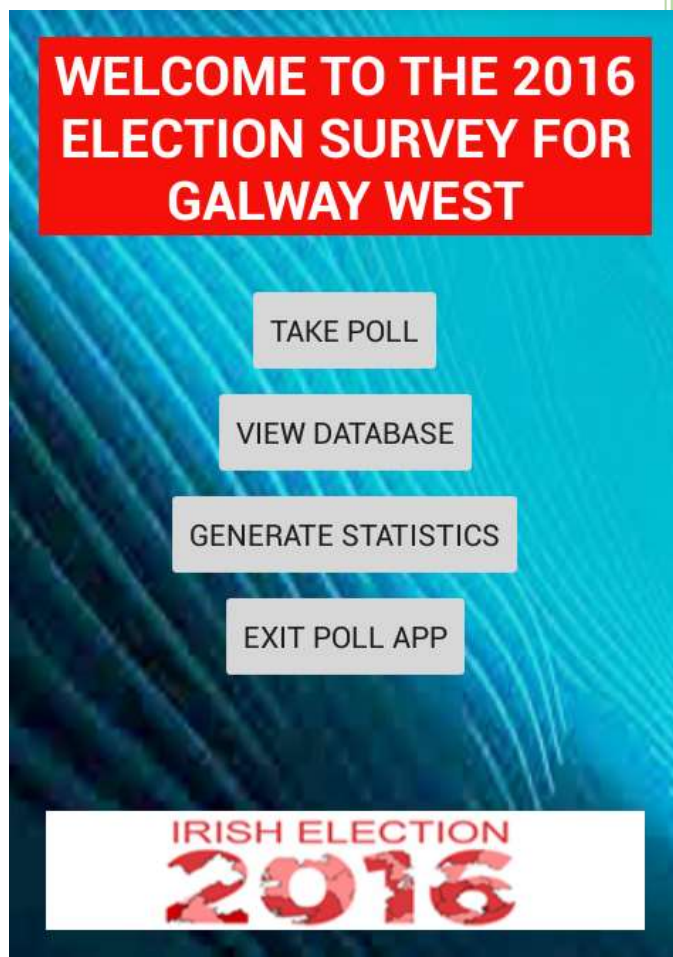


2016

MOBILE POLLING APPLICATION DESIGN AND DEVELOPMENT



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APPLICATION OVERVIEW

MAIN PAGE / HOME PAGE OF POLLING APPLICATION

The first page of the mobile voting application is made from two files. An activity_main.xml file which contains the layout of the page and a MainActivity.java file which contains the java code to make everything function on the page.



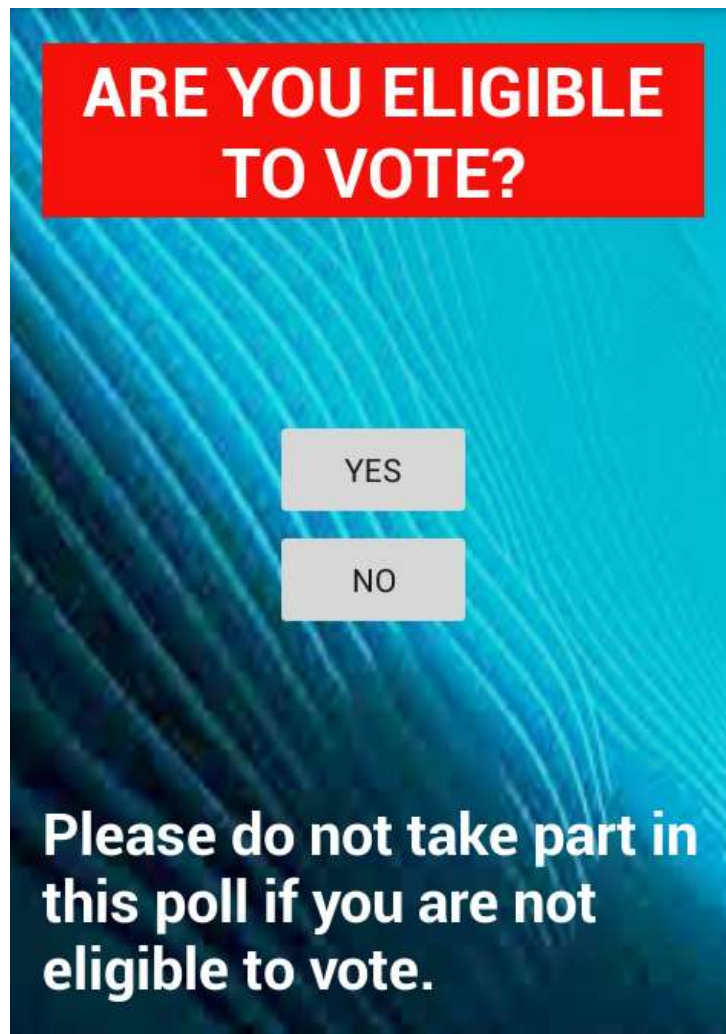
This contains a Relative layout which contains a Text View and two Linear Layout's. The Relative layout contains a blue image which is used as the background. The Text View contains the text "WELCOME TO THE 2016 ELECTION SURVEY FOR GALWAY WEST" and it has been given a red background colour. The text has also been given the text style bold.

