

# University of Guyana



**Faculty of Natural Sciences,  
Department of Computer Science.**

**Course Name:** Software Engineering I

**Course Code:** CSE 2101

**Lecturers:** Alicia Layne, Penelope DeFreitas, Juanelle Marks

## **Semester Project Submission Four (4), System Testing**

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## Functional Requirement #1

The system should compare the identifying information with the information given by GECOM and the government to ensure there is no fraud

<b>Test case ID</b>	TC_BE_1
<b>Test priority (Low/Medium/High):</b>	High
<b>Test Title/Name:</b>	Corroborate ID Information
<b>Test Summary/Description</b>	After the user registers, the system must compare the information they gave with the Voters List and Voter Information provided by GECOM to decide whether or not the User is a valid voter.
<b>Pre-conditions</b>	<ul style="list-style-type: none"><li>❖ Software must already have GECOM database with voters ID running without any issues</li><li>❖ Voters should be able to upload a clear picture of their ID.</li></ul>
<b>Dependencies</b>	<ul style="list-style-type: none"><li>❖ Voter's list database should be working without issues or bugs.</li><li>❖ Function to accept the user information is working and free of bugs.</li><li>❖ Function to compare the users' ID information to the ID in GECOM's Voters database to check eligibility must be ready and free of bugs or issues before testing.</li><li>❖ Function to check if a voter already has an account should be functioning properly.</li></ul>
<b>Test Steps</b>	<ol style="list-style-type: none"><li>1. The user must input their personal information and a scan of their ID.</li><li>2. The system must access the Voters List previously provided by GECOM.</li><li>3. Using the provided first, middle and last names, addresses, occupations and ID numbers.</li></ol>

