
String sql_countryList = "SELECT `countryID` FROM `delegate` WHERE `comitteeID` = "+ committeeID +"";
```

I realised after putting this SQL statement into *PHPMyAdmin* that I spelt committeeID wrong!

Error

SQL query: ?


```
SELECT `countryID` FROM `delegate` WHERE `comitteeID` = 1 LIMIT 0, 25
```

MySQL said: ?

#1054 - Unknown column 'comitteeID' in 'where clause'

I corrected this spelling mistake. I also realised I never connected to the database in the testing class that I had created. I sorted this problem as well.

This solved this error of this part of the program however I am now getting an error elsewhere with this error message displaying:



java.sql.SQLException: Before start of result set

OK

Evidence

Implementation (Fourth Sprint)

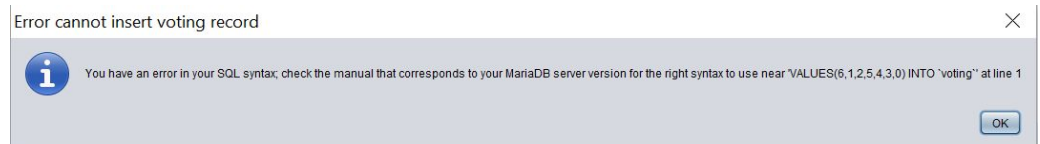
Date:	4th February 2019
Description of work completed	<p>I created classes in my database to hold the information for the delegates.</p> <p>I decided to go back and rethink the structure of my program. While I was studying for prelims I realised that I didn't create any classes for the delegates and the chairs that I had in my design plan.</p>
What help I needed today/ Any errors I had and how I dealt with them	
Evidence	
Implementation (Second Sprint)	
Date:	8th February 2019
Description of work completed	<p>I decided that instead of using a 2D array to hold the delegateID value that it would be worthwhile to create an array of records. I started on this as I need this array of records to complete the voting page.</p> <p>Thought of could I have a queue/ stack of records? No because then I can't search them and I don't need to push or pop any data currently.</p>
What help I needed today/ Any errors I had and how I dealt with them	<p>"SELECT `d.countryID`, `c.countryName` `d.committeeID`, `d.delegateID` FROM `delegate d`, `country c` WHERE (c.countryID = d.countryID)";</p> <p>Query not working so ran it through using PhpMyAdmin and realised the SQL statement was wrong. Corrected statement which gives expected results is:</p> <p>"SELECT d.countryID, c.countryName, d.committeeID, d.delegateID FROM `delegate` AS `d`, `country` AS `c` WHERE (c.countryID = d.countryID)".</p>