In the first linear layout four buttons have been created which bring the user of the application to different pages in the application. The "TAKE POLL" button lets the user take part in the poll and view the record they have created in the database. The first page this takes the user to is the eligibility page. The "VIEW DATABASE" button brings the user to view the database they have created. The "GENERATE STATISTICS" button brings the user of the app to view the statistics. The first page this brings the user to is the statistics menu. The "EXIT POLL APP" button lets the user exit the polling application.

In the second Linear Layout an Image View has been created which contains an "election 2016" logo.

ELIGIBILITY PAGE

The eligibility page is reached by clicking the “TAKE POLL” button in the home page. The eligibility is made from two files, an eligibility.xml file which contains the layout of the page and an Eligibility.java file which contains the java code to make everything function on the page.



This contains a Relative layout which contains a Text View and two Linear Layout's. The Relative layout contains a blue image which is used as the background. The Text View contains the text “ARE YOU ELIGIBLE TO VOTE” and it has been given a red background colour. The text has also been given the text style bold.

In the first linear layout there are two buttons created which bring the user of the application to different pages in the application. The “YES” button lets the user take part in the poll as the user is eligible to vote. This takes the user to the first page of the poll. The “NO” button brings the user back to the home page because the user is not eligible to vote. The user is asked not to take part in the survey if they are not eligible to vote in a Text View below.

FIRST QUESTIONNAIRE PAGE OF THE POLL

The first questionnaire page is reached by clicking the “YES” button in the eligibility page. This questionnaire is made from two files, the questionnaire.xml file which contains the layout of the page and the Questionnaire.java file which contains the java code to make everything function on the page.

This contains a Linear layout which contains a Text View and five Linear Layout’s nested in it. The Linear layout contains a blue image which is used as the background. The Text View contains the text “VOTING INFORMATION” and it has been given a red background colour. The text has also been give the text style bold.

In the first linear layout there is a Text View which contains a question asking the user “What is your age?” and a drop down Spinner menu which gives the user a range of answers to select.

The second linear layout contains a Text View asking the user what their “Gender” button and a Radio Group which contains two Radio Buttons with the options “Male” or Female”.

The third linear layout contains a Text View asking the user “Are you a member of a Political Party?” and also contains a drop down Spinner menu with a range of answers for the user to select.

The fourth linear layout contains a Text View asking the user what their “Do you intend to vote?” button and a Radio Group which contains two Radio Buttons with the options “YES” or NO”.

The fifth linear layout contain a “NEXT PAGE” button which brings the user to the next questionnaire page and bundles the answers given by the user to the next page.

SECOND QUESTIONNAIRE PAGE OF POLL

The second questionnaire page is reached by clicking the “NEXT PAGE” button in the first questionnaire page. This questionnaire is made from two files, the questions_2.xml file which contains the layout of the page and the Questions2.java file which contains the java code to make everything function on the page.

This contains a Linear layout which contains a Text View and five Linear Layout’s nested in it. The Linear layout contains a blue image which is used as the background. The Text View contains the text “VOTING INFORMATION” and it has been given a red background colour. The text has also been give the text style bold.

In the first linear layout contains a Text View asking the user “Are you married?” and a Radio Group which contains two Radio Buttons with the options “YES” or NO”.

The second linear layout contains a Text View asking the user “Do you have children?” and a Radio Group which contains two Radio Buttons with the options “YES” or NO”.

The third linear layout contains a Text View asking the user “What area of Galway West are you from?” and also contains a drop down Spinner menu with a range of answers for the user to select.

