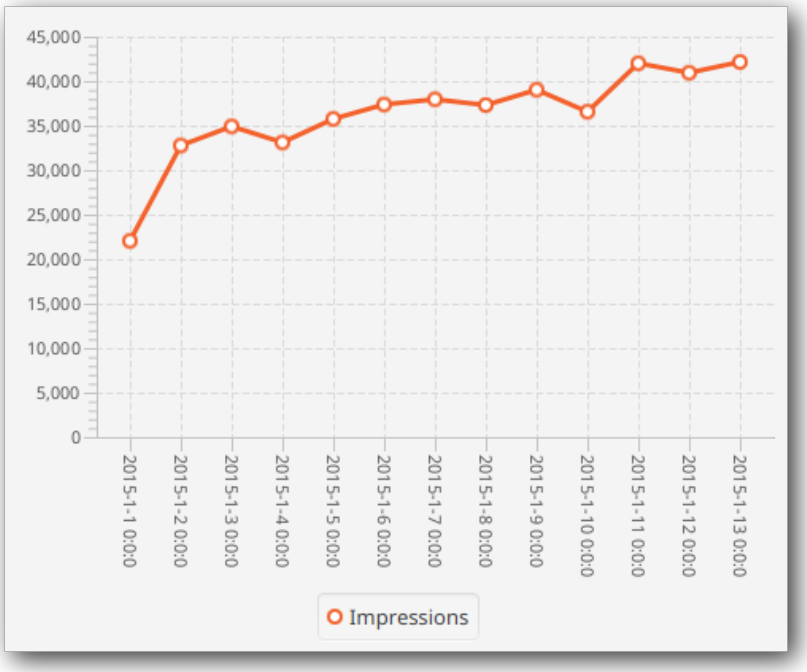
Ben Hadlington (bh9g22)
David Afonso Shepherd (das1g22)
Alejandro Andino Martinez (aam1g22)
Patrick Jfremov-Kustov (pjk1g22)
Kun Chen (kc4a22)

COMP2211
SEng Group Project

Ad Auction Dashboard
(2024)



Group 24
Version 1
Hand-in 2

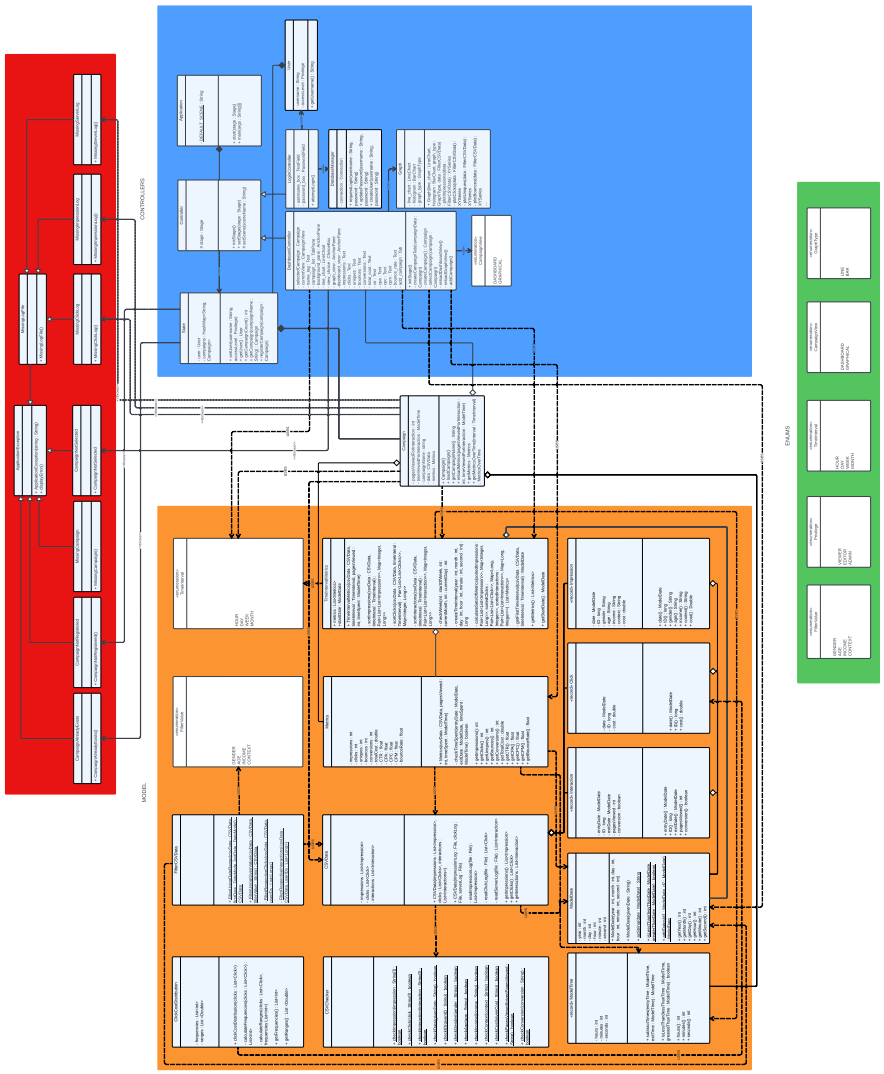
Part I.

