Increment 3 report

Team 38
- Alex - tll1g19
- Carlos - cab1g19
- Jamaal - jm3g19
- Stoyan - sv1u19
- Tom - tdh1g19
- Vlad - vgh1u19

Design choices
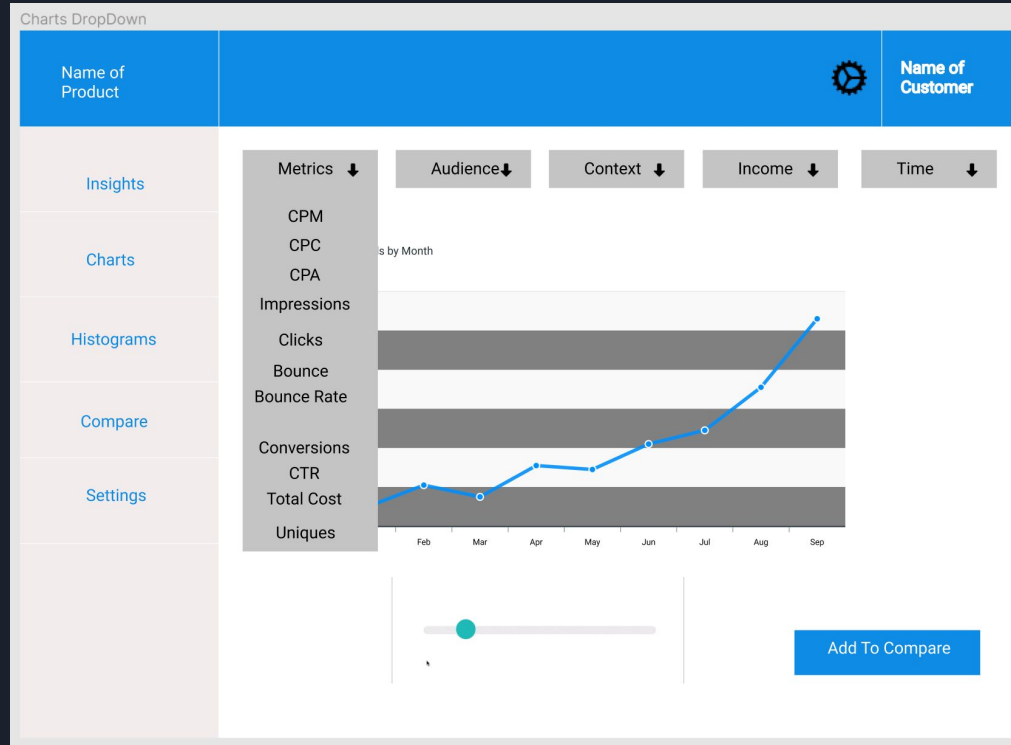
Design Artifacts

Storyboards

Filtering w/ Dates

Settings Page (Technical Section)

Developments

Metrics Page

OLD

- Added start Date and End Date filtering for the metrics
- Changed Total Click Cost to display as a number instead of scientific number after feedback from client for easier understanding

NEW

Charts Page

OLD

- Added start Date and End Date filtering for the charts
- Added "Save Chart" button

NEW
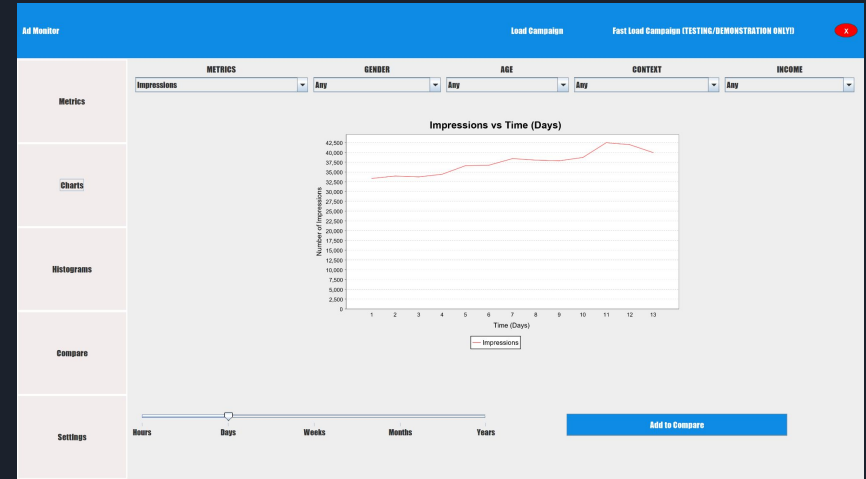
Chart Compare Page

OLD

- Added a label at the left side of every chart. The reason for this was to have a way of keeping track of the order the charts were added.

