

Cost Estimation and Acceptance Testing

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Cost Estimation

1. Predicted Cost

Component	UFP	VAF	FP
Recipient Web Page	41	0.96	41.96
Donor Web Page	57	0.97	57.97
Payment Handling	49	1.03	50.03
		Total	149.96

2. Actual Cost

Component	Hours logged by tickets
Laura	95
Thong	92.5
Elan	
Patrick	74.7
Matt	98.3
Mitch	100.1
Abiy	107

Mike	96
Total (+/- missing members')	663.6

3. Effort Analysis

Component	Predicted Effort (/10)	Actual Effort (/10)
Recipient Web Page	3/10	3/10
Admin Web Page	3/10	3/10
Stripe Integration	8/10	9/10
Plaid Integration	0/10	5/10
Webhook Integration	7/10	4/10
JWT Integration	5/10	8/10
File Upload/Download	4/10	8/10
AWS Deployment	3/10	6/10
Testing / Fixing Bugs	9/10	10/10

Acceptance Testing for Sandbox Mode

1. User

1.1 Donation Test

Task Given to Subject	Test Setup	Expected Outcome	Sign Off
Donation	Donor is show the login/register page. Donor click on the “Donate” button	Redirected to Affordable donation webpage.	Yes

1.2 Applicant Test

Task Given to Subject	Test Setup	Expected Outcome	Sign Off
Withdraw Attempt: Fail Case	Applicants will enter a newly created account and ask to click on the withdrawal button.	Popup with the text “Please Add a Bank Account in Settings/Banking Information”	Yes
Going to the Setting page	Applicants will be login into an account and ask to go to the setting page. This is done by clicking on the	Applicants should see a new page with the title “Setting.”	Yes

	Setting option on the sidebar		
Going to the Banking Information tab	<p>Applicants will be shown the setting page.</p> <p>Applicant will be ask to click on the “Banking Information” table</p>	<p>A new page should appear that have a table with column:</p> <ul style="list-style-type: none"> • Account Type • Account Name <p>The table should be filled with the account saved bank account which can be empty if you haven't saved any.</p>	Yes
Opening the popup to add a bank account	<p>Applicants will be shown the Banking Information tab.</p> <p>They will be asked to scroll to the bottom and click on the Add Bank button.</p>	Applicants will be redirected to a page that says “Affordable uses Plaid to link your bank.”	Yes
Adding a bank account: Part 1	<p>Applicant will be shown a page that says “Affordable uses Plaid to link your bank.”</p> <p>Applicants will be asked to click on the Continue button, select their bank account, and login to that bank account.</p>	Applicant will be redirected back to the “Bank Information” Page	Yes

Adding a bank account: Part 2	<p>Applicants will be redirected back to the “Bank Information” Page.</p> <p>Applicant should wait for a moment</p>	Applicants should see the bank account they just save.	Yes
Verify Bank Account: Part 1	<p>After adding the bank account, the applicant clicks on the withdraw button.</p>	<p>A popup that says “To enable withdrawals, we need more information. Proceed to information form?”, with 2 button:</p> <ul style="list-style-type: none"> • Cancel • Proceed 	Yes
Verify Bank Account: Part 2	<p>A popup that says “To enable withdrawals, we need more information. Proceed to information form?”, with 2 button:</p> <ul style="list-style-type: none"> • Cancel • Proceed <p>Applicant click on the Proceed button</p>	Applicants are redirected to a page that asks for more information to verify their account.	Yes

Verify Bank Account: Part 3	Applicants enter the information to verify their bank account.	Applicant is redirected back to the Affordable website. They will ask for more information by clicking on the withdrawal button if there is any more information needed.	Yes
Going to the Transaction page on new account	Applicants will be login into a newly created account and ask to go to the transaction page. This is done by clicking on the Transaction option on the sidebar	Applicant should see a table with the column: <ul style="list-style-type: none"> • Date • Type • Amount • Status Applicant should seen no entries in the table	Yes
Apply for a grant: Fail Case 1 Part A	The applicant will be shown the dashboard. They will be ask to scroll down and click on the "Send Application"	A popup will appear with the title: "Error" and text: "You have not filled out all elements marked with an *" and there is an "OK" button.	Yes
Apply for a grant: Fail Case 1 Part B	A popup will appear with the title: "Error" and text: "You have not filled out all elements marked with an *" and there is	The Error popup should disappear and display the application screen.	Yes