Increment 1

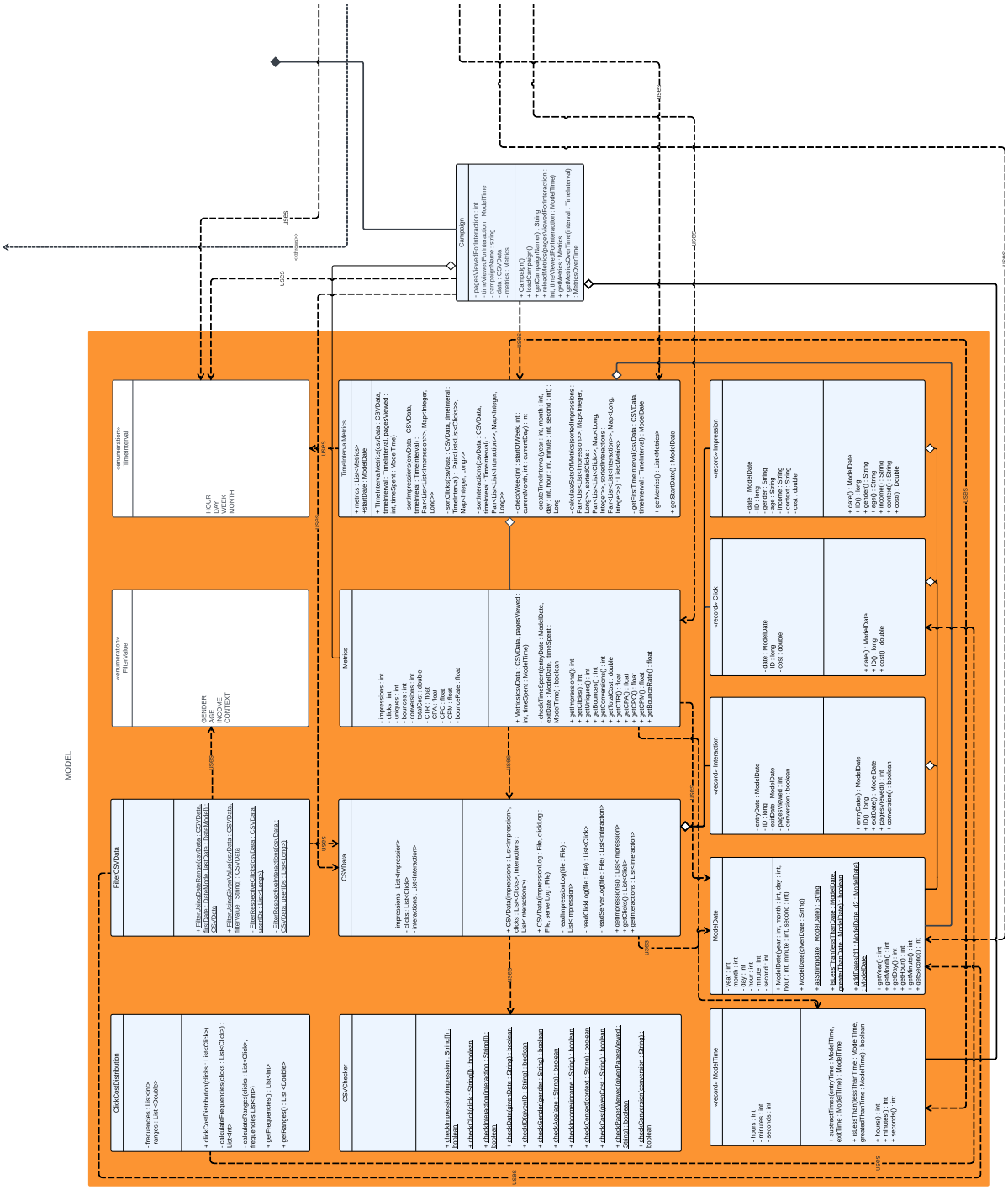
1. Design

We have opted to use the MVC (model-view-controller) architecture to structure our application as it best encapsulates the base controller-fxml relation of JavaFX.