The fourth linear layout contains a Text View asking the user “What income bracket are you in?” and also contains a drop down Spinner menu with a range of answers for the user to select.

The fifth linear layout contain a “SUBMIT” button which brings the user to the next questionnaire page and bundles the answers given by the user in the first and second questionnaire pages to the next page.

CANDIDATE LIST/ PREFERRED CANDIDATE QUESTION

The preferred candidate page is reached by clicking the “SUBMIT” button in the second questionnaire page. This questionnaire is made from three files, the list.xml file which contains the layout of the page, the rows.xml contains the layout of each row in the List View contained in the list.xml file and the Candidate.java file which contains the java code to make everything function on the page.



This list.xml file contains a Linear Layout which contains a Text View and a ListView. The Linear layout contains a blue image which is used as the background. The Text View contains the text “WHICH CANDIDATE WOULD YOU LIKE TO VOTE FOR?” and it has been given a red background colour. The text has also been given the text style bold.

The List View contains a list of all the politicians in the Galway West area who are campaigning for the general election. The ListView has been designed as a table which contains rows and columns. The layout of each row is designed in the rows.xml file and each row contains three columns. The left column contains a picture of the politician, the middle column contains the name of the politician, and the right column contains an image of the political party logo.

When the user clicks on their preferred politician they are brought to the next questionnaire page and the answers given by the user in the first, second and candidate questionnaire pages are bundled to the next page.

TAOISEACH CANDIDATE LIST/ PREFERRED TAOISEACH CANDIDATE QUESTION

The preferred Taoiseach candidate page is reached by clicking an option in the preferred candidate page. This questionnaire is made from three files, the taoiseach_list.xml file which contains the layout of the page, the rows_taoiseach.xml contains the layout of each row in the List View contained in the taoiseach_list.xml file and the TaoiseachList.java file which contains the java code to make everything function on the page.



This taoiseach_list.xml file contains a Linear Layout which contains a Text View and a ListView. The Linear layout contains a blue image which is used as the background. The Text View contains the text “WHO IS YOUR PREFERRED TAOISEACH?” and it has been given a red background colour. The text has also been given the text style bold.

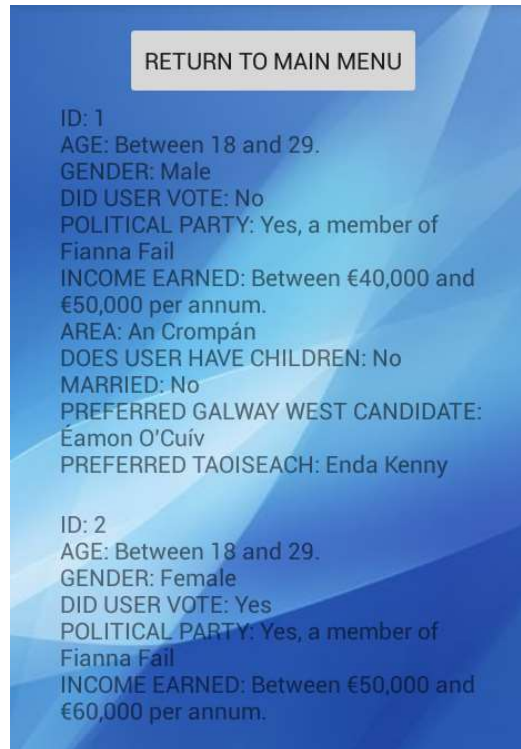
The List View contains a list of all the politicians in Ireland who are campaigning in the general election for the position of Taoiseach. The ListView has been designed as a table which contains rows and columns. The layout of each row is designed in the rows_taoiseach.xml file and each row contains three columns. The left column contains a picture of the politician, the middle column contains the name of the politician, and the right column contains an image of the political party logo.

When the user clicks on their preferred Taoiseach the answers from Questionnaire 1, Questionnaire 2, the preferred Galway West Candidate question and the preferred Taoiseach question are entered into a database contained in the MyDBManager.java file. This java file is hidden and cannot be viewed by the user. But I have created a method in MyDBManager which prints the database in text format to a View Database page.

When the user selects/clicks a preferred Taoiseach they are then brought to the View Database page.

VIEW DATABASE PAGE

The preferred Taoiseach candidate page is reached by clicking an option in the preferred Taoiseach candidate page or by clicking the “VIEW DATABASE” button on the home page. This page is made from two files, the view_database.xml file which contains the layout of the page and the ViewDatabase.java file which contains the java code to make everything function on the page.