NEW
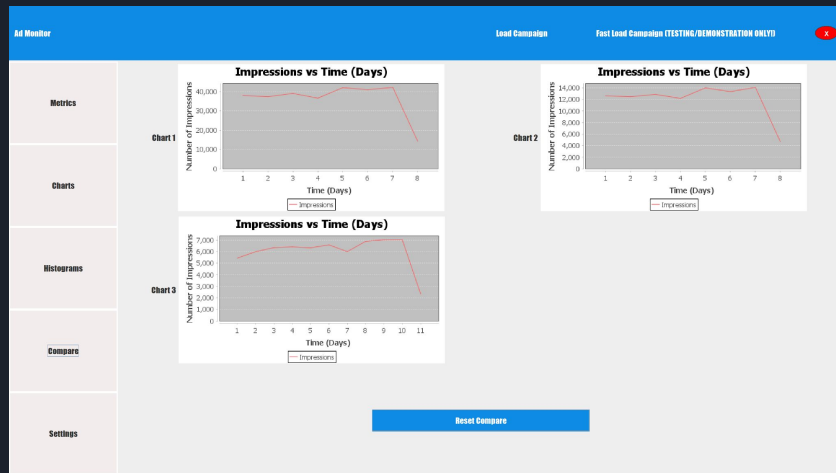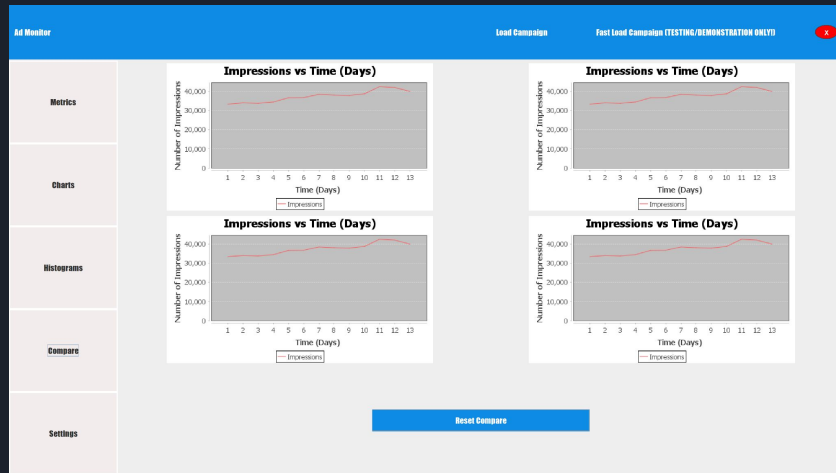
Metric and Chart Date Filtering

- Initially in our plan for increment 2 - whilst we completed this on the backend, we were unable to create a method of selecting the date
- Now using a calendar to select the date
- Provided for both metrics and charts
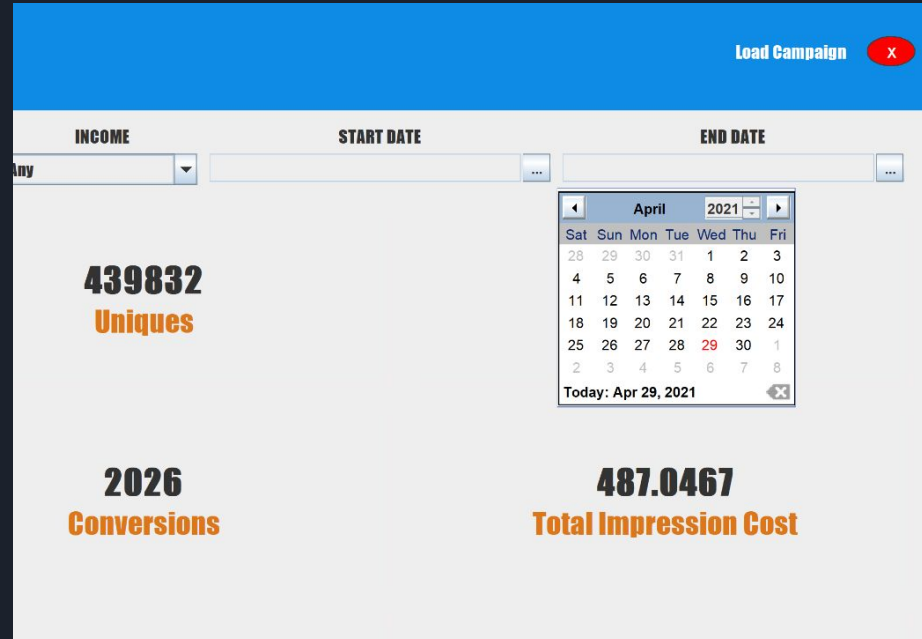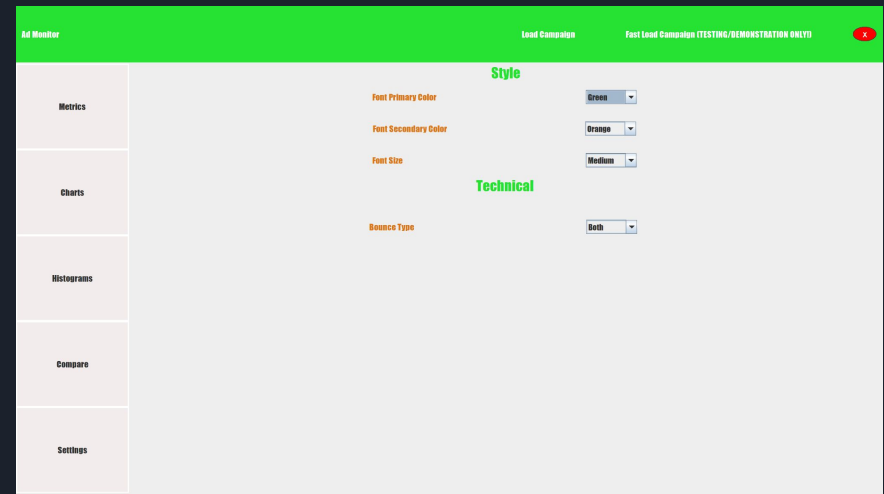
Settings Page
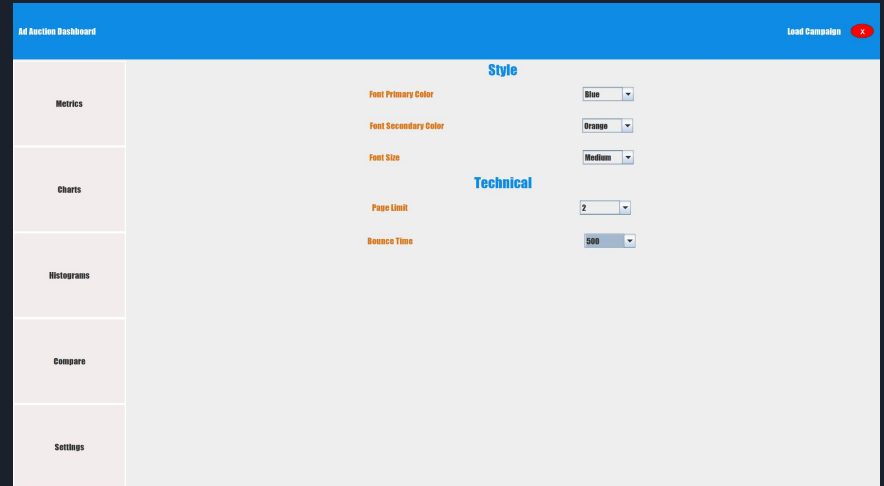
OLD

