



Universidad Carlos III  
Software Engineering 2019-20  
Final Project  
Course 2019-20

## RateMyPolitician

Date: **13/01/2020** - Version: **Final**

GROUP: **89** TEAM: **03**

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## Document Status

### Document History

Version	Date	Author	Description
0	02-10-2019	Raul	First Draft
0.1	05-10-2019	Miguel	Business case and restrictions
0.2	09-10-2019	Team	Finishing matrix, requirements and introduction
0.3	10-10-2019	Yawo, Josh	Product perspectives, vocabulary and classification
0.4	16-10-2019	Team	Finishing additional requirements and Requirements' consistency matrix
0.5	19-10-2019	Amanda, Yawo	Finishing last requirements
1.0	21-10-2019	Team	Final revisions
1.1	20-11-2019	Raul	Conceptual model
1.2	27-11-2019	Josh, Yawo	Architectural model and components
1.3	29-11-2019	Miguel, Amanda	Conceptual matrices, use case and fixing terminology
2.0	02-12-2019	Team	Final revisions
2.1	10-12-2019	Yawo	Corrections of first part, including redefining some requirements
2.2	11-01-2020	Raul	Corrections of second part, conceptual model
2.3	12-01-2020	Miguel	Replacing deployment diagram
2.4	13-01-2020	Josh	Revamped component diagram, edited component spec
2.5	13-01-2020	Team	Overall revision of whole document

### Time effort

Name	INDIVIDUAL	TEAM (class hours)	TOTAL
Josh	3+1.5+1.5	5.5+4	<b>8.5+5.5+1.5=15.5</b>
Raul	3.5+2+1.5	6+2	<b>9.5+4+1.5=15.0</b>
Miguel	3.5+2+1.5	6+2	<b>9.5+4+1.5=15.0</b>
Yawo	3+2+0.5	5.5+2	<b>8.5+4+0.5=13.0</b>
Amanda	3+1.5+0.5	5+3	<b>8+3.5+0.5=13.0</b>
TOTAL	<b>16+9+5.5</b>	<b>28+12</b>	<b>44+22+5.5=71.5</b>

### Roles and responsibilities

NAME	MAIN CONTRIBUTIONS
Josh	2.1-2.2, 3.3-3.4, 4.1-4.2
Raul	1.1-1.3, 5.1, 3.3-3.4, 4.1
Miguel	2.3-2.4, 3.3-3.4, 5.2-5.3
Yawo	3.1, 3.5, 3.3-3.4, 4.2
Amanda	2.5-2.6, 3.3-3.4, 4.3-4.5

It is also possible to use a RACI matrix: *responsible, accountable, consulted, informed*.

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## **1 INTRODUCTION**

In this document we will describe the product, its scope, environment, etc. and its requirements (functional and non-functional), explaining how the system has to work and adding some definitions about the system.

### **1.1 Purpose of this document**

The purpose of this document is to have a clear idea about the product we will create, making a concise description and studying all the aspects about it, like restrictions and business case; and explain how the system will work, explaining its requirements and describing them, taking care about their consistency (conflicts, overlapping and redundancies)

The target audience of this document is the client, to help him to understand how the system will work and provide him a product context. Stakeholders are the audience of this document too, in order to give them information about the product.

### **1.2 How to use this document**

The first part of the document is the description of the product, which is divided into some sub-sections to focus on different aspects like its scope, business case, restrictions, etc.

The second part consists of describing and classifying the requirements, adding some glossary about the system vocabulary.

At the end of the document, there are the table references and more features to improve the requirements as checking its consistency.

### **1.3 References**

- [1] J. W. S. Josh W. Schoen, *What's in a name? One-third of US voters don't know candidates* Wednesday, 03-10-2018 URL:  
<https://www.cnbc.com/2018/10/03/one-third-of-us-voters-dont-know-candidates-reuters-ipsos-poll.html>
- [2]"Modelio Open Source - UML and BPMN free modeling tool", Modelio Open Source, 2019. [Offline tool]. Available: <https://www.modelio.org/>. [Accessed: 24- Nov-2019].

## 2 DESCRIPTION

### 2.1 Product perspective

There are many applications and websites used for political information and discussion. Social media platforms, such as Twitter, Facebook, and Reddit are the most common sources. However, it is nearly impossible to receive unbiased information related to politicians on these current platforms due to the proliferation of “fake news” and bad-faith actors. The cacophony of political discourse on these social media platforms can also be too overwhelming for people who are not politically aware and voters are left not knowing who to trust.

RateMyPolitician is a platform to cleanly streamline information, news, and discussion for each candidate. Instead of disparate tweets, FaceBook posts, and scattered articles, experts and constituents can update their opinions for a particular candidate on a single page. They can also rate politicians by a set of criteria: effectiveness, corruption, likeability, etc.

### 2.2 Scope of the product

- 1) RateMyPolitician (RMP) will generate two software products:
  - a) A website
  - b) A mobile app
- 2) The objective of the system is to provide the user with a more unbiased way to learn about every politician as well as an opportunity to voice their own opinions. RMP is intended to outperform the political components of Twitter, Reddit, and Facebook. RMP does not intend to be a social media platform outside of political discourse.
- 3) Expected benefits, objectives, and goals:
  - a) Benefits:
    - i) A more information-dense, but organized interface than Twitter/Facebook/Reddit
    - ii) Has a monetary incentive for the user with Candidate Cash
  - b) Objectives:
    - i) Allow users to research politicians in a centralized location
  - c) Goals:
    - i) Institute and encourage public funding of elections
    - ii) Improve political transparency
    - iii) Drown out political dark money and lobbying with personal contributions
- 4) Ethical Implications

- a) Politicians could potentially pay reviewers to write glowing reviews for themselves and negative reviews for their enemies.
  - i) Fix: Such reviews must include a disclaimer “*Paid for by X*”.
  - ii) Fix: All reviews must allow comments.
- b) The inclusion of ads and Candidate Cash can give an unfair advantage to politicians with more money
  - i) Counterargument: Candidate Cash can empower users to donate to underfunded campaigns
- c) RMP, like all social media platforms, will need to walk a fine line between censorship and “free speech.” It may be a struggle to deal with statements that are blatantly false.
  - i) Fix: Let the user decide how honest a pundit or politician is. Include honesty as a criterion one can rate someone on.