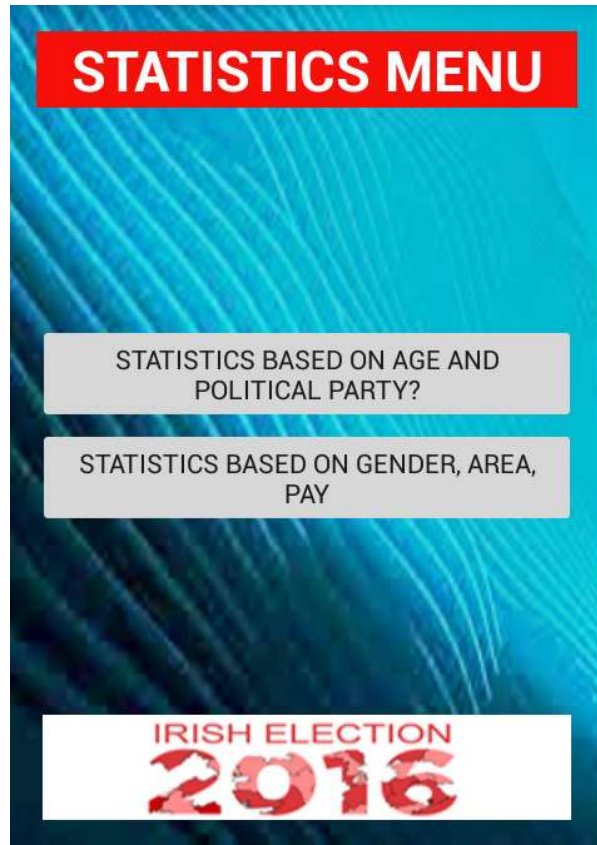


This view_database.xml file contains a Scroll View which contains a Linear Layout called database. A button with the writing “RETURN TO MAIN MENU” brings the user back to the home page. In the database Linear Layout the results of the poll are taken from the database in the MyDBManager.java file and printed out in text format under the following headings: ID, AGE, GENDER, DID USER VOTE, POLITICAL PARTY, INCOME EARNED, AREA, DOES THE USER HAVE CHILDREN, MARRIED, PREFERRED GALWAY WEST CANDIDATE, and PREFERRED TAOISEACH.

Every time a user takes part in the poll and completes all the questions in the poll they are entered into a database and each user is given a unique ID. Every time a user takes part in the poll the database grows in size. The user can view the entire database on their phone by scrolling down in the Scroll View.

STATISTICS MENU

The statistics page is reached by clicking the “GENERATE STATISTICS” button in the home page. The statistics menu page is made from two files, the statistics_menu.xml file which contains the layout of the page and the StatisticsMenu.java file which contains the java code to make everything function on the page.



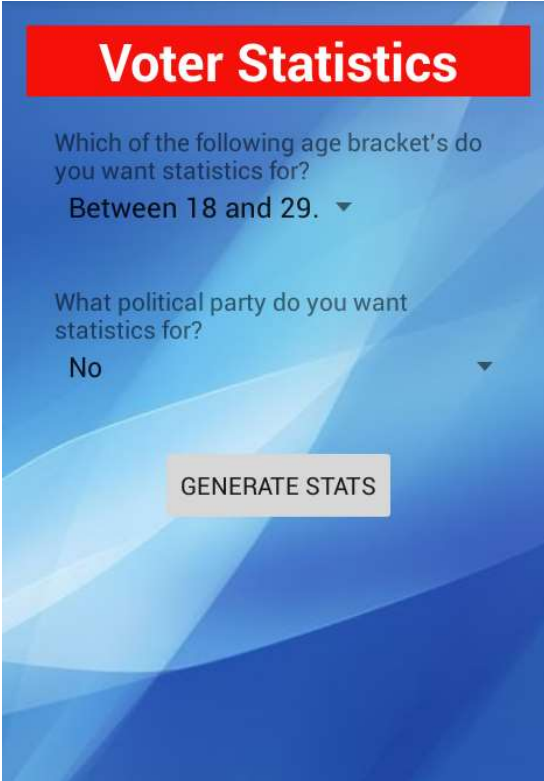
This page contains a Relative layout which contains a Text View and two Linear Layout's. The Relative layout contains a blue image which is used as the background. The Text View contains the text “STATISTICS MENU” and it has been given a red background colour. The text has also been give the text style bold.