Evidence	
Implementation (Second Sprint)	
Date:	18th February 2019
Description of work completed	<p>I managed to get the delegateID and all other values needed to input into the voting table. I still need to get the committeeID. I completed this and got the instance to be added onto the voting table. I decided to add a message so after</p>

	<p>the button is pressed the chair knows the voting has been successful.</p> <p>I also started working on the timer. I used and modified previously made source code.₂</p>
<p>What help I needed today/ Any errors I had and how I dealt with them</p>	<p>When working on the 2D array I noticed that after trying to set the 2D array the code kept jumping to the catch.</p> <pre> 42 try { 43 String sql_array = "SELECT 'countryID', 'committeeID', 'delegateID' FROM 'delegate'"; 44 ps = connection.prepareStatement(sql_array); 45 rs = ps.executeQuery(); 46 47 while (rs.next()) 48 { 49 int committeeID = rs.getInt("committeeID"); 50 int countryID = rs.getInt("countryID"); 51 int delegateID = rs.getInt("delegateID"); 52 53 committeeCountry[committeeID][countryID] = delegateID; 54 55 //committeeCountry[committeeID][countryID] = delegateID; //setting 2D array 56 } 57 } 58 catch (Exception ex) { 59 JOptionPane.showMessageDialog(null, ex, "I am sorry. The query to find the countryID and committeeID from the delegate t 60 } 61 } 62 } </pre> <p>I realise that this is due to the the fact that countryID number was 19 and that this was more than the initial size when instantiating the array. I now know that I definitely have to make a record for the delegate ID as the current country, delegate and chairID's cant have gaps within them since I am using an auto-increment field in my database.</p> <p>I just decided to use another sql statement to to get the delegateID.