### 2.3 Business case for the product

The current problem with a big majority of the population is that they are not completely sure what politicians and political parties are trying to achieve, implement and support. The political world is full of controversies, ‘fake news’ and unclear ideas. This project uses this problem as motivation with the intent to provide a clear view alongside unbiased and credible news.

The app provides a comfortable solution for people interested in politics and people who want to be more interested. The application will include a description of the political parties for each politician, side-by-side with their beliefs and ideologies. This will help users to understand clearly what each party is supporting and trying to implement.

Alongside the description for each politician included, there will be a comment and review section where the community can interact with each other, being able to review positively or negatively. This service is reinforced by the implementation of constraints such as a feature to report irrelevant or unwelcome comments, a system that detects harassment comments, etc...

Additional features are available for the users, such as being able to filter according to affiliation, anonymity and other useful categories. In addition to this, politicians, constituents and pundits can verify their accounts to further improve the community and accessibility of the system.

Financially, RMP generates revenue from ads, sponsored articles, and surveys, and ~50 cents for every \$1.50 in Candidate Cash used to spend on gift cards.

## 2.4 Restrictions

As for restrictions, there are several circumstances that will restrict our project. Mainly, there could be problems with policies, since RMP takes on a highly controversial theme. A problem that could appear, for example, is that RMP could be sued or sabotaged by supporters of a political party. On the other hand, during its development, the app won't have as much exposure since there would be no advertisements.

Another restriction is corruption. Since our application deals with politicians and political parties, the community and investors could think that our data is biased, false or unverified, hence, it could lead to a bad opinion or a lack of investors/community-support, which could hinder us severely during the launch of our app.

Also, RMP may be impossible to implement in authoritarian countries like North Korea and countries with strict social media censorship like China. We will begin our launch in the United States and branch out from there if successful.

Lastly, budgeting could be a problem, since our project will need money to startup, we will need to use our own money, fundraising money, and other investors to achieve our project and promote it.

## 2.5 Types of users: roles and capabilities

Users	Pundits	Constituents	Politicians
Rate a politician	Rate a politician	Rate a politician	Upgrade its profile
Describe a politician with a set of attributes	Describe a politician with a set of attributes	Describe a politician with a set of attributes	Comment news
Donate	Donate	Donate	Participate in polls and surveys
Comment news	Comment news	Comment news	
Participate in polls and surveys	Write professional reviews	Comment in users reviews and comments	
Watch ads to earn Candidate Cash.	Write news	Review only other Constituents	



		reviews	
Search a politician	Review All the reviews and comments (from Pundits and Constituents)	Participate in polls and surveys	
	Participate in polls and surveys	Search a politician	
Delete his account	Delete his account	Delete his account	Delete his account

## 2.6 Operational environment

The main environments in which the system will be deployed rely on an external component. The environment is a mobile application, which will be connected to servers where all of the data is stored. The app will have access to databases about donations to politicians so that the donation data is always up to date.

As for the deployment environment, the development and testing environment consists of the developer's and designer's team workstation, in which the app will go through changes. These changes will be done according to testing and designing errors and improvements.

This process lets the RateMyPolitician team follow a continuous workflow, which helps to solve errors throughout the development and testing parts since errors can be accidentally implemented in any part of the actual cycle. Finally, as said before, the users will access the app through the use of the mobile by downloading the app in which they can log in.

### 3 REQUIREMENTS

#### 3.1 Requirements classification

The requirements in this document are grouped into categories which are then broken down into subcategories.

We distinguish two main categories which are Non-Functional Requirements and Functional Requirements:

- All the requirements that describe the functionalities, use cases, and capabilities of our applications are classified as Functional Requirements. (FR)
  - All the legal, quality, and compliance requirements are classified as Non-Functional Requirements. (NFR)
- The Functional Requirements:
    - User profile requirements
    - Rating feature requirements
    - Reviews and comment requirements
    - Anonymity and accountability requirements
  - Non-Functional Requirements:
    - Legal and compliance
    - Accessibility

#### 3.2 Template for requirements

Requirements shall be presented in a table following some template and including/justifying the most relevant attributes.

A verification test plan is a mandatory item in this project. Verification tests shall be specified for every requirement as a field in the aforementioned table.

##### A. Example template

ID	FRXX / NFRXX
Name	(Ex: Add user)
Description	(Ex: The system shall be able to add a user to the database when the.....)
Source	Client/Users/Design/Testing etc..
Test Plan	Brief steps (Example):

	1. Generate user 2. Search ID etc..
--	--

#### B. Blank template

ID	
Name	
Description	
Source	
Test Plan	

### 3.3 Functional Requirements

ID	Text	Subtype
FR1	The system shall have a registration menu where users can register, log in and log out.	Registration
FR2	The system shall include a setting menu, in which users can change its nickname, photo and preferences	Account management
FR3	The system shall allow prospective candidates to upgrade from regular user to a politician if they are officially qualified for a primary election.	Account management
FR4	The system shall allow users to delete the account by confirming their email and phone number.	Account management
FR5	The system shall show the news related to the last 3 days as soon as the users log in.	Core System
FR6	In a campaign, the system shall allow users to check the political party from each politician in campaign.	Core System
FR7	The system shall display a list of politician attributes (centrist, communist, socialist, right-wing, nationalist) in order to make people choose what attribute describes better politicians.	Core System
FR8	The system shall include donation information about each politician.	Core System

FR9	The system shall include an overview of the policies and voting related information for each politician	Core System
FR10	The system shall be able to determine the politicians that represent users by the user's location, which would be both the state and the counties (from the smartphone)	Core System
FR11	In a campaign, the system shall allow users to see the official electoral survey.	Core System
FR12	The system shall be able to search/filter politicians by name, political party, political ideologies and time in politics.	Core System
FR13	The system shall be able to access location.	Core System
FR14	The system shall be able to access the internet to refresh news.	Core System
FR15	The system shall designate journalists from a list of publications as "verified critics".	Reviews and Comments
FR16	The system shall permit the user to review (give an opinion) a politician that represents them.	Reviews and Comments
FR17	The system shall allow users to comment (give a small opinion or fact) on reviews.	Reviews and Comments
FR18	The system shall allow users to review posts and comments, being able to give positive or negative feedback.	Reviews and Comments
FR19	The system shall allow users to report irrelevant posts/comments (ads, pornography, spam).	Reviews and Comments
FR20	The system shall allow users to filter (exclude or order) reviews by political affiliation.	Reviews and Comments
FR21	The system shall allow users to filter (exclude or order) out anonymous reviews.	Reviews and Comments
FR22	The system shall include weekly surveys and polls to centralize user opinions.	Reviews and Comments
FR23	The system shall have a two-tier review system, similar to RottenTomatoes or IMDB. Reviews will be divided into pundits (political experts) and constituents (the people represented by a politician).	Reviews and Comments