In the first linear layout there are two buttons created which bring the user of the application to different pages in the application. The “STATISTICS BASED ON AGE AND POLITICAL PARTY” button brings the user to a page calculates the statistics based on age and political party. The “STATISTICS BASED ON GENDER, AREA, PAY” button brings the user to a page which calculates the statistics based on gender, area and pay.

In the second Linear Layout an Image View has been created which contains an “election 2016” logo.

STATISTICS CALCULATED BY AGE AND POLITICAL PARTY PAGE

The statistics calculated by age and political party page is reached by clicking the “STATISTICS BASED ON AGE AND POLITICAL PARTY” button in the statistics menu page. This questionnaire is made from two files, the age_politicalparty_statistics.xml file which contains the layout of the page and the AgePoliticalPartyStatistics.java file which contains the java code to make everything function on the page.



Voter Statistics

Which of the following age bracket's do you want statistics for?
Between 18 and 29. ▼

What political party do you want statistics for?
No ▼

GENERATE STATS

This contains a Linear layout which contains a Text View and 3 Linear Layout's nested in it. The Linear layout contains a blue image which is used as the background. The Text View contains the text “VOTER STATISTICS” and it has been given a red background colour. The text has also been given the text style bold.

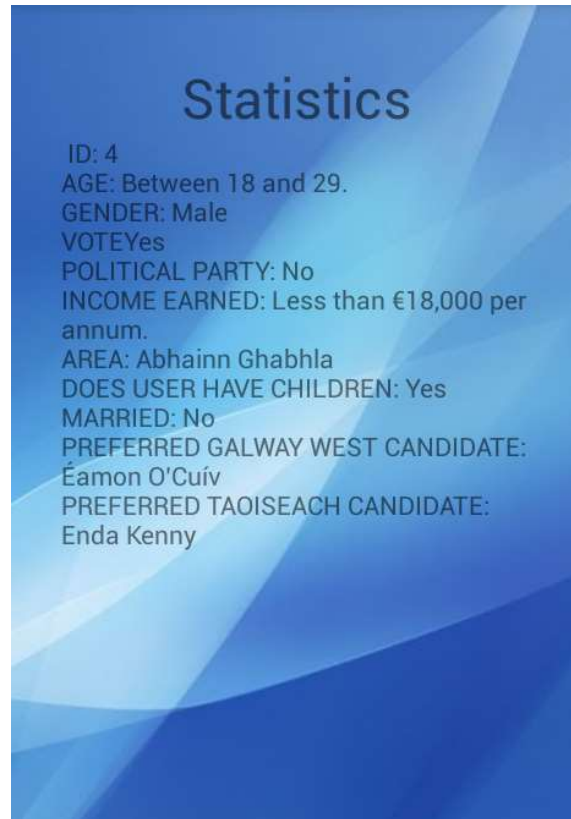
The first linear layout contains a Text View asking the user “Which of the following age brackets do you want statistics for” and also contains a drop down Spinner menu with a range of answers for the user to select.

The second linear layout contains a Text View asking the user “What political party do you want statistics for?” and also contains a drop down Spinner menu with a range of answers for the user to select.

The third linear layout contains a “SUBMIT” button which brings the user to the next questionnaire page and the answers from this page are bundled to the results calculated by age and political party page.

Results calculated by age and political party page.

This page is reached by clicking the “SUBMIT” button in the statistics calculated by age and political party page. This questionnaire is made from two files, the age_politicalparty_statistics_results.xml file which contains the layout of the page and the AgePoliticalPartyStatisticsResults.java file which contains the java code to make everything function on the page.