- Split bounce type into 2 different options in the settings page. After we talked to the supervisor he told us that it is better to have them split into 2 different options

NEW

Bounce Definition Settings

- A visual option in the previous increment, now with functionality
- Can now change page limit (how many pages need to be visited to count as a conversion) and bounce time (how long before the user is determined to be "inactive")
- Additional option to toggle each setting off

Technical

Page Limit	3
Bounce Time	500

None
100
500
1000
2500

Saving Charts as Files

- One of the optional objectives for increment 3

- JFreeChart provides easy functionality for saving the chart
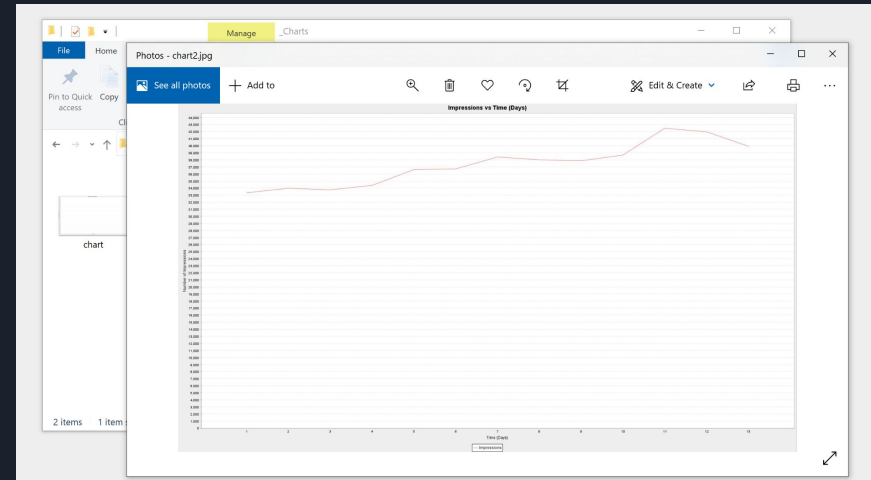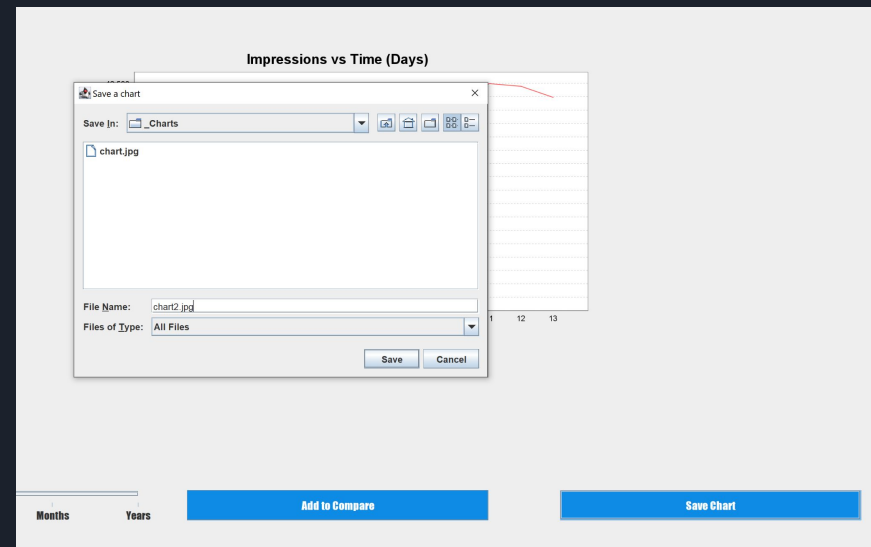
Testing