FR24	The system shall have a list of approved publications/independent media sources that may contribute to pundit reviews.	Reviews and Comments
FR25	The system shall allow independent pundits to request pundit review status based on a set of rules.	Reviews and Comments
FR26	The system shall reward the user in “Candidate Cash” for writing reviews, viewing advertisements, and participating in surveys.	Currency and donation
FR27	The system shall allow users to donate to politicians using Candidate Cash.	Currency and donation
FR28	The system shall allow users to receive \$1 in gift card currency for every \$1.50 in Candidate Cash.	Currency and donation

### 3.4 Non-functional Requirements

ID	Text	Type
NFR01	The system shall only permit users to review politicians that represent them.	Restrictions
NFR02	The system shall comply with the anti-corruption laws of the country, such as, the American Anti-Corruption Act (AACA).	Restrictions
NFR03	The system shall comply with the data privacy policies of different countries, such as the General Data Protection Regulation in the European Union.	Restrictions
NFR04	The system shall provide a secure login method, such as Two-factor authentication and TLS.	Restrictions
NFR05	The device shall be an Android 3.0 or higher, a 4’’ screen or larger, 800MHz or higher processor and 512 MB or more of RAM.	Restrictions

### 3.5 Domain vocabulary

The domain vocabulary (also known as “glossary”) can be divided into two groups:

#### 3.5.1. Conceptual model terminology

User: Someone that use the platform

Account: Set of information (including username and password) associated with a user

Review: Judgment that users make to a politician or a new

Comment: Text that is written by a user to express his opinion

Politician: User who is a political figure. He can be reviewed.

Overview of a politician: Some data and information about a politician's career

Poll: Ask users questions about some aspects of politics and/or politicians

News: Newly received or noteworthy information, especially about recent events.

Candidate Cash: Coin used inside the application, earned by users watching adds and used to donate money to politicians or political campaigns.

Electoral Survey: Prediction about how elections will go on

*Hint: the technical terms defined here do not appear in the conceptual model.*

Vote: As user can give positive or negative feedback to a politician

Delete account: a user can voluntarily decide not to be part of the application, deleting its account.

Comment: Text written by a user about a politician or news to express his opinion

Review a post: Opinion written by a user of a post

Register: Creation of an account by a user

Filter: Searching following some restrictions

Donate: Money given by a user to support a politician

Upgrade profile: Changes in the account made by its user

### 3.5.2. Technical terminology

RAM: Random access memory. In relation to the size of the app, the 'space' the app will take.

System specifications: The several minimum requirements needed for the app to work.

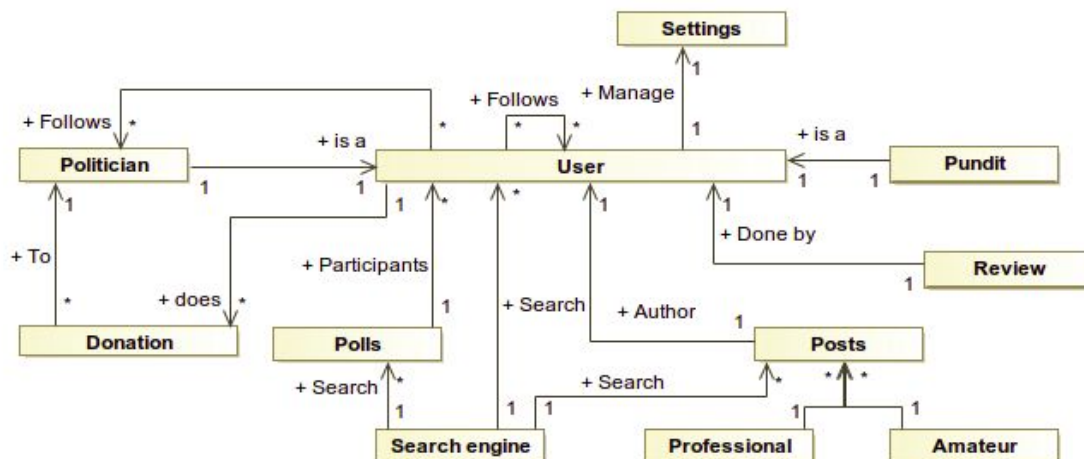
Terms of service (and conditions): The list of agreements between the user and the business that includes rules and guidelines of behavior and usage of the app that must be agreed on before using the app.

Server: Computer that provides services to client software running on other computers.

SSI: Server-side includes. Instructions to the server to include dynamic information such as opinion polls, news, etc..

## 4 ARCHITECTURE

### 4.1.1 Conceptual Model



[2]

This model was created with: *MODELIO*. Open Source: *MODELIO SOFT*.

To start we will speak about the class *user*, which the “center” of the application. A *user* can be a *politician* or a *pundit*, but each *politician* or *pundit* has only one *user* account; a *user* can do many *reviews*, write many *posts* and do *polls*, but each has a unique *user* (author).

*Posts* can be written by normal *users* or *pundits*, so posts must be differentiated between *amateur* and *professional*.

A *user* can make *donations* (one user can make some donations but each donation is done by only one user), and those *donations* have a beneficiary *politician*. A *politician* can receive all donations that *users* give them.