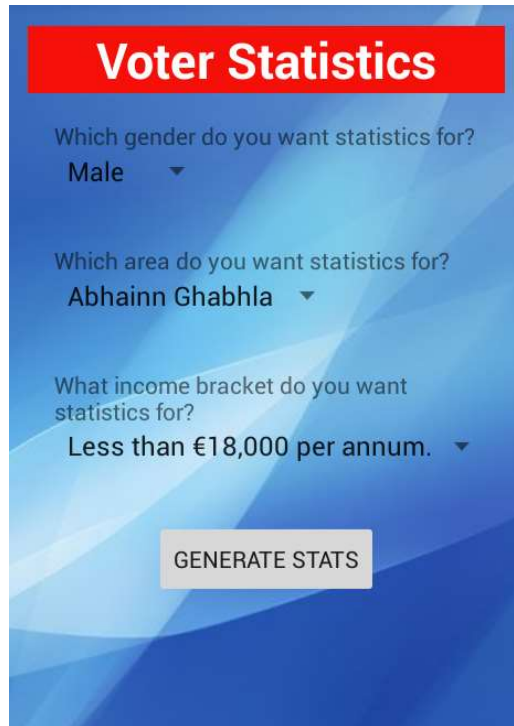


This contains a Scroll View which contains a Linear Layout called database. In the database Linear Layout the results of the poll are taken from the database in the MyDBManager.java file and printed out in text format under the following headings: ID, AGE, GENDER, DID USER VOTE, POLITICAL PARTY, INCOME EARNED, AREA, DOES THE USER HAVE CHILDREN, MARRIED, PREFERRED GALWAY WEST CANDIDATE, and PREFERRED TAOISEACH.

All the records in the database which have the same answers as the questions on the statistics calculated by age and political party page are displayed. The user can view all the similar records in the database on their phone by scrolling down in the Scroll View.

STATISTICS BASED ON GENDER, AREA, AND INCOME

The statistics based on gender, area and income page is reached by clicking the “STATISTICS BASED ON GENDER, AREA, PAY” button in the statistics menu page. This questionnaire is made from two files, the age_politicalparty_statistics.xml file which contains the layout of the page and the AgePoliticalPartyStatistics.java file which contains the java code to make everything function on the page.



This contains a Linear layout which contains a Text View and 4 Linear Layout's nested in it. The Linear layout contains a blue image which is used as the background. The Text View contains the text “VOTER STATISTICS” and it has been given a red background colour. The text has also been given the text style bold.

The first linear layout contains a Text View asking the user “Which gender do you want statistics for” and also contains a drop down Spinner menu with a range of answers for the user to select.

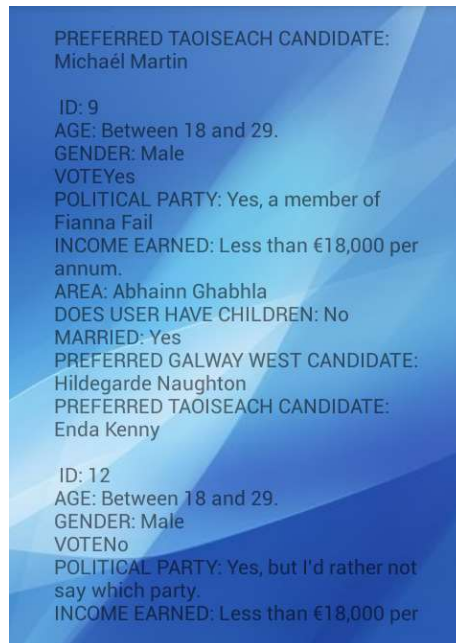
The second linear layout contains a Text View asking the user “What area do you want statistics for?” and also contains a drop down Spinner menu with a range of answers for the user to select.

The third linear layout contains a Text View asking the user “What income bracket do you want statistics for?” and also contains a drop down Spinner menu with a range of answers for the user to select.

The fourth linear layout contains a “GENERATE STATS” button which brings the user to the next questionnaire page and the answers from this page are bundled to the results calculated by gender, area and income page.

Results calculated by Gender, Area and Income page.