Tests

Automated Tests

- Unit Testing
- Validation Testing
- Defect Testing
- Boundary Testing
- Partitioning Testing

Manual Tests

- User scenarios (based on user stories)
- Boundary Testing
- Regression Testing
- Manually comparing values displayed on Insights and values in Charts

Automated Tests

Validation tests

Validation: ID	
0	No error
1	No error
12345678	No error

Validation tests

Validation: Date / Entry date / Exit date	
0001-01-01 00:00:00	No error
2020-01-01 01:03:21	No error
9999-12-30 12:59:59	No error

Validation tests

Validation: Click cost / Impression cost	
0	No errors
1.23	No errors
999.99	No errors

Validation tests

Validation: Pages viewed	
0	No error
12	No error
12345	No error

Validation tests

Validation: ID	
0	No error
1	No error
12345678	No error

Defect tests

Defect: ID	
-1	Logical mistake w/o error msg
-12345678	Logical mistake w/o error msg
Incorrect format (e.g. ABC)	java.lang.NumberFormatException
Decimals	java.lang.NumberFormatException

Defect tests

Defect: Date / Entry date / Exit date	
0000-00-00 00:00:00	DateTimeParseException
2020-01-01 99:99:99	DateTimeParseException
Incorrect Format (e.g. ABC)	DateTimeParseException
Exit date < Entry date	Logical mistake w/o error msg

Defect tests

Defect: Click cost / Impression cost	
-1.00	Logical mistake w/o error msg
-999.99	Logical mistake w/o error msg
-0.001	Logical mistake w/o error msg
Incorrect Format (e.g. ABC)	Number format error

Defect tests

Defect: Pages viewed	
Negative Ints	Logical mistake w/o error msg
Invalid format (e.g. ABC)	java.lang.NumberFormatException

Boundary tests

Boundary: ID	
Positive Long	No error
Negative Long	Logical mistake w/o error msg

Boundary/Partitioning tests

Boundary: Date / Entry date / Exit date	
<0001-01-01 00:00:00	DateTimeParseException
0001-01-01 00:00:00 - 9999-12-30 12:59:59	No error
>10000-01-01 00:00:00	DateTimeParseException

Boundary tests

Boundary: Click cost / Impression cost	
Positive doubles	No errors
Negative Doubles	Logical mistake w/o error msg

Boundary tests

Boundary: Pages viewed	
Positive Ints	No error
Negative Ints	Logical mistake w/o error msg

Manual Testing

Boundary Testing Start Date Filtering

1. User loads the application and runs a campaign
2. Initial metics display the whole time range
3. Filter start date on 1/1/2015 (first date of csv, no changes expected)
4. Filter start date on 2/1/2015 (second date of csv, impressions should decrease
5. Filter start date on 31/12/2014 (date before csv, same values as 1/1 expected
6. Filter start date on 14/1/2015 (last date of csv, some but much reduced number of impressions)
7. Filter start date on 15/1/2015 (date after csv, no impressions should be expected)

Images correspond to instructions 2-7 and display as expected

Boundary Testing End Date Filtering

1. User loads the application and runs a campaign
2. Initial metics display the whole time range
3. Filter end date on 15/1/2015 (last date of csv, all impressions expected)
4. Filter end date on 14/1/2015 (last date of csv, slightly reduced number of impressions)
5. Filter end date on 16/1/2015 (date after csv, same as 14/1, all impressions expected)
6. Filter end date on 2/1/2015 (date after csv, no impressions should be expected)
7. Filter end date on 1/1/2015 (first date of csv, no impressions expected)