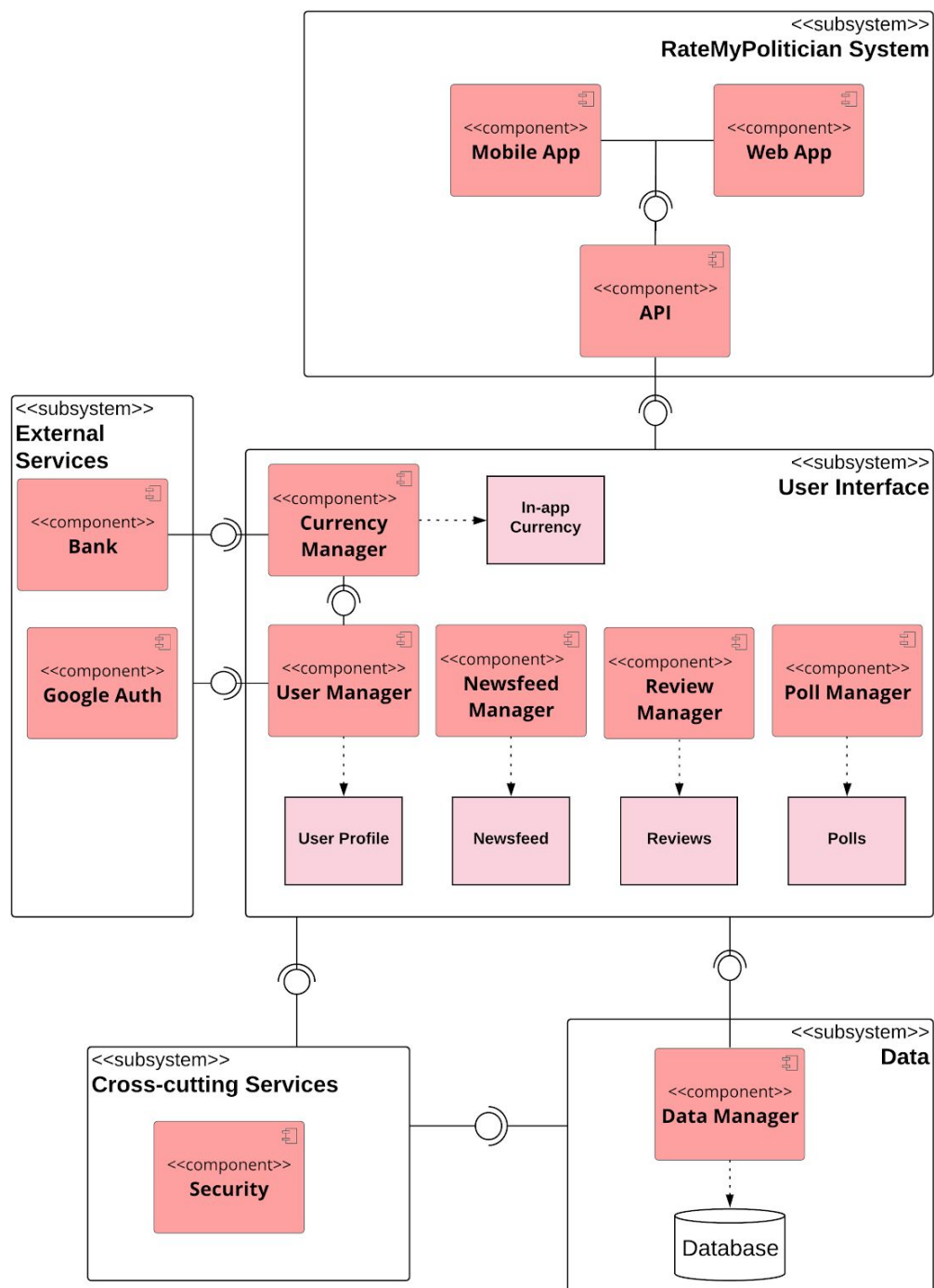
Each *user* has a unique setting account, in which user manage some settings like notifications, email information, age, language, etc. All the user *settings* (name, email, password...) are part of the *user*.

Each *user* can follow more users (normal *users*, *politicians* or *pundits*).

Finally we added a *search engine* in order to fit some requirements, with this engine we can search and find *users* (in which are included *politicians* and *pundits*), posts and *polls*. With a single search engine we can find (search) several users, posts...



### 4.1.2 - Component Diagram



This model was created with *LucidChart*.

The *RateMyPolitician System* subsystem contains the *API*, *Mobile App*, and *Web App* components. The *API*, which is an executable component, provides the interface for the *Mobile* and *Desktop* apps. Without the *API*, no app can be executed.

The *User Interface* subsystem contains the *User Manager*, *Currency Manager*, *Newsfeed Manager*, *Review Manager*, and *Poll Manager* components. These components produce the interfaces for *User Profile*, *In-App Currency*, *Newsfeed*, *Reviews*, and *Polls* respectively. The entire *User Interface* subsystem provides the interface for the main system. The *API* is meaningless without content.

The *External Services* subsystem contains the *Bank* and *Google Auth* components. The *Bank* component provides an interface for the *Currency Manager* component and the *Google Auth* component provides an interface for the *User Manager* component.

The *Cross-Cutting Services* subsystem contains the *Security* component, which provides an interface for the *Data* and the *User Interface* subsystems.

Finally, the *Data* subsystem contains the *Data Manager* component, which produces a database interface and provides an interface for the *User Interface* subsystem.

## **4.2 Component specification**

This section shall include a detailed description of all system components. A component will have a name and a unique, clear, concise and meaningful identifier. It is possible to use some kind of acronym or naming convention to ensure that all component identifiers are consistent and understandable.

The main task in the component specification lies in the description of the interfaces that must be the same that we have defined in the previous section.

### **4.2.1 User Manager**

**Type:** Executable

**Purpose [Function, Processing, Data, Resource]:**

This handles all the logic that has to do with a user's account and their time as well as the permission they have on the platform.