</p> <pre> //countryName to countryID String queryydelegate = "SELECT 'delegateID' FROM 'delegate' WHERE 'countryID' = " + countryID + " AND 'chairID'="+chairID+""; </pre> <p>Realised this was wrong. I solved it by changing all the things related to chairID in this statement to the fields related with the committee.</p> <pre> int poi = [country = null] true(); String country = jComboBox1.getName(); </pre> <p>When using breakpoints to test to see if my values were being retrieved from the database properly I noticed that a the country value wasn't being received therefore the countryID wasn't working.</p> <p>The catch section would always play once this query was executed. I realised that the country variable wasn't a string. To solve this I need to do what I did with the username and passwords.₁</p> <pre> //countryName to countryID String queryyCountry = "SELECT 'countryID' FROM 'country' WHERE 'countryName' = " + country + " "; rs = connection.prepareStatement(queryyCountry); </pre> <p>The problem was solved with this resulting code:</p>


```
//countryName to countryID
String queryCountry = "SELECT `countryID` FROM `country` WHERE `countryName` = ?";
ps = connection.prepareStatement(queryCountry);
ps.setString(1, country);
rs = ps.executeQuery();

while (rs.next()) {
    countryID = rs.getInt("countryID");
}
```

When I finished the insert statement and ran the code this error came up:



I realised that my SQL statement was wrong as when I inputted the same statement into phpmyadmin (variable names replaced with values) an error message also came up). I realised that instead of:

```
INSERT VALUES("+delegateID+", "+committeeID
+", "+chairID+", "+qualityOfSpeech+", "+humour+", "+poi+", "+instagateDebate+")
INTO `voting`
```

It needs to be:

```
INSERT INTO `voting` VALUES("+delegateID+", "+committeeID
+", "+chairID+", "+qualityOfSpeech+", "+humour+", "+poi+", "+instagateDebate+")
```

When trying to add values to the combobox I had to move the section that set the committeeID to further up but I kept getting an error

```
public votingPage1() {
    //put interface in place
    initComponents();

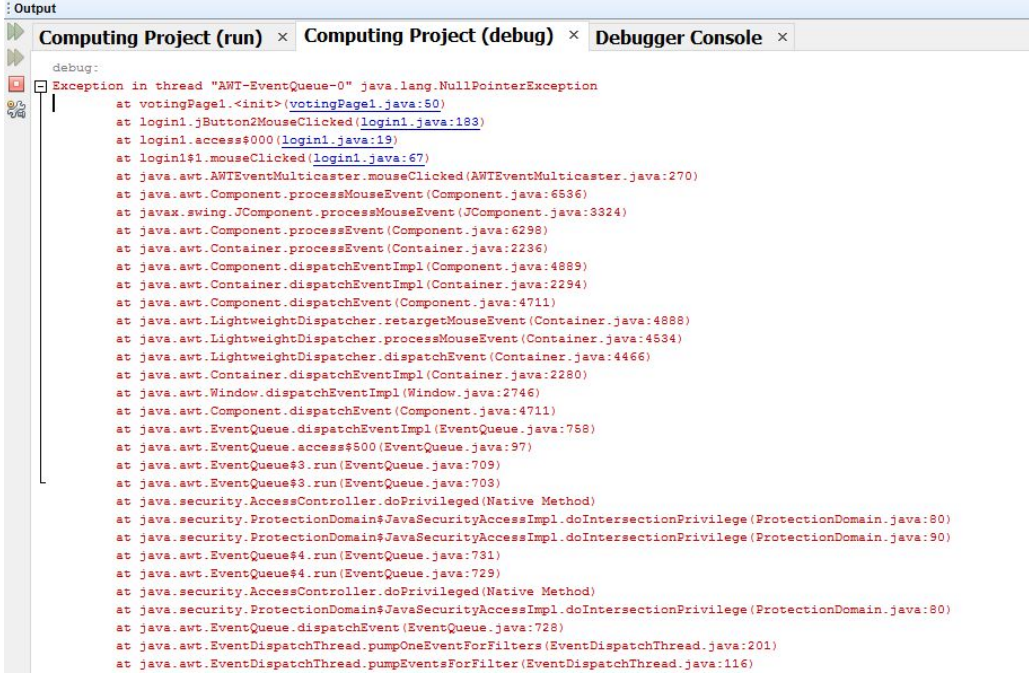
    try {