	<div>4. If the voter is present on the list, the system will flag that voter’s account as such.</div> <div>5. Otherwise, the system will flag the user as absent.</div> <div>6. The flagged accounts are set aside for verification by the IT Administrator</div>																																																																																																																																																															
Test Data	<div><div><div>OFFICIAL LIST OF ELECTORS</div><div>District 1Division Number: 111111Division Name: BARAMA HEAD/MATARKAI</div><table><tr><th>No.</th><th>Surname</th><th>First Name</th><th>Middle Name</th><th>Address</th><th>Occupation</th><th>ID Number</th></tr><tr><td>1</td><td>ABBENSETTS</td><td>TIMOTHY</td><td>OSCAR</td><td>BARAMITA</td><td>MINER</td><td>157304610</td></tr><tr><td>2</td><td>ALANZO</td><td>ALLAN</td><td></td><td>CENTRAL BARAMITA</td><td>FARMER</td><td>130162652</td></tr><tr><td></td><td></td><td></td><td></td><td>BARAMITA</td><td></td><td></td></tr><tr><td>3</td><td>ALANZO</td><td>AMELIA</td><td></td><td>BARAMITA</td><td>-</td><td>151427089</td></tr><tr><td>4</td><td>ALANZO</td><td>AMELIA</td><td></td><td>BARAMITA</td><td>-</td><td>147029982</td></tr><tr><td>5</td><td>ALANZO</td><td>AUSTIN</td><td></td><td>BARAMITA</td><td>FARMER</td><td>161399368</td></tr><tr><td>6</td><td>ALANZO</td><td>BREANNIE</td><td></td><td>BARAMITA</td><td>-</td><td>159952031</td></tr><tr><td>7</td><td>ALANZO</td><td>CARLTON</td><td></td><td>LAST RESORT BARAMITA</td><td>-</td><td>167457115</td></tr><tr><td>8</td><td>ALANZO</td><td>CAROLYN</td><td></td><td>ARANKA BARAMITA</td><td>FARMER</td><td>169193027</td></tr><tr><td>9</td><td>ALANZO</td><td>CINDY</td><td></td><td>LAST RESORT BARAMITA</td><td>-</td><td>166027044</td></tr><tr><td>10</td><td>ALANZO</td><td>CLIVE</td><td></td><td>BARAMITA</td><td>FARMER</td><td>159945726</td></tr><tr><td>11</td><td>ALANZO</td><td>DAWN</td><td></td><td>LAST RESORT BARAMITA</td><td>-</td><td>167005289</td></tr><tr><td>12</td><td>ALANZO</td><td>DORIS</td><td>JAMES</td><td>BARAMITA</td><td>-</td><td>157324495</td></tr><tr><td>13</td><td>ALANZO</td><td>EDGINA</td><td></td><td>ARANKA BARAMITA</td><td>-</td><td>169206704</td></tr><tr><td>14</td><td>ALANZO</td><td>ELENE</td><td></td><td>BARAMITA</td><td>-</td><td>166446375</td></tr><tr><td>15</td><td>ALANZO</td><td>GARREN</td><td></td><td>BARAMITA</td><td>MINER</td><td>166034125</td></tr><tr><td>16</td><td>ALANZO</td><td>INEZ</td><td></td><td>CENTRAL BARAMITA</td><td>HOUSEWIFE</td><td>130162555</td></tr><tr><td></td><td></td><td></td><td></td><td>BARAMITA</td><td></td><td></td></tr><tr><td>17</td><td>ALANZO</td><td>IRIS</td><td></td><td>CENTRAL BARAMITA</td><td>FARMER</td><td>130164495</td></tr><tr><td></td><td></td><td></td><td></td><td>BARAMITA</td><td></td><td></td></tr></table></div><div>Image 1: Snippet of the 2020 Voters List</div><div><table><tr><td>Name</td><td>Jane1 Doe2</td></tr><tr><td>Age</td><td>146</td></tr><tr><td>Gender</td><td>Goose</td></tr><tr><td>Height</td><td>1094cm</td></tr><tr><td>Nationality</td><td>Atlantean</td></tr><tr><td>National Identification Number</td><td>00000000000</td></tr></table></div><div>Table 2: Voter Information provided during registration</div></div>	No.	Surname	First Name	Middle Name	Address	Occupation	ID Number	1	ABBENSETTS	TIMOTHY	OSCAR	BARAMITA	MINER	157304610	2	ALANZO	ALLAN		CENTRAL BARAMITA	FARMER	130162652					BARAMITA			3	ALANZO	AMELIA		BARAMITA	-	151427089	4	ALANZO	AMELIA		BARAMITA	-	147029982	5	ALANZO	AUSTIN		BARAMITA	FARMER	161399368	6	ALANZO	BREANNIE		BARAMITA	-	159952031	7	ALANZO	CARLTON		LAST RESORT BARAMITA	-	167457115	8	ALANZO	CAROLYN		ARANKA BARAMITA	FARMER	169193027	9	ALANZO	CINDY		LAST RESORT BARAMITA	-	166027044	10	ALANZO	CLIVE		BARAMITA	FARMER	159945726	11	ALANZO	DAWN		LAST RESORT BARAMITA	-	167005289	12	ALANZO	DORIS	JAMES	BARAMITA	-	157324495	13	ALANZO	EDGINA		ARANKA BARAMITA	-	169206704	14	ALANZO	ELENE		BARAMITA	-	166446375	15	ALANZO	GARREN		BARAMITA	MINER	166034125	16	ALANZO	INEZ		CENTRAL BARAMITA	HOUSEWIFE	130162555					BARAMITA			17	ALANZO	IRIS		CENTRAL BARAMITA	FARMER	130164495					BARAMITA			Name	Jane1 Doe2	Age	146	Gender	Goose	Height	1094cm	Nationality	Atlantean	National Identification Number	00000000000
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	<div data-bbox="751 210 1292 541" data-label="Image"></div> <p data-bbox="727 596 1317 632"><b>Image 2: Scan of ID card provided by User.</b></p>
<b>Expected Results</b>	<p data-bbox="526 791 1511 867">When a user has uploaded their ID information, the system will compare it to the voters list from the database used by GECOM.</p> <ul data-bbox="578 915 1511 1283" style="list-style-type: none"><li>❖ Providing that the voter is of age, hasn't already registered, or isn't deceased(any form of fraud), the system will register them and give them access to the dashboard to vote/view results. (user will receive a welcome to system message)</li><li>❖ If the voter has already registered, is deceased and someone tried to impersonate the deceased, or is not of age,the voter is of age, hasn't already registered, or isn't deceased(any form of fraud) (user will be given a warning message displaying that they are denied access and the reason for that)</li></ul>
<b>Post Condition</b>	<p data-bbox="526 1362 1495 1522">The system should display a loading screen that tells the user that their ID is being verified. If verified and is eligible the voter will have access to the system else they will be reviewed by IT administrator and be given a confirmation of status.</p>