**Interfaces (provided interfaces):**

- An interface that allows checking for a user and their the account type (politician, voter ...) and verifies what permission they have
- An interface that allow to retrieve users based on certain attributes
- An interface that allows to add and remove user

**Dependencies (required interfaces)**

- An interface to store and retrieve data
- An interface that allows checking for user authentication
- An interface to encrypt and decrypt sensitive data

### **4.2.2 Google Authentication**

**Type:** Third Party Service

**Purpose [Function, Processing, Data, Resource]:**

This ensures that the user is who they claim to be

**Interfaces (provided interfaces)**

- Interface for login/logout

- Interface to check if a user is logged in

**Dependencies (required interfaces):**

- Interface to check if username matches password

**4.2.3 Data Manager**

**Type:** Executable

**Purpose [Function, Processing, Data, Resource]**

The role of the component is to access the database to retrieve or modify information

**Interfaces (provided interfaces):**

- Interface to retrieve users and their info
- Interface to retrieve posts and their comments and the associated users
- Interface to retrieve polls and their info

**Dependencies (required interfaces)**

- Database interface

**4.2.4 API**

**Type:** Executable

**Purpose [Function, Processing, Data, Resource]:**

Provides the interface for Mobile and Desktop apps

**Interfaces (provided interfaces)**

- N/A

**Dependencies (required interfaces)**

- Interface to retrieve users and their info
- Interface to retrieve posts and their comments and the associated users
- Interface to retrieve polls and their info
- Interface for login/logout

#### **4.2.5 Newsfeed Manager**

**Type:** Non-executable

**Purpose [Function, Processing, Data, Resource]**

The purpose of this is to handle all logic related to posting and commenting

**Interfaces (provided interfaces):**

- Interface to add, edit or remove posts and their comments
- Interface to retrieve posts and their comments based on a given user

**Dependencies (required interfaces):**

- Interface to retrieve or modify posts and their comments in the database
- Interface to check if a user is login
- An interface that allow checking for a user and their account type (politician, voter ...) and verifies what permission they have

#### **4.2.6 Review Manager**

**Type:** Executable

**Purpose [Function, Processing, Data, Resource]**

The purpose of this is to handle all logic related to politician rating

**Interfaces (provided interfaces):**

- Interface to rate or update rating for a given politician
- Interface to retrieve rating for a given user

**Dependencies (required interfaces):**

- Interface to retrieve or modify ratings in the database
- Interface to check if a user is logged in
- An interface that allows checking for a user and their account type (politician, voter ...) and verifies what permission they have

#### **4.2.7 Poll Manager**

**Type:** Executable

### **Purpose [Function, Processing, Data, Resource]**

The purpose of this is to handle all logic related to polls

### **Interfaces (provided interfaces):**

- Interface for creating and managing a poll
- Interface for responding to and viewing polls

### **Dependencies (required interfaces):**

- Interface to retrieve or modify polls in the database
- Interface to check if a user is logged in
- An interface that allow to check for a user and their account type (politician, voter ...) and verifies what permission they have

#### **4.2.8 Currency Manager**

**Type:** Executable

### **Purpose [Function, Processing, Data, Resource]**

The purpose of this is to handle all logic related to the usage and earning of Candidate Cash

### **Interfaces (provided interfaces):**

- Interface for showing advertisements
- Interface for earning Candidate Cash from advertisements
- Interface for spending Candidate Cash on campaign contributions

### **Dependencies (required interfaces):**

- Interface to retrieve advertisements and their insights in the database
- Interface to allocate funds to users from the currency bank
- Interface to check if a user is logged in
- An interface that allows checking for a user and their account type (politician, voter ...) and verifies what permission they have