        //get committeeID
        String queryCommittee = "SELECT `committeeID` FROM `chair` WHERE `chairID` = " + chairID + "";
        ps = connection.prepareStatement(queryCommittee);
        rs = ps.executeQuery();

        while (rs.next()) {
            committeeID = rs.getInt("committeeID");
        }

        //get country names and add to drop down list
        String queryCountry = "SELECT `countryName`, `countryID`, `committeeID` FROM `country`, `delegate` WHERE `countryID` = ?";
        ps = connection.prepareStatement(queryCountry);
        ps.setInt(1, countryID);
        rs = ps.executeQuery();

        while (rs.next()) {
            jComboBox1.addItem(rs.getString("countryName"));
        }
    } catch (SQLException e) {
        JOptionPane.showMessageDialog(null, e);
    }

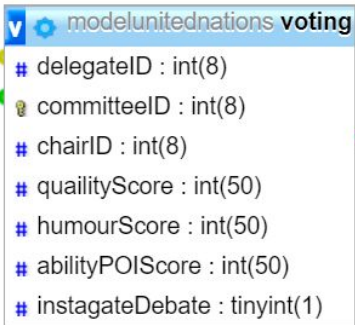

    jComboBox1.addItem("Russia");
}
```


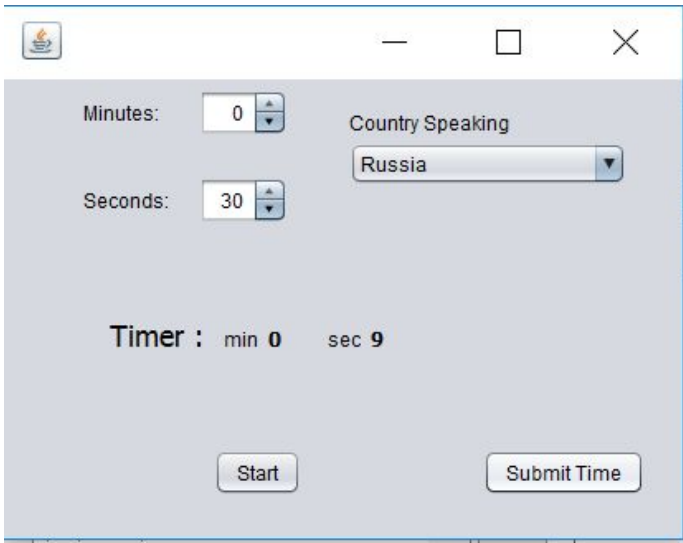
	 <p>debug:</p> <pre> Exception in thread "AWT-EventQueue-0" java.lang.NullPointerException at votingPage1.<init>(votingPage1.java:50) at login1.jButton2MouseClicked(login1.java:183) at login1.access\$000(login1.java:19) at login1\$1MouseClicked(login1.java:67) at java.awt.AWTEventMulticaster.mouseClicked(AWTEventMulticaster.java:270) at java.awt.Component.processMouseEvent(Component.java:6536) at javax.swing.JComponent.processMouseEvent(JComponent.java:3324) at java.awt.Component.processEvent(Component.java:6298) at java.awt.Container.processEvent(Container.java:2236) at java.awt.Component.dispatchEventImpl(Component.java:4889) at java.awt.Container.dispatchEventImpl(Container.java:2294) at java.awt.Component.dispatchEvent(Component.java:4711) at java.awt.LightweightDispatcher.retargetMouseEvent(Container.java:4888) at java.awt.LightweightDispatcher.processMouseEvent(Container.java:4534) at java.awt.LightweightDispatcher.dispatchEvent(Container.java:4466) at java.awt.Container.dispatchEventImpl(Container.java:2280) at java.awt.Window.dispatchEventImpl(Window.java:2746) at java.awt.Component.dispatchEvent(Component.java:4711) at