Images correspond to instructions 2-7 and display as expected

User Stories

User Stories Relevant For This Increment

(1) As a < fashion business owner>

I want <to see which dates had the most clicks>

So that <I can understand my business>

1 Start and End Date filtering

(2) As a <manager for a large business>

I want <to be able to save the charts as files>

So that <I can use them later in a business meeting for a presentation>

2 Saving charts as files

(3) As a <Car Shop Owner>

I want <to be able to print the charts>

So that <we can demonstrate to investors our business is growing>

3 Printing functionality

(3) As a <manager from an up and coming business>

I want <to be able to change the definition of a bounce/conversion>

So that <we can define what success means to our new business>

4 Bounce Definitions

User Scenarios and Outputs

Scenario 1: Jeff, Car Shop Owner

- Jeff opens the *Ad Monitor* application aiming to see a chart of the conversions from the first week of his advertising campaign and compare it to his second week. Jeff loads the campaign by using the button from the top menu and goes to the charts page through the left side vertical menu. Then he changes the metric to "Conversions" and he filters the graph using the "Start Date" and "End Date" filters above the graph to display his first week. He then adds the chart to the compare page using the button "add to compare" displayed below the chart and repeats the process for the second week. Finally, Jeff goes to the Compare Page and looks at the graphs side by side.

Scenario 1: User wants to compare 2 Conversions charts from 2 different weeks

1. User opens application
2. User loads campaign
3. User presses "Charts" button in the left vertical menu
4. User filters chart to show "Conversions"
5. User filters Start and End Date accordingly
6. User presses "Add to compare button"
7. User filters Start and End Date again
8. User presses "Add to compare button"
9. User presses "Compare" button in the left vertical menu
10. Application displays compare page with the 2 "Conversions" charts side by side from 2 different weeks
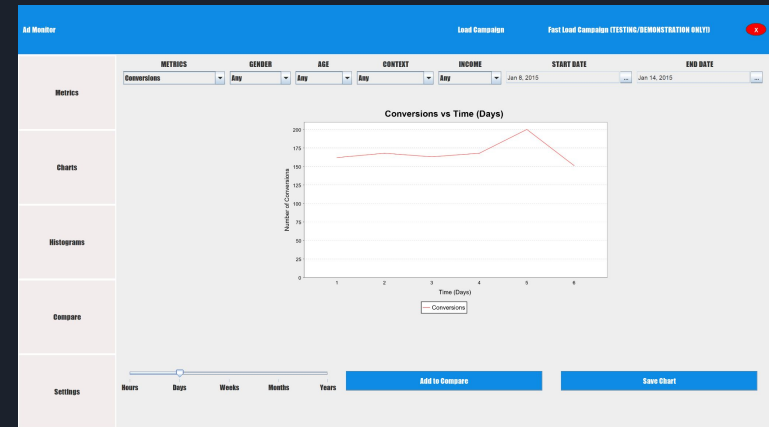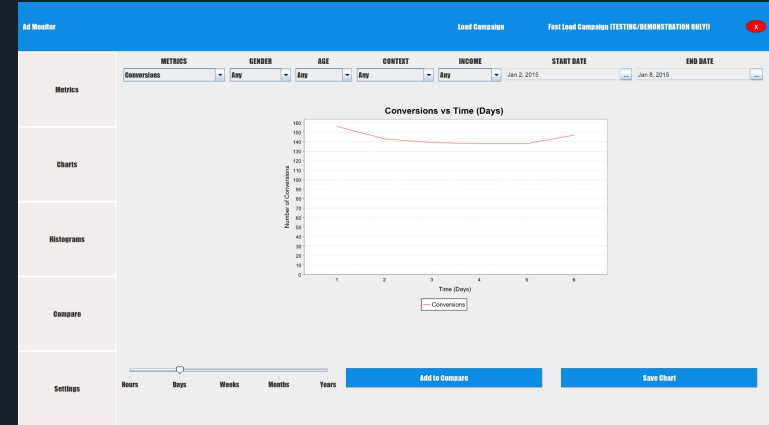
Scenario 2: Bianca, Clothing Brand Owner

- Bianca opens the *Ad Monitor* application aiming to see the total click cost as a chart and save it as a file on her computer. She loads a campaign and then goes to the chart page through the left side vertical menu. There, she filters the metric to display total click cost and presses the "Save chart" button located on the right side below the graph.