## Functional Requirement #2

The system should deny access to anyone who doesn't meet the voting criteria e.g under 18, has voted already, is not on the voters' list, or insufficient ID proof.

<b>Test case ID</b>	TC_IU_2
<b>Test priority (Low/Medium/High):</b>	High
<b>Test Title/Name:</b>	Deny Access to Invalid User
<b>Test Summary/Description</b>	After deciding that the user is an invalid voter, the system must deny access to that user.
<b>Pre-conditions</b>	<ul style="list-style-type: none"><li>❖ The system should be able to successfully accept user input into the respective registration fields.</li><li>❖ The system should be able to allow users to successfully cast a vote.</li></ul>
<b>Dependencies</b>	<ul style="list-style-type: none"><li>❖ System must have access to the voters list on GECOM's database which should be working without any issues or bugs.</li><li>❖ Function to compare user ID to ID in the GECOM voter's database to check eligibility must be ready and free of bugs or issues before testing.</li><li>❖ The system must be able to confirm votes casted and afterwards add the voters to a section of the database that contains persons who have already voted. (This serves to prevent double voting.)</li></ul>

<b>Test Steps</b>	<ol style="list-style-type: none"><li>1. Information pertaining to the user's personal information is entered into the appropriate registration fields.</li><li>2. Information that indicates the user is underage is provided into the registration fields, and the system should be able to identify and highlight this issue.</li><li>3. Information indicating that a person does not exist on GECOM's voters' list is entered into the registration fields, and the system should be able to compare the information with GECOM's database and flag this problem.</li><li>4. Information suggesting that someone that has already voted is entered into the registration fields and the system should be able to compare this information with the database consisting of persons who have already voted.</li><li>5. Information is entered into the registration fields along with inadequate or no ID proof and the system should be able to detect and flag this issue.</li><li>6. The system notifies the IT administrator of each suspicious activity listed prior, and the administrator refuses access to those invalid users.</li></ol>												
<b>Test Data</b>	<table><tr><td><b>Name</b></td><td>Jane1 Doe2</td></tr><tr><td><b>Age</b></td><td>146</td></tr><tr><td><b>Gender</b></td><td>Goose</td></tr><tr><td><b>Height</b></td><td>1094cm</td></tr><tr><td><b>Nationality</b></td><td>Atlantean</td></tr><tr><td><b>National Identification Number</b></td><td>00000000000</td></tr></table> <p><b>Table 2: Voter Information provided during registration</b></p>	<b>Name</b>	Jane1 Doe2	<b>Age</b>	146	<b>Gender</b>	Goose	<b>Height</b>	1094cm	<b>Nationality</b>	Atlantean	<b>National Identification Number</b>	00000000000
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	<div data-bbox="745 210 1287 541" data-label="Image"></div> <p data-bbox="722 596 1312 632"><b>Image 3: Scan of ID card provided by User.</b></p>
<b>Expected Results</b>	<p data-bbox="518 709 1357 745">When the user attempts to submit the above personal information:</p> <ol data-bbox="566 791 1484 1157" style="list-style-type: none"><li>1. The system should first compare it to the information on the Voters List.</li><li>2. The system should then flag the attempt as invalid and alert the IT Administrator.</li><li>3. The IT Administrator should examine the information provided and reject the account.</li><li>4. After the IT Administrator rejects the account, the system should present an error message to the user when they attempt to login with their voter ID.</li></ol>
<b>Post Condition</b>	<p data-bbox="518 1239 1484 1314">The system should return to the login page, having notified the user of their rejection and deleting the information they submitted.</p>