java.awt.EventQueue.dispatchEventImpl(EventQueue.java:758) at java.awt.EventQueue.access\$500(EventQueue.java:97) at java.awt.EventQueue\$3.run(EventQueue.java:709) at java.awt.EventQueue\$3.run(EventQueue.java:703) at java.security.AccessController.doPrivileged(Native Method) at java.security.ProtectionDomain\$JavaSecurityAccessImpl.doIntersectionPrivilege(ProtectionDomain.java:80) at java.security.ProtectionDomain\$JavaSecurityAccessImpl.doIntersectionPrivilege(ProtectionDomain.java:90) at java.awt.EventQueue\$4.run(EventQueue.java:731) at java.awt.EventQueue\$4.run(EventQueue.java:729) at java.security.AccessController.doPrivileged(Native Method) at java.security.ProtectionDomain\$JavaSecurityAccessImpl.doIntersectionPrivilege(ProtectionDomain.java:80) at java.awt.EventQueue.dispatchEvent(EventQueue.java:728) at java.awt.EventDispatchThread.pumpOneEventForFilters(EventDispatchThread.java:201) at java.awt.EventDispatchThread.pumpEventsForFilter(EventDispatchThread.java:116) </pre> <p>I realised this was due to the fact that at this point I haven't called the method to set the chairID. I also realised that a connection to the database wasn't made.</p>
Evidence	<ol style="list-style-type: none"> 1. https://stackoverflow.com/questions/29063756/how-i-can-insert-a-string-variable-into-an-sql-statement-in-java 2. http://www.mediafire.com/file/pury9385au93z0x/TimerDo.zip timer 3. https://www.youtube.com/watch?v=spYqsH8cSWw <p>This is what the voting page interface currently looks like:</p>

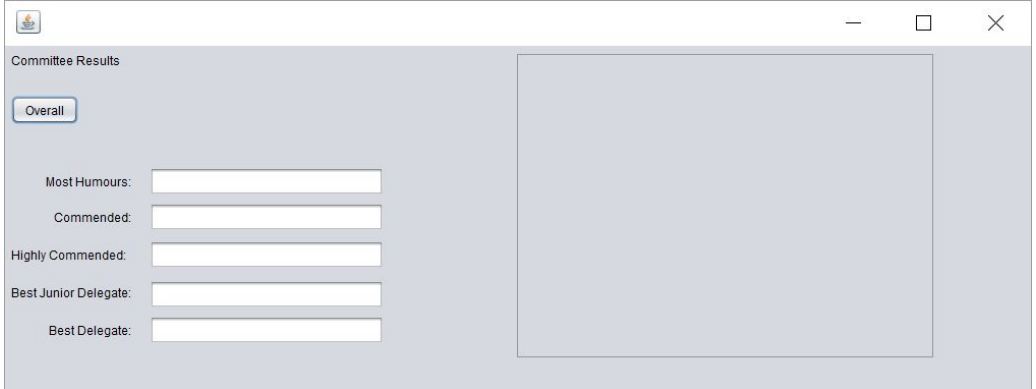
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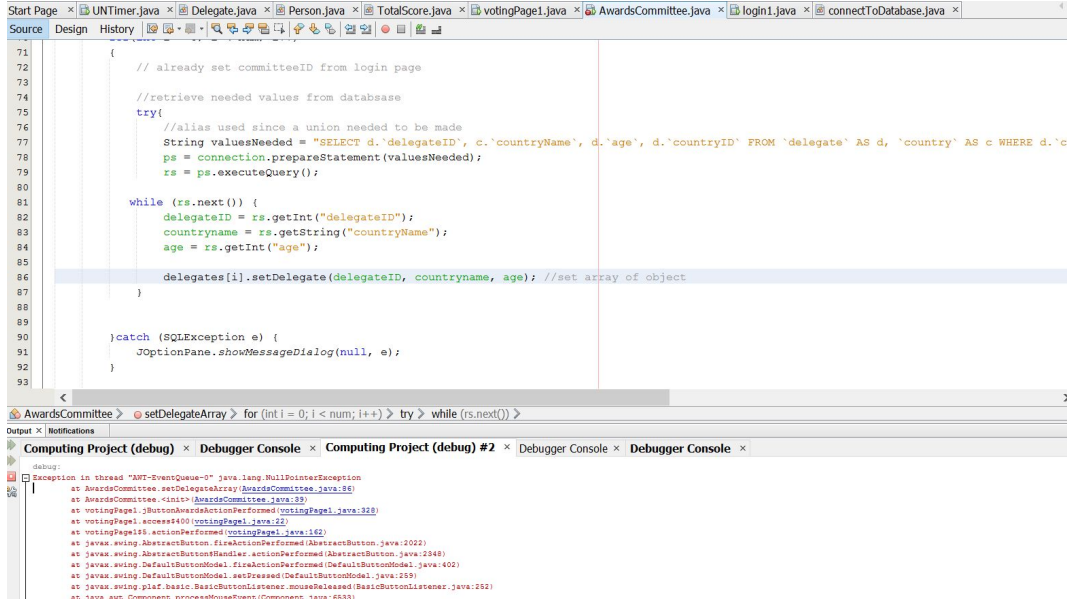
Implementation (Second Sprint)	
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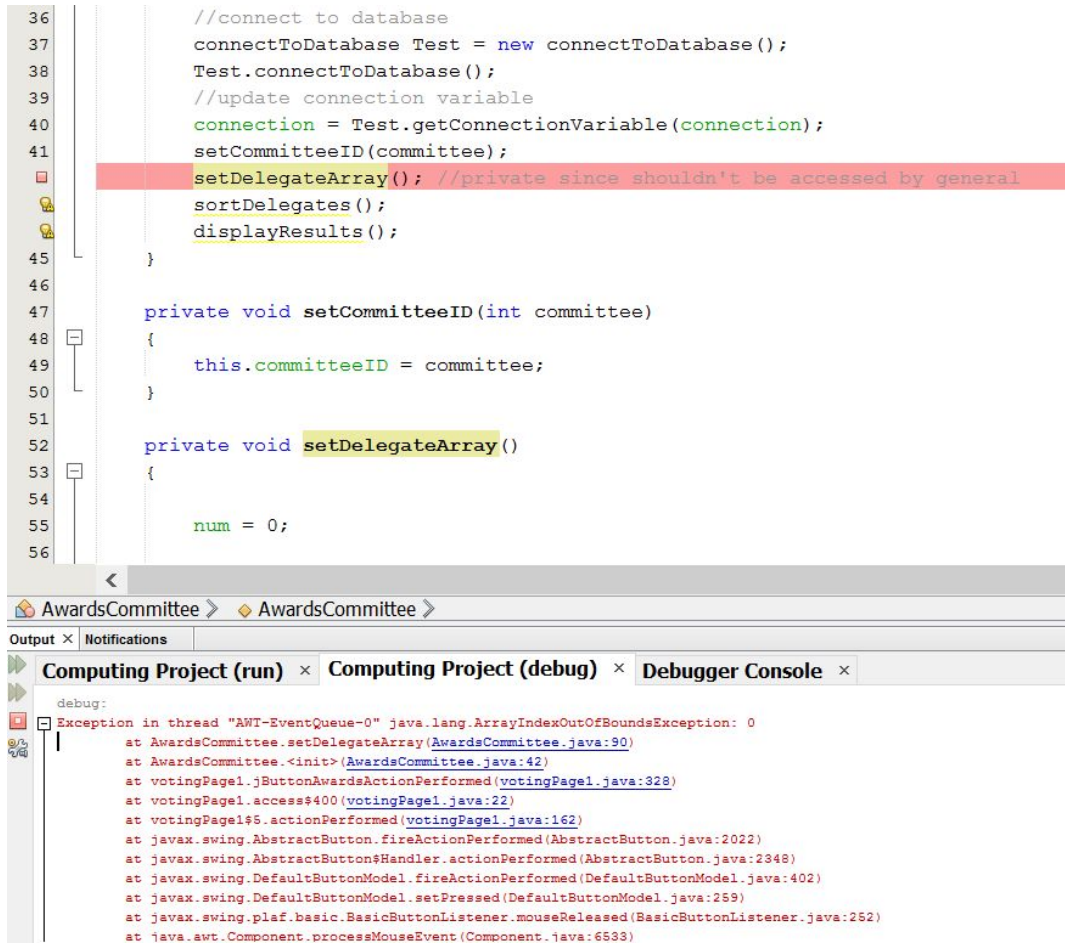
Date:	19th February 2019
Description of work completed	<p>Corrected the voting page. Continued working on the timer. When working with the jSpinner element I used a website to help set the minimum and maximum values.₂</p> <p>I managed to get the timer to work like a proper timer (the minute and seconds changing correctly) and introduced a stop and start button.</p>