Scenario 2: User wants to save a chart of Total Click Cost

1. User opens application
2. User loads campaign
3. User presses "Charts" button in the left vertical menu
4. User filters chart to show "Total Click Cost"
5. User presses "Save Chart" button
6. Application allows user to choose directory where file is saved
7. Chart is saved
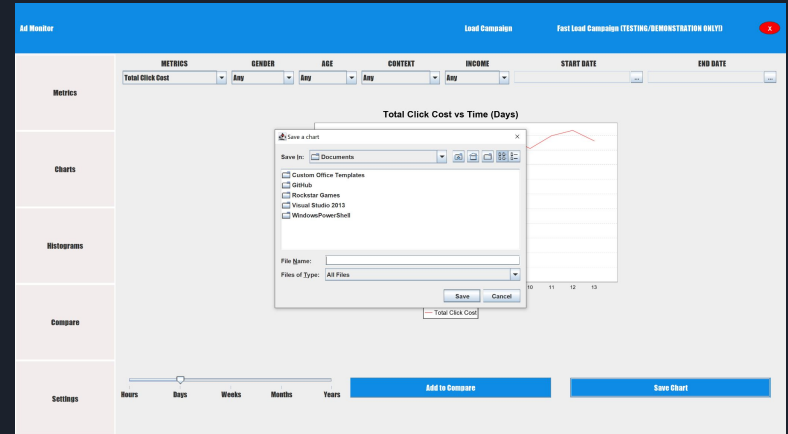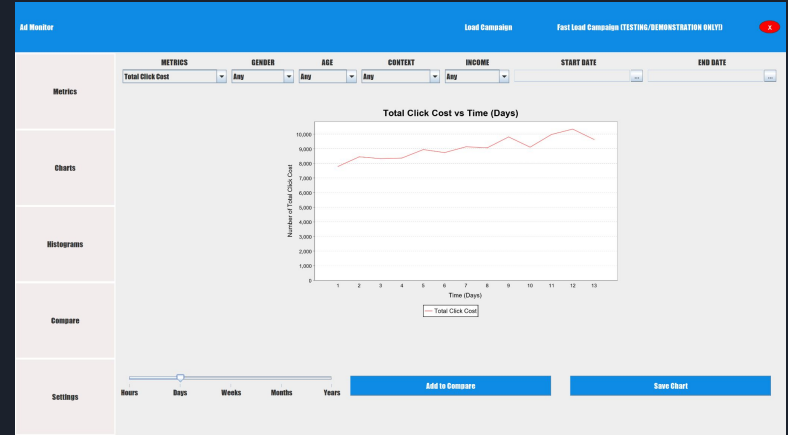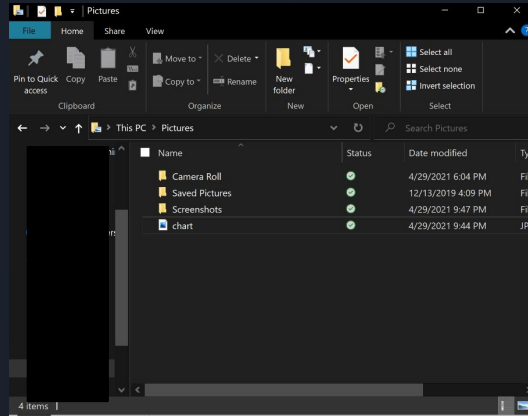
Regression Testing

Scenario 3: Stephany, Artist

- Stephany is an up and coming artist who sells her work online .
- Stephany opens the Ad Monitor application and wants to find out how well her advertised work gets clicked on in terms of months instead of days. She goes to the charts page and filters the metrics by number of clicks. Then she adjusts the time granularity slider at the bottom from days to weeks. The chart is now updated displaying total number of clicks in terms of weeks.

Scenario 3: User wants to change time granularity in a chart

1. User opens application
2. User loads campaign
3. User presses "Charts" button in the left vertical menu
4. Application displays charts page with "Impressions as default"
5. User filters chart to display clicks
6. User changes Time granularity to "Weeks" using slider
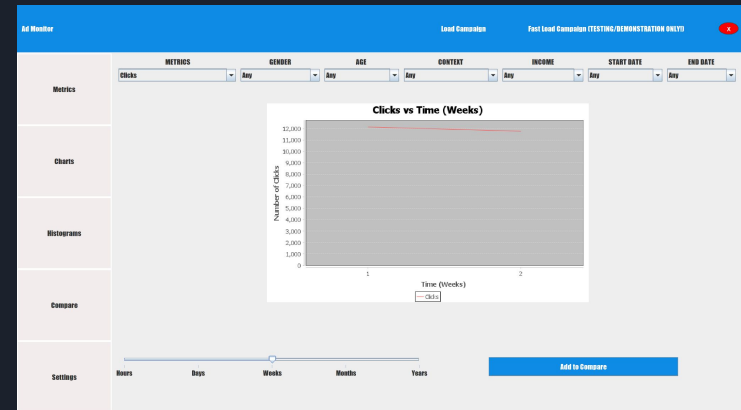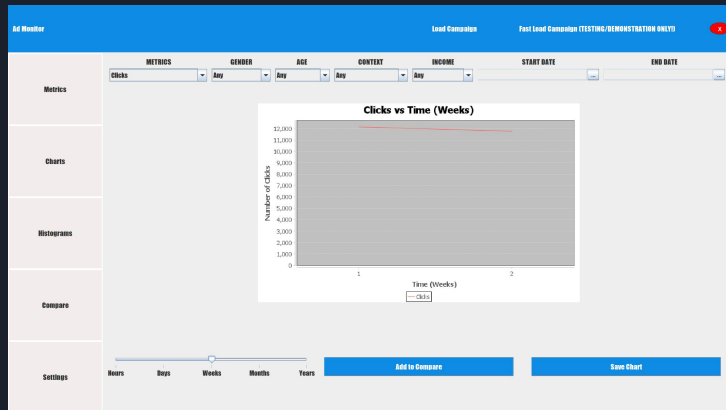7. Chart is updated and displayed
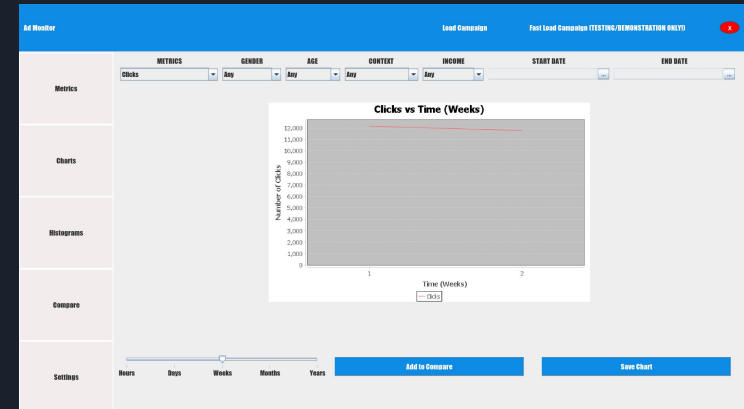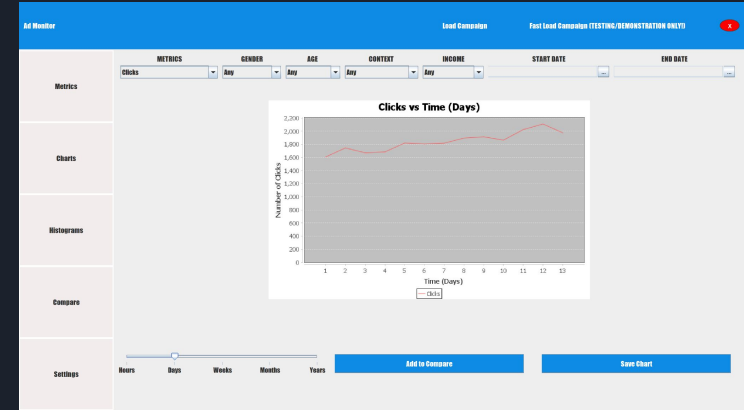
Regression Testing Scenario 3 (NEW vs OLD)