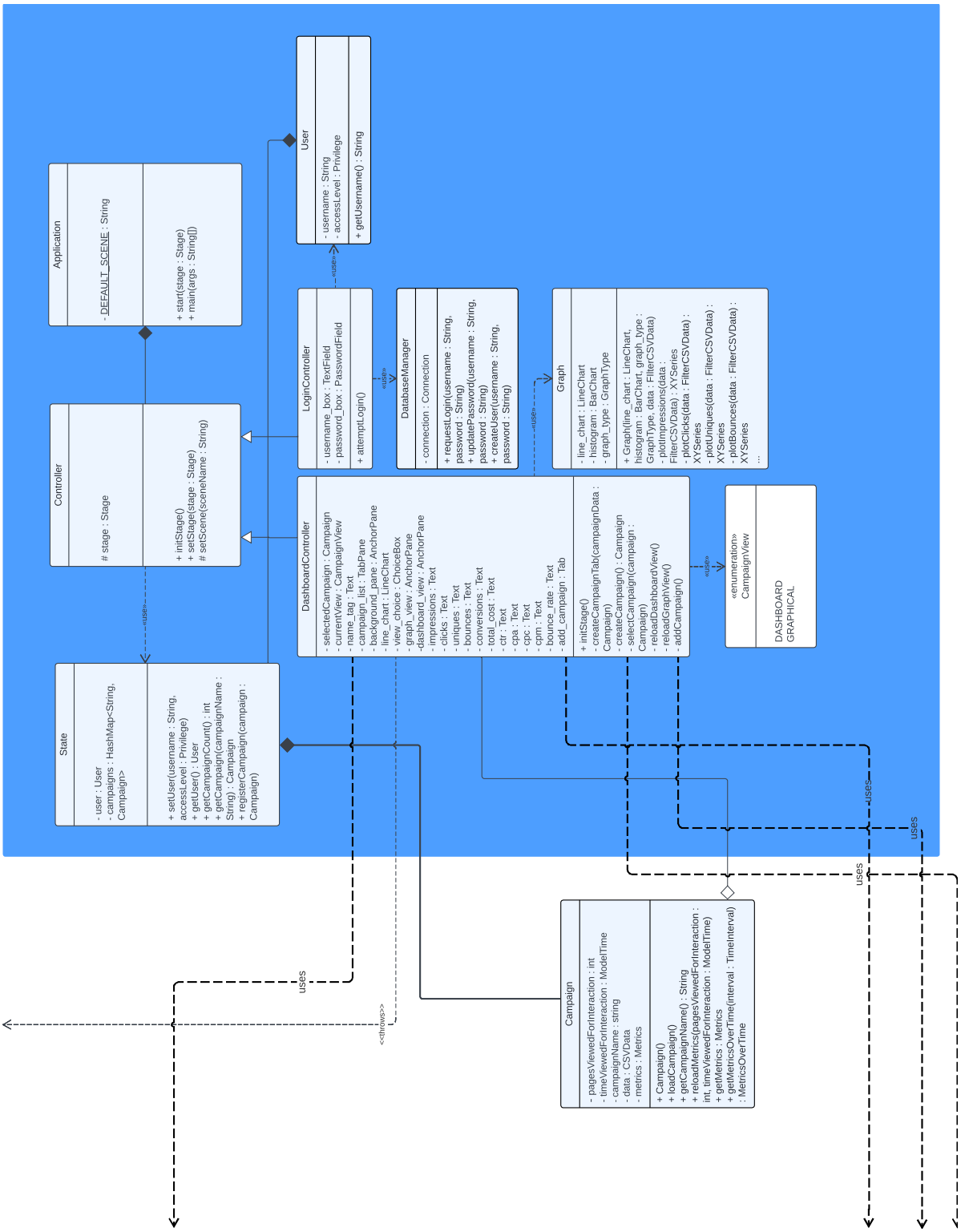
1.1. UML Class Diagram



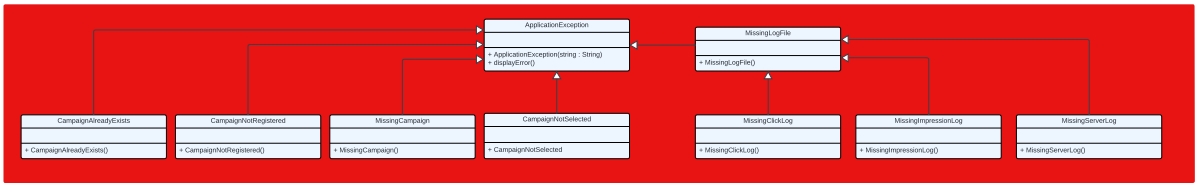
1.1.1. Model


MODEL
Campaign
TimeIntervalMetrics
Metrics
FilterCSVData
CSVData
CSVChecker
ClickCostDistribution
ModelDate
ModelTime
«records» Impression