What help I needed today/ Any errors I had and how I dealt with them	<p>When testing out the voting page I noticed that it only let me one record. THIS error then came up</p> <div data-bbox="469 1486 1073 1791"> </div> <p>I knew there was a problem with my data structure within the voting table and so went onto the design view.</p>

	<div data-bbox="578 220 930 543"></div> <p>I realised that the committeeID field is a primary key therefore cannot have duplicates of the number. I have to change this and if I can't create a table without a primary key then I need to include another field which is just auto incremented and call it votingID.</p> <p>After deleting the committeeID and trying to recreate the relationship this error keeps appearing:</p> <div data-bbox="474 865 1291 921"><p>Error: Missing index on column(s).</p></div> <p>I solved this problem by deleting the committeeID field altogether. When I recreated the field I made sure that the index type was INDEX and named it 'foreign'. This solved the problem and the committeeID no longer has a key next of the name, instead a hashtag. I also didn't need to include a votingID field. To fix this problem I looked the error up and this web forum helped.</p>
<p>Evidence</p>	<p>Timer page currently looks like this:</p> <div data-bbox="474 1291 1343 1843"></div>

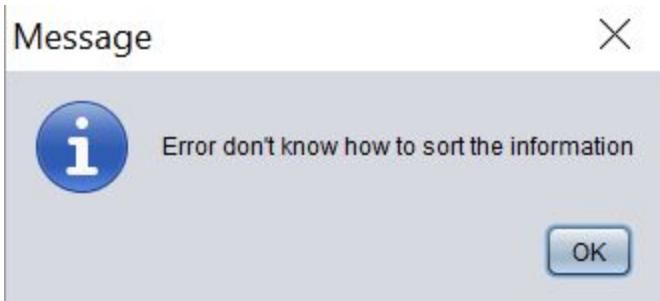

	<ol style="list-style-type: none"> 1. https://stackoverflow.com/questions/49094502/im-getting-error-missing-index-on-columns-when-i-try-to-create-a-relationsh 2. https://stackoverflow.com/questions/15880844/how-to-limit-jspinner
Implementation (Third Sprint)	
Date:	20th February 2019
Description of work completed	Continued working on my timer. I focused on inserting the timer values into the database. I also changed the design of my timer page slightly and have a pause button instead of stop. I also included a submit timer button. The new design of the timer page is shown in the evidence.