Same Charts : Yes
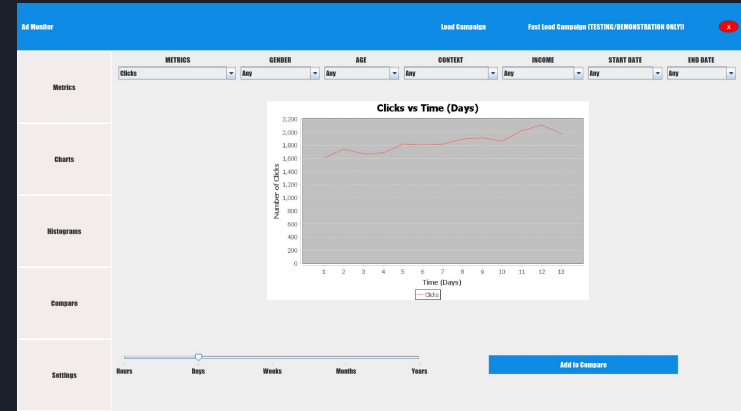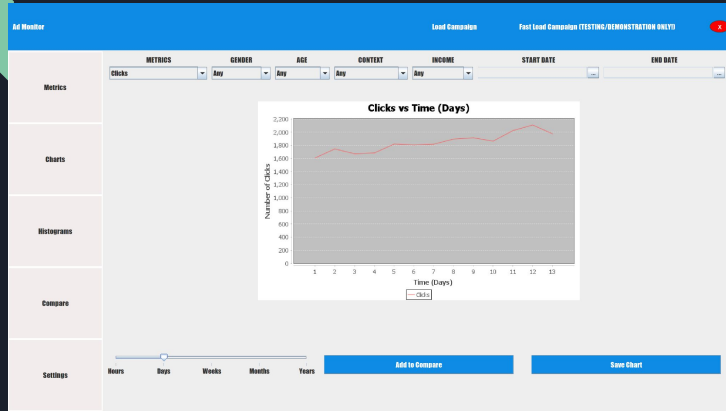
Same Charts : Yes