This page is reached by clicking the “GENERATE STATS” button in the statistics based on gender, area, and income. This questionnaire is made from two files, the gender_area_pay_statistics_results.xml file which contains the layout of the page and the GenderAreaPayStatisticsResults.java file which contains the java code to make everything function on the page.



```

PREFERRED TAOISEACH CANDIDATE:
Michael Martin

ID: 9
AGE: Between 18 and 29.
GENDER: Male
VOTEYes
POLITICAL PARTY: Yes, a member of
Fianna Fail
INCOME EARNED: Less than €18,000 per
annum.
AREA: Abhainn Ghabhla
DOES USER HAVE CHILDREN: No
MARRIED: Yes
PREFERRED GALWAY WEST CANDIDATE:
Hildegarde Naughton
PREFERRED TAOISEACH CANDIDATE:
Enda Kenny

ID: 12
AGE: Between 18 and 29.
GENDER: Male
VOTENo
POLITICAL PARTY: Yes, but I'd rather not
say which party.
INCOME EARNED: Less than €18,000 per

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This contains a Scroll View which contains a Linear Layout called database. In the database Linear Layout the results of the poll are taken from the database in the MyDBManager.java file and printed out in text format under the following headings: ID, AGE, GENDER, DID USER VOTE, POLITICAL PARTY, INCOME EARNED, AREA, DOES THE USER HAVE CHILDREN, MARRIED, PREFERRED GALWAY WEST CANDIDATE, and PREFERRED TAOISEACH.

All the records in the database which have the same answers as the questions on the statistics based on gender, area and income page are displayed. The user can view all the similar records in the database on their phone by scrolling down in the Scroll View.

DESIGN DECISIONS

It was decided that the style of the application would have a blue background image with a Text View at the top of most pages which would be used as a header or to show the title of the page. The Text View has a red background and the text in the Text View has a bold text style with a white text colour. Any text below the text view would be black in colour. This was the main design for nearly every page in the application as it needed a uniform look and feel.

Most websites or application concerning a government usually have an organised, and uniform layout. It was also decided to give the application a formal layout and not have it look to artistic with lots of colours and lots of designs and patterns in it. The user needs to understand that this is a polling application which gathers important information for generating statistics on how people are going to vote in the next general election.

In the home page there is the name of the application on top, which introduces the user to the polling application by saying "WELCOME TO THE 2016 ELECTION SURVEY FOR GALWAY WEST". Then there is four buttons below and an image located below.

It was decided to include an image with a "election 2016" logo to make the webpage better looking by adding an image into it and also to let the user know that this a polling application to calculate the outcome of 2016 general election.

It was decided to create a "TAKE POLL" button to enable the user to take part in the poll and to add a record to the database, and then enable them to view the database. The user is first asked are they eligible to vote and if they were not eligible to vote they are asked not to take part in the poll. It was chosen to include this as it was decided that the poll did not need to include people who were not eligible to vote in the database, as they would not be voting in the general election and an accurate figure could not be predicted. The user is then asked a number of questions in two question pages and then asked "who is their preferred candidate?" in a List View and "who is their preferred Taoiseach?" in a List View. In the first two question pages it was decided to include four questions per page as that is all the questions that could be displayed in a small android phone. It was decided to include List View questions because you could display images of the politician's faces and party logos along with their names and make the application nicer to look at. It was also decided to include a button when viewing the database so the user could return to the homepage

The "VIEW DATABASE" button was created so a user could view the database without taking part in the poll. It was decided for the user to be able to view the database as there is no exact information available on the people who have entered information into the database. The database does not contain information on the user's name, address, date of birth, bank details, etc. or any other sensitive information so that the people who enter information into the database remain anonymous. For this reason it was chosen to display the database.

The "Generate Statistics" button was created so the user could generate statistics based on age and preferred political party or to generated statistics based on gender, area the user lived in and the income the user makes per year. The user is asked a number of questions and the records in the database which contain the same answers to these questions are then displayed on the screen. It was planned to include the answers to be printed out in percentages in a List View containing images of the politicians and the percentages displayed beside them but this was not achieved.

The "Exit Poll App" button was created so the user could leave the polling application.

HOW TO USE THE POLL APPLICATION

1. Open the PollingApplicationFiles and put all of the files into Android Studio including the image files which should be put into the drawable folder.
2. When all the files are uploaded click on the Run button and run the application through an emulator or through an android device connected to the computer via USB.
3. The user can also click "Build APK" in the build menu option and install the application via Bluetooth.
4. When the user opens the home page they have four options:
 - (a) To take part in the poll.
 - (b) View the database.
 - (c) Generate statistics.
 - (d) Exit the application.
5. If the user chooses to take part in the poll, they have to answer all the questions until they complete the poll to add a record to the database. Repeat this step a number of times to add multiple records to the database. Every time a user completes the poll they can view the database they have created.
6. If the user chooses the view database option you can view the database without taking part in the poll.
7. If the user chooses the generate statistics option they will be brought to another menu. This menu has the following options:
 - (a) STATISTICS BASED ON AGE AND POLITICAL PARTY.
 - (b) STATISTICS BASED ON GENDER, AREA, AND PAY.

Whether the user selects option (a) or (b) they will be brought to a series of questions based on the topics and when the user selects the answers to these questions the database will be searched. If the data in some of the records matches the answers of the questions then the records with the matching data will be displayed on the screen.

8. If the user selects the exit poll option on the menu then the application will no longer run.