What help I needed today	<p>When testing that the timers result entered into the database this error came up</p>  <p>I realised that this error was die to the fact I never received the input of the country name of the delegate speaking therefore the delegate ID couldn't be correctly received from the database and the values couldn't be inserted into the table.</p>
Evidence	
Implementation (Fourth Sprint)	
Date:	25th February 2019
Description	I had a meeting with my teacher showing her the work I have completed currently.

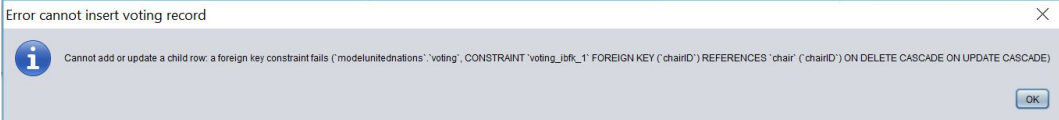
of work completed	<p>I still need to</p> <ol style="list-style-type: none"> 1. Validate Registration More 2. Explain my project in the introduction of my report <p>When going through my project with my teacher I noticed that the understanding of the topic (MUN) as a whole was confused and so I realised in the introduction of my project I will have to explain what MUN is in detail and explain what the concept of this club actually is.</p> <p>I started the user interface design for the committee's award page and started the creation of my 'delegates' array of objects.</p>
What help I needed today	
Evidence	<p>Current user interface for Committee Awards page</p> 
Implementation (Fourth Sprint)	
Date:	27th February 2019
Description of work completed	<p>I created my array of objects for the delegates. I also created another class for called total Score which calculates the total score of a delegate. I have initialised the array however I am still figuring out how I will pass certain values into the record. For example how I will achieve the committeeID.</p>
What help I needed today	
Evidence	
Testing (Comprehensive)	
Date:	4th March 2017

Description of work completed	
What help I needed today	<p>When testing my array of objects to make sure that the values were being set into the array an error keeps occurring whenever I reached the section of code highlighted in value.</p>  <p>I realised that I it would be easier to call each variable and make accessors and mutators for each of the different variables. This meant I could also make the variables private and that would increase the overall security in my project.</p>
Evidence	
Testing (Comprehensive)	
Date:	5th March 2019
Description of work completed	I took a break from working on the implementation of my project and decided to update my project write up and include and change anything that I have currently changed (i.e. wireframes and diagrams).