Scenario 4 : User wants to load campaign and see metrics

1. User opens application
2. Application loads
3. User presses "load campaign" button
4. Pop up appears where user can input the files
5. User presses "select impressions log"
6. Application opens directory for user to choose file
7. User presses "select clicks log"
8. Application opens directory for user to choose file
9. User presses "select server log"
10. Application opens directory for user to choose file
11. User presses "load campaign" button
12. Pop up disappears and campaign is loaded
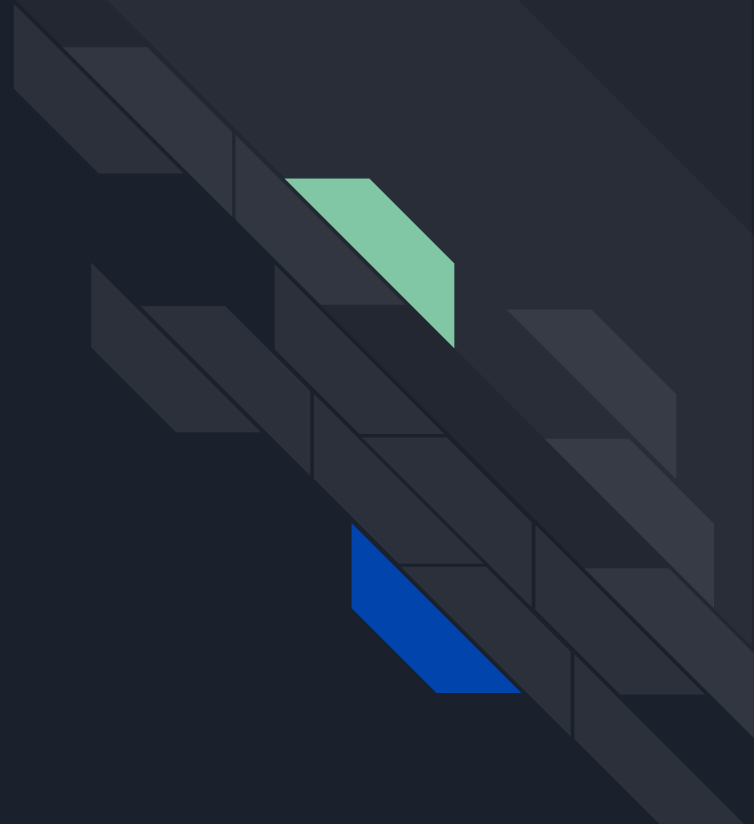13. Metrics are displayed in the metrics page
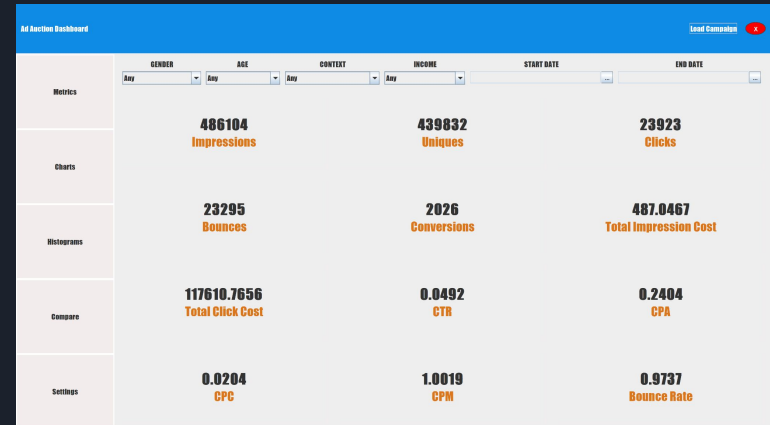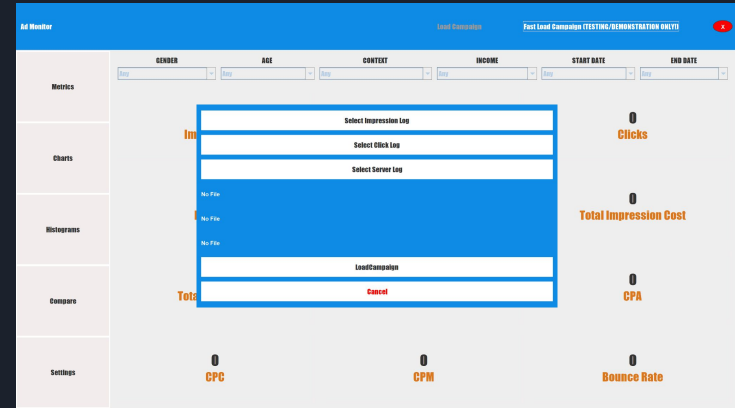
Regression Testing Scenario 4 (OLD vs NEW)

Ad Monitor — Load Campaign — Fast Load Campaign (TESTING/DEMONSTRATION ONLY!) — X

	GENDER	AGE	CONTEXT	INCOME
	Any	Any	Any	Any

Metrics	486104 Impressions	439832 Uniques	23923 Clicks
Charts	23258 Bounces	2026 Conversions	487.0 Total Impression Cost
Histograms	1.176e+05 Total Click Cost	0.04921 CTR	0.2404 CPA
Compare	0.02036 CPC	1.002 CPM	0.9722 Bounce Rate
Settings			

Ad Auction Dashboard — Load Campaign — X

	GENDER	AGE	CONTEXT	INCOME	START DATE	END DATE
	Any	Any	Any	Any		

Metrics	486104 Impressions	439832 Uniques	23923 Clicks
Charts	23295 Bounces	2026 Conversions	487.0467 Total Impression Cost
Histograms	117610.7656 Total Click Cost	0.0492 CTR	0.2404 CPA
Compare	0.0204 CPC	1.0019 CPM	0.9737 Bounce Rate
Settings			

Burndown Chart

Planned Burndown Chart

Actual Burndown Chart