	<p>an “OK” button.</p> <p>User is ask to click on the “OK” button</p>		
Apply for a grant: Fail Case 2	<p>The applicant will be shown the dashboard.</p> <p>They will be ask to answer:</p> <ul style="list-style-type: none"> • “First Name*” • “Last Name*” • “Have you tested positive for Covid-19?” • “What is your monthly income?*” <p>They will be ask to scroll down and click on the “Send Application”</p>	<p>A popup will appear with the title: “Error” and text: “You have not filled out all elements marked with an *” and there is an “OK” button.</p>	Yes
Apply for a grant: Success Case 1	<p>The applicant will be shown the dashboard.</p> <p>They are given 3 files</p> <p>They will be asked to answer all of the questions and upload the file.</p> <p>They will then click on the</p>	<p>A temporary popup that say “Success”</p> <p>The popup will disappear in a brief moment. All input and file will disappear on the application page.</p>	Yes

	"Send Application."		
Apply for a grant: Success Case 2	<p>The applicant will be shown the dashboard.</p> <p>They are given no files to upload.</p> <p>They will be asked to answer all of the questions that have '*' but do not upload any file.</p> <p>They will then click on the "Send Application."</p>	<p>A temporary popup that say "Success"</p> <p>The popup will disappear in a brief moment.</p> <p>All input and file will disappear on the application page.</p>	Yes
Withdraw: Part 1	<p>Admin accepted the application to an applicant.</p> <p>User is logged in as the applicant, the application has been accepted, and a bank account verified.</p> <p>User click on the Withdraw button</p>	A popup that has the title "Withdraw."	Yes
Withdraw: Part 2	<p>A popup that has the title "Withdraw."</p> <p>User enter the information and amount to withdraw and click</p>	Submit pop ups appear that show no processing fee with the confirm button.	Yes

	the submit button		
Withdraw: Part 3	<p>Submit pop ups appear that show no processing fee with the confirm button.</p> <p>Users click on the confirm button.</p>	The popup closes.	Yes
Withdraw: Part 4	After the popup closes, users go to the transaction page.	Users should see the amount they withdraw in the transaction table.	Yes

1.3 Admin Tasks

Task Given to Subject	Test Setup	Expected Outcome	Sign off
Review Applicants: Fail Case	Admin login and go to the dashboard and click on the "View Applicant" button.	A popup appears with the following message: "Please select a request"	Yes
Review Applicants: Success Case	Admin login and go to the dashboard, select an applicant, and click on the "View Applicant" button.	<p>A popup with:</p> <ol style="list-style-type: none"> 1. The applicant information 2. Button to download applicant files 3. Recommended Grant Amount 4. A field to enter the 	Yes

		<p>amount to grant applicants.</p> <p>5. Option to grant/reject the applicant.</p>	
Download applicant files	<p>Admin login and go to the dashboard, select an applicant, and click on the "View Applicant" button.</p> <p>Then click on the Download button.</p>	The 0-3 file that the applicant upload should now be downloaded for the admin to review.	Yes
Award Applicant: Fail Case	<p>Admin login and go to the dashboard, select an applicant, and click on the "View Applicant" button.</p> <p>Admin click on the "Grant" button.</p>	A popup with the error message "Please enter an amount to grant to" + the applicant name	Yes
Award Applicant: Success Case Part 1	<p>Admin login and go to the dashboard, select an applicant, and click on the "View Applicant" button.</p> <p>Admin enter the amount to grant in the "Grant Amount:" field.</p> <p>Admin click on the "Grant"</p>	<p>Popup that asks if the admin wants to grant the amount specified in the Grant with 2 button:</p> <ul style="list-style-type: none"> • Cancel • Confirm 	Yes