#### **4.2.9 Security**

**Type:** Executable

### **Purpose [Function, Processing, Data, Resource]:**

This is in charge of providing security across the entire application

**Interfaces (provided interfaces);**

- Interface to encrypt/decrypt data
- Interface to log and retrieve system tasks

**Dependencies (required interfaces):**

- Interface to save and retrieve log files in the database

**4.2.10 Bank**

**Type:** Third Party Service

**Purpose [Function, Processing, Data, Resource]:**

Storage and allocation for in-app currency

**Interfaces (provided interfaces);**

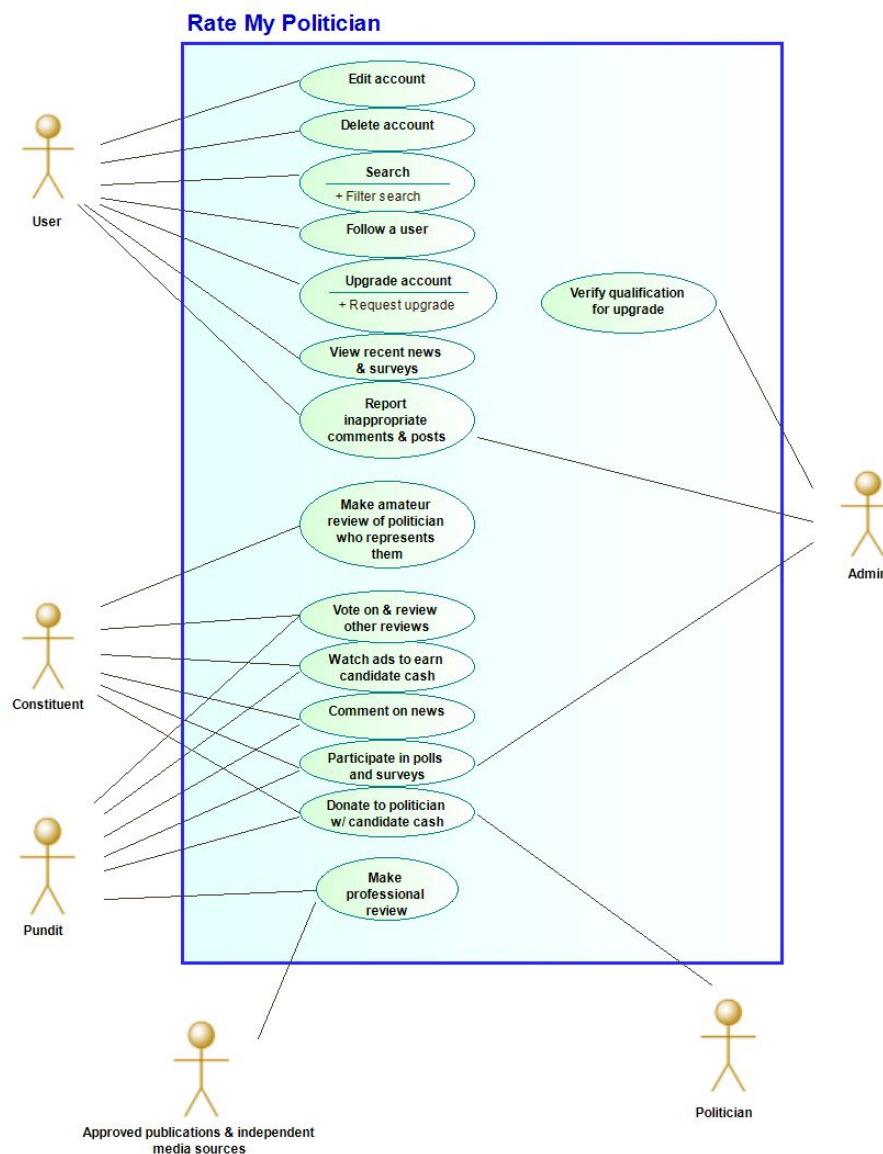
- Interface to withdraw money for user

**Dependencies (required interfaces):**

- Interface to deposit money from stakeholders

### 4.3 Use case

The purpose of the use case diagram is to map users to roles and capabilities. In this diagram the blue box represents the system, and each of the actors represents a different role a user of the system could take. Politicians, Pundits, and Constituents are all Users, so they all have their mapped capabilities plus that of the User. The Admin handles certain tasks such as verifying an account upgrade, dealing with reports of inappropriate content, and submitting surveys.

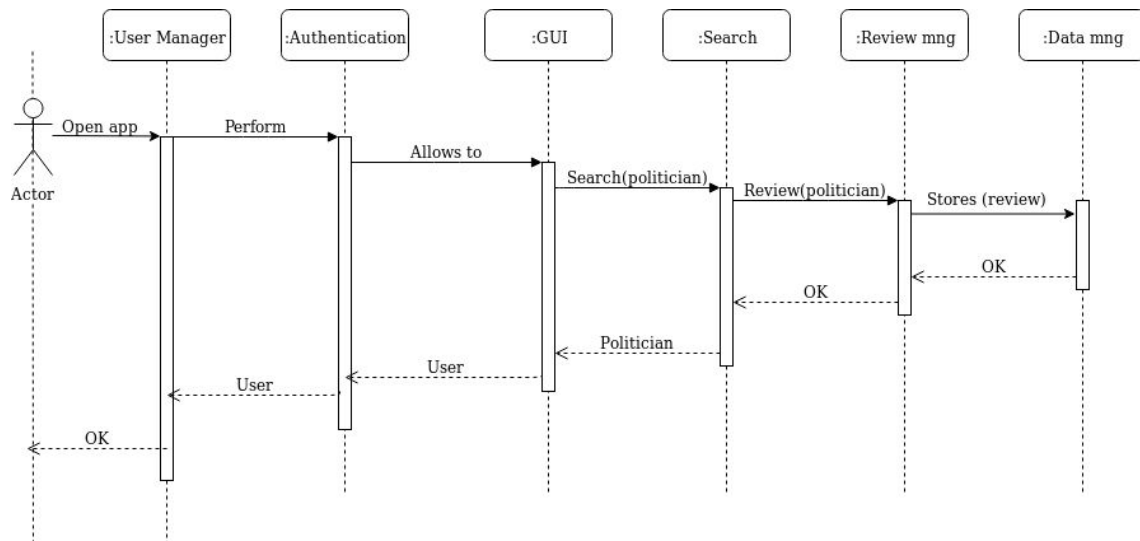


This model was created with *DRAWIO*.



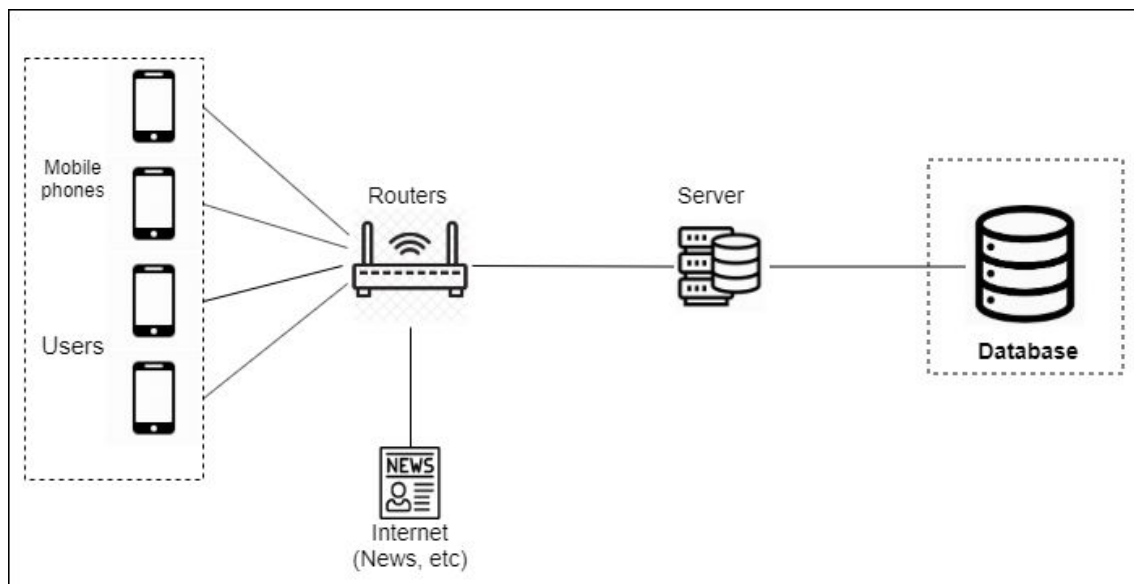
#### 4.4 Sequential model

RateMyPolitician sequential model



This model was created with *DRAWIO*.

#### 4.5 Physical model



This model was created with *DRAWIO*.