What help I needed today	
Evidence	
Implementation (Fourth Sprint)	

Date:	11th March 2019
Description of work completed	<p>I had a check in with my teacher and updated some of my report.</p> <p>I have started working on the implementation of my project again and trying to resolve the issues in my awards committee Page.</p>
What help I needed today	<p>This error kept coming up after I called on the sub-class 'setDelegate' in the committee awards page.</p>  <p>The screenshot shows a Java IDE with the following code in AwardsCommittee.java:</p> <pre> 36 //connect to database 37 connectToDatabase Test = new connectToDatabase(); 38 Test.connectToDatabase(); 39 //update connection variable 40 connection = Test.getConnectionVariable(connection); 41 setCommitteeID(committee); 42 setDelegateArray(); //private since shouldn't be accessed by general 43 sortDelegates(); 44 displayResults(); 45 } 46 47 private void setCommitteeID(int committee) 48 { 49 this.committeeID = committee; 50 } 51 52 private void setDelegateArray() 53 { 54 55 num = 0; 56 </pre> <p>Below the code, the IDE shows a runtime exception in the Debugger Console:</p> <pre> debug: Exception in thread "AWT-EventQueue-0" java.lang.ArrayIndexOutOfBoundsException: 0 at AwardsCommittee.setDelegateArray(AwardsCommittee.java:90) at AwardsCommittee.<init>(AwardsCommittee.java:42) at votingPage1.jButtonAwardsActionPerformed(votingPage1.java:328) at votingPage1.access\$400(votingPage1.java:22) at votingPage1\$5.actionPerformed(votingPage1.java:162) at javax.swing.AbstractButton.fireActionPerformed(AbstractButton.java:2022) at javax.swing.AbstractButton\$Handler.actionPerformed(AbstractButton.java:2348) at javax.swing.DefaultButtonModel.fireActionPerformed(DefaultButtonModel.java:402) at javax.swing.DefaultButtonModel.setPressed(DefaultButtonModel.java:259) at javax.swing.plaf.basic.BasicButtonListener.mouseReleased(BasicButtonListener.java:252) at java.awt.Component.processMouseEvent(Component.java:6533) </pre> <p>I don't think the object is being initialised correctly.</p>
Evidence	
Report Update Going Back Through It All	
Date:	18th March 2019

Description of work completed	I continued to update my report.
What help I needed today	
Evidence	
Implementation (Fourth Sprint)	
Date:	27th March 2019
Description of work completed	I completed my sorting algorithm as well as gave some of the awards out. I went back and worked on my registration page a little as I noticed an error in it.
What help I needed today	<p>When I went to register a new country I realised that if the country wasn't a security council country and an age value wasn't entered then an error would appear. I solved this error by including an if statement so that if the condition was met (checkbox checked) then the age would be applied and if not then the age for the non-existent security council member would default to 0.</p> <p>Sorting algorithm wasn't working when trying to use the bubble sort.</p>  <p>I went online and saw that I needed to make use of a ToCompare() method.¹ Once I got this sorted I went back and ran the code again. This still wasn't working and so I went through with breakpoints to see if it was performing how I expected. The program did go how I thought and the correct objects were being</p>

	swapped as expected. It was then that I realised that the objects weren't being swapped correctly. I then looked up online and found out that I could use a wrapper class so as to swap my objects. ²
Evidence	1. https://www.mkymong.com/java/java-object-sorting-example-comparable-and-comparator/ 2. https://www.geeksforgeeks.org/swap-exchange-objects-java/
Implementation (Fourth Sprint)	
Date:	1st April 2019
Description of work completed	Worked on the creation of a delegate and a delegation class.
What help I needed today	<p>Delegates Class kept wanting to become abstract class which isn't good cause then I can only access that class through a subclass</p>  <p>As thought the 'howToSort' variable isn't being saved in the other class and therefore I need to</p>  <p>Not showing the results I expected since I forgot to add a 'GROUP BY' statement in the query.</p>

	
Evidence	
Testing (Component)	
Date:	10th April 2019
Description of work completed	Component testing was started. I started with the login section of my program and worked through the rest of my program.
What help I needed today	<p>When testing the login I noticed that the if the username or password was entered correctly but not having the same capital letters then the login was accepted. After going through my program I noticed that this error was due to my database. I realised my fields of the username and password were not case sensitive. I immediately changed the password and username fields to case sensitive by going into collation in table structure and selecting CS instead of CI (case insensitive)</p> <p>I also noticed that in the login that the user was required to enter a special character and a digit Operator when it should have been either or. In the program i noticed that the condition statement was wrong as I used instead of && as my operators. This was a syntax error.</p>
Evidence	See testing section of my report
Overall	
Date:	17th April 2019
Description of work completed	Going through my report one final time before it is printed out and submitted.
What help I needed today	Got final feedback about my project from my teacher and updated all the changes.
Evidence	