	button.		
Award Applicant: Success Case Part 2A	<p>Popup that asks if the admin wants to grant the amount specified in the Grant Amount field to the applicant.</p> <p>Admin click on the Confirm button.</p>	<p>Applications disappear from the dashboard.</p> <p>The applicant balance increases by the granted amount after tax.</p>	Yes
Award Applicant: Success Case Part 2B	<p>Popup that asks if the admin wants to grant the amount specified in the Grant Amount field to the applicant.</p> <p>Admin click on the Cancel button.</p>	Popup close.	Yes
Reject Applicant: Success Part 1	<p>Admin login and go to the dashboard, select an applicant, and click on the "View Applicant" button.</p> <p>Admin click on the "Reject" button.</p>	<p>Popup that asks if the admin wants to reject the applicant with 2 button:</p> <ul style="list-style-type: none"> • Cancel • Confirm 	Yes
Reject Applicant: Success Part 2 Version A	<p>Popup that asks if the admin wants to reject the applicant with 2 button:</p> <ul style="list-style-type: none"> • Cancel • Confirm <p>Click on the confirm button</p>	<p>Associated HUG is removed from the database.</p> <p>Application status in the database is updated to grant.</p> <p>Applications disappear from</p>	Yes

		the dashboard.	
Reject Applicant: Success Part 2 Version B	<p>Popup that asks if the admin wants to reject the applicant with 2 button:</p> <ul style="list-style-type: none"> • Cancel • Confirm <p>Click on the Cancel button</p>	Popup up close.	Yes

2. Security

2.1 Testing Outline

Test	Procedure	Expected Outcome	Sign Off
Standard Security Tests	A Selenium script will bombard the website with known common web app vulnerabilities such as cross site scripting, sql injection, and other basic penetration techniques.	The website should operate normally with no crashes, and it should not divulge sensitive user information. If any malicious are used in any of the application input fields, the user will be notified to avoid using them.	
Crash Validation Tests	A Selenium script will try to perform monetary transactions while shutting down and	Transaction logs from the system should match the logs from the Stripe system, and	

	restarting the backend, cutting off internet connectivity, and performing other kinds of common natural sabotage.	should remain internally consistent. Money should not disappear or be spontaneously created.	
Penetration Testing	At least one human with some web app experience will attempt to break into the website and retrieve sample user data, or simply crash the system.	No trivial methods of crashing or data leakage should be found within our project scope. Anything out of scope will be reported to the clients.	

2.2 Penetration Testing Logs

Here is a sample of how penetration testing will be recorded:

Attempted Attack	Procedure	Expected Outcome	Sign Off
SQL Injection	Attempt to log into an account with a known username but crafted password. The following line will be entered into the password field: " or ""="	Login failed	Yes
SQL Injection	Try to sabotage the website's login feature by using a crafted sql query. The following string format will be entered into every available text field in the login and registration pages: <AnyText>; DROP TABLE accountinfo	Login failed. Tables were not erased	Yes
SQL Injection	Attempt to sabotage the application system by using crafted sql queries. Once an account is created and	A form was stored with the inputted text. Tables	Yes

	logged in the following string format will be entered into every available text field and then submitted: <AnyText>; DROP TABLE accountinfo	were not erased	
XXS	An XSS attack will be attempted using URL field script tags	404 page not found	Yes
XXS	An XSS attack will be attempted using text field script tags. 	The string was stored in the text fields. No alert appeared	Yes
XXS	An XSS attack will be attempted using text field property tags	The string was stored in the text fields. No alert appeared	Yes
XXS	Try to upload a malicious file to the application upload system	The file was accepted, executable did not run	Yes

3. Usability Survey

3.1 Survey

Link to form: [Recipient Usability Survey](#)

Statement	Strongly Disagree 1	2	3	4	Strongly Agree 5
I am satisfied with the amount of time it					

takes to apply.					
I am satisfied with the level of difficulty to save my account information.					
I am satisfied with the layout of the Settings page.					
I am satisfied with the withdrawal processes.					
Were pages easy to find?					

Link to form: [Admin Usability Survey](#)

Statement	Strongly Disagree 1	2	3	4	Strongly Agree 5
I am satisfied with the layout of the Dashboard.					
I am satisfied with the review of applicants.					
I am satisfied with the award application processes.					
I am satisfied with the reject application processes.					
Were pages easy to find?					

3.2 Results

We had no feedback as of time of writing.