## 5 LIST AND TABLES

### 5.1. Requirements' consistency matrix: overlapping, conflicts, etc.

	FR1	FR2	FR3	FR4	FR5	FR6	FR7	FR8	FR9	FR10	FR11	FR12	FR13	FR14	FR15	FR16	FR17	FR18	FR19	FR20	FR21	FR22	FR23	FR24	FR25	FR26	FR27	FR28
FR1																												
FR2																												
FR3																												
FR4																												
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**\*\*There is the matrix in an external PDF that will be attached to this document in a zip file ( Requirements\_consistency\_matrix.pdf ).**

## 5.2. Requirements traceability – Conceptual model (classes)

	Users	Politician	Pundit	Posts	Amateurs	Professionals	Polls	Donations	Settings	Search engine
FR1	X									
FR2	X								X	
FR3	X	X							X	
FR4	X									
FR5	X									
FR6	X	X								X
FR7	X	X								
FR8	X	X						X		
FR9	X	X								
FR10	X	X								
FR11	X	X								
FR12	X	X								X
FR13	X								X	
FR14									X	
FR15	X		X							
FR16	X		X							
FR17	X		X	X	X	X				
FR18	X		X	X	X	X				
FR19	X			X	X					
FR20	X	X		X	X	X				X
FR21	X			X	X	X				X
FR22	X						X			
FR23		X	X	X	X	X				
FR24			X	X					X	X
FR25			X						X	
FR26	X			X	X	X	X			
FR27	X	X						X		
FR28	X							X		

### 5.3. Requirements traceability – Development view (requirements vs components)

	User manager	Authenticat ion	Data manager	GUI	Post manager	Rating manager	Google Authentication	Poll manager	Security
FR1	X	X					X		X
FR2	X		X						
FR3	X	X	X						
FR4	X	X					X		X
FR5			X						
FR6	X		X						
FR7	X		X						
FR8	X		X						
FR9			X						
FR10	X		X						
FR11	X		X						
FR12	X		X						
FR13			X						
FR14			X						
FR15	X					X			
FR16	X					X			
FR17	X				X	X			
FR18	X				X	X			
FR19	X				X				
FR20	X				X				
FR21	X				X				
FR22								X	
FR23	X	X				X			
FR24	X	X			X				
FR25	X					X			
FR26	X		X	X	X	X		X	
FR27	X			X					
FR28	X			X					

### 5.3. Requirements traceability – Development view (components vs classes)

	Users	Politician	Pundit	Posts	Amateurs	Professionals	Polls	Donations	Settings	Search engine
User manager	X								X	
Authentication	X	X	X						X	
Data manager	X			X			X	X	X	X
GUI				X			X	X	X	X
Post manager				X	X	X				
Rating manager				X	X	X				
Google Auth	X	X	X						X	
Poll manager							X			
Security									X	

**\*\*\*There is the matrix in an external PDF that will be attached to this document in a zip file ( Requirements\_traceability\_classes/components\_matrix.pdf ).**

## 6 ANNEX

### 6.1. Detailed requirements

#### A. Registration

ID	FR01
Name	Register and log in/out user
Description	The system shall allow users to register, log in and log out.
Source	Client
Test Plan	Steps to test: 1. Create user and check profile 2. Log in with the created user 3. Proceed to log out 4. Verify user has been logged out

#### B. Account management

ID	FR02
Name	User settings
Description	The system shall include a setting menu, in which users can change its nickname, photo and preferences
Source	Client
Test Plan	Steps to test: 1. Log in with existing user 2. Go to the settings menu 3. Change nickname and photo

ID	FR03
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Name	Validate Politician
Description	The system shall allow prospective candidates and current/past politicians to add themselves as politicians if they are officially qualified for a primary election or are part of a political database.
Source	Client and Admin
Test Plan	Steps to test: <ol style="list-style-type: none"><li>1. Log in with current user.</li><li>2. Go to the settings menu</li><li>3. Upload proof of candidacy or incumbency</li><li>4. Admin: Validate that the candidate is legitimate</li></ol>

ID	FR04
Name	Delete user
Description	The system shall allow users to delete the account by confirming their email and phone number.
Source	Client
Test Plan	Steps to test: <ol style="list-style-type: none"><li>1. Log in with existing user</li><li>2. Go to the settings menu</li><li>3. Delete user using email verification</li></ol>

### C. Core system

ID	FR05
Name	News Feed
Description	The system shall show the most recent news as soon as the users log in.
Source	Client and Admin
Test Plan	Steps to test: <ol style="list-style-type: none"><li>1. Login as user</li><li>2. Check if user can view news feed</li></ol>

ID	FR06
Name	Check politician
Description	In campaign, the system shall allow users to check the political programme from each politician in campaign.
Source	Client
Test Plan	Steps to test: <ol style="list-style-type: none"><li>1. Go to test politician (previously created account with politician ID)</li><li>2. Verify that user can see political programme</li></ol>

ID	FR07
Name	Check attributes
Description	The system shall display a list of politician attributes (centrist, communist, socialist, right-wing, nationalist) in order to make people choose what attribute describes better politicians.
Source	Client
Test Plan	Steps to test: <ol style="list-style-type: none"><li>1. Go to test politician profile</li><li>2. Check politician description</li><li>3. Check if user is able to assign attributes</li></ol>

ID	FR08
Name	Donation information
Description	The system shall include donation information about each politician.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Go to test politician profile</li><li>2. Check politician donation information</li></ol>

ID	FR09
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Name	Voting & policy summary
Description	The system shall include an overview of policy positions and voting records for each politician
Source	Users
Test Plan	Steps to test: <ol style="list-style-type: none"><li>1. Go to chosen politician</li><li>2. Check summary of voting records and policy positions</li></ol>

ID	FR10
Name	Location-based politician
Description	The system shall be able to determine the politicians that represent users by the user location (from the smartphone)
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Check current location/assigned location</li><li>2. Check location on the RateMyPolitician app</li><li>3. Check politicians assigned to the area</li></ol>

ID	FR11
Name	Check official survey
Description	In campaign, the system shall allow users to see the official electoral survey.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Go to voting/survey menu</li><li>2. Check official electoral survey</li></ol>

ID	FR12
Name	Filter system
Description	The system shall be able to search/filter politicians by name, political party, political ideologies and time in politics.



Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Go to search bar</li><li>2. Search by name</li><li>3. Check results</li><li>4. Repeat step 2 and 3 for the chosen attributes.</li></ol>

ID	FR13
Name	Access Location
Description	The system shall be able to access location.
Source	Admin
Test Plan	<ol style="list-style-type: none"><li>1. Request to access user's location.</li><li>2. Verify that location is accurate.</li></ol>

ID	FR14
Name	Updating news
Description	The system shall be able to access the internet to refresh news.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Go to news menu</li><li>2. Check current news on the app</li><li>3. Wait until the next day and see if the news are updated</li></ol>

#### D. Reviews and Comments

ID	FR15
Name	Verify Critics
Description	The system shall designate journalists from a list of publications as "verified critics".
Source	User and Admin

Test Plan	<ol style="list-style-type: none"><li>1. Log in as user.</li><li>2. Submit publication credentials.</li><li>3. Admin: Verify journalist with credentials.</li></ol>
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ID	FR16
Name	Review politician
Description	The system shall permit the user to review a politician that represents them.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Check politicians assigned to their represented party</li><li>2. Write a review</li><li>3. Check if review has been submitted</li></ol>

ID	FR17
Name	User comments
Description	The system shall allow users to comment on reviews.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Submit a review.</li><li>2. Log into a different account.</li><li>3. Comment on review.</li></ol>

ID	FR18
Name	Review comments
Description	The system shall allow users to review posts and comments, being able to give positive or negative feedback.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Submit a review</li><li>2. Log into a different account</li><li>3. Upvote/Downvote review</li></ol>

ID	FR19
Name	Report comments
Description	The system shall allow users to report irrelevant posts/comments (ads, pornography, spam).
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Submit comment</li><li>2. Log into a different account</li><li>3. Report comment with selected reason</li></ol>

ID	FR20
Name	Political filter
Description	The system shall allow users to filter reviews by political affiliation.
Source	User
Test Plan	<ol style="list-style-type: none"><li>1. Go to review section</li><li>2. Select a political party in the drop-down menu.</li><li>3. Verify that reviews reflect the party designated.</li></ol>

ID	FR21
Name	Political filter
Description	The system shall allow users to filter out anonymous reviews.
Source	User
Test Plan	<ol style="list-style-type: none"><li>1. Go to review section</li><li>2. Click the check box for “Exclude anonymous reviews”</li><li>3. Verify that each review has a profile attached to it.</li></ol>

ID	FR22
Name	Weekly resume

Description	The system shall include weekly surveys and polls to centralize user opinions.
Source	Client
Test Plan	<ol style="list-style-type: none"> <li>1. Go to news section</li> <li>2. Click the option surveys and polls</li> <li>3. Verify that the surveys and polls are upgraded</li> </ol>

ID	FR23
Name	Review hierarchy
Description	The system shall have a two-tier review system, similar to RottenTomatoes or IMDB. Reviews will be divided into pundits (political experts) and constituents (the people represented by a politician).
Source	Client
Test Plan	<ol style="list-style-type: none"> <li>1. When a user log in, go to user information</li> <li>2. There will be a description about who is that user, in that information there will be written if the user is a pundit or a constituent</li> </ol>

ID	FR24
Name	Approved publications
Description	The system shall have a list of approved publications/independent media sources that may contribute to pundit reviews.
Source	Client
Test Plan	<ol style="list-style-type: none"> <li>1. Log in as a test pundit.</li> <li>2. Assure that reviews written by the test pundit are properly part of the "Pundit Reviews" section.</li> </ol>

ID	FR25
Name	Expert reviews
Description	The system shall allow independent pundits to request pundit review status

	based on a set of rules.
Source	client
Test Plan	<ol style="list-style-type: none"> <li>1. Open the app as a pundit user</li> <li>2. Go to review section</li> <li>3. You should be allowed to review whatever you want</li> <li>4. Now open the app with a constituent</li> <li>5. Go to review section</li> <li>6. Now, you are allowed only to review the others constituent reviews, not pundit ones.</li> </ol>

#### E. App Currency

ID	FR26
Name	Rewards
Description	The system shall reward the user in “Candidate Cash” for writing reviews, viewing advertisements, and participating in surveys.
Source	Client
Test Plan	<ol style="list-style-type: none"> <li>1. Open the app</li> <li>2. Go to Candidate Cash section</li> <li>3. Select one of the proposed actions to earn them (contribute in surveys, watch ads or write a review)</li> <li>4. After doing one of those actions, a quantity of “Candidate Cash” will be added to you wallet</li> </ol>

ID	FR27
Name	Donation
Description	The system shall allow users to donate to politicians using Candidate Cash.
Source	Client
Test Plan	<ol style="list-style-type: none"> <li>1. Open the app and go to the politicians section</li> <li>2. Select a politician</li> <li>3. In the politician profile there will be a button to donate the quantity you want of “Candidate Cash”</li> </ol>

ID	FR28
Name	Currency exchange
Description	The system shall allow users to receive \$1 in gift card currency for every \$1.50 in Candidate Cash.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Open the app and go to the user information section</li><li>2. Inside it, go the my wallet section</li><li>3. Inside the wallet you will have the option of getting those “Candidate Cash” (1.50 Candidate Cash == 1 US Dollar)</li></ol>

ID	NFR1
Name	Review restrictions
Description	The system shall only permit users to review politicians that represent them.
Source	Client
Test Plan	<ol style="list-style-type: none"><li>1. Log in as user and click “Verify Account.”</li><li>2. Type in voting address and contact information.</li><li>3. Log in as admin and check if the user’s address is in the correct district based on voter registration database.</li><li>4. If the user is not a registered voter or did not sign up in the right district, notify the user. If the information is correct, approve the user.</li><li>5. Log in as user again and check if Account Status is correct.</li></ol>

ID	NFR2
Name	Anti-corruption Specifications
Description	The system shall comply with the anti-corruption laws of the country.
Source	Lawyers, Admin
Test Plan	Consult with campaign finance lawyers if RateMyPoliticians complies with the anti-corruption laws of the country.

ID	NFR3
Name	Privacy politics
Description	The system shall comply with data privacy policy in different countries.
Source	Lawyers, Admin
Test Plan	Consult with campaign finance lawyers if RateMyPoliticians complies with the data privacy laws of the country.

ID	NFR4
Name	source login
Description	The system shall provide a secure login method
Source	Client
Test Plan	Check that all passwords in the database are securely encrypted

ID	NFR5
Name	System specifications
Description	The device shall be an Android 3.0 or higher, a 4'' screen or larger, 800MHz or higher processor and 512 MB or more of RAM.
Source	Device
Test Plan	<ol style="list-style-type: none"><li>1. Check if the app runs</li><li>2. If you can run the app, the specification is fitted</li></ol>