«records» Click
«records» Interaction
«enumeration» TimeInterval
HOUR
DAY
WEEK
MONTH
«enumeration» FilterValue
GENDER
AGE
INCOME
CONTEXT
uses

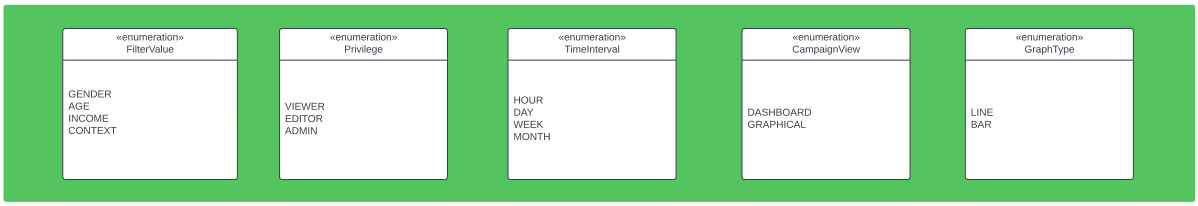
1.1.2. Controller



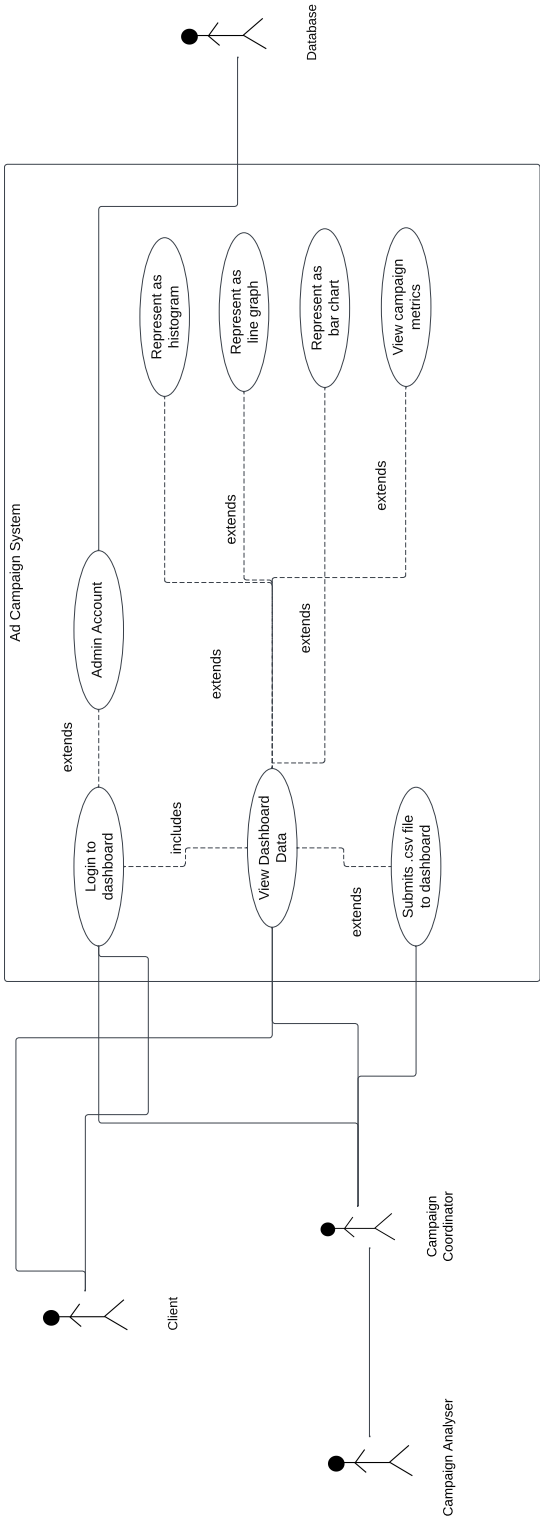
1.1.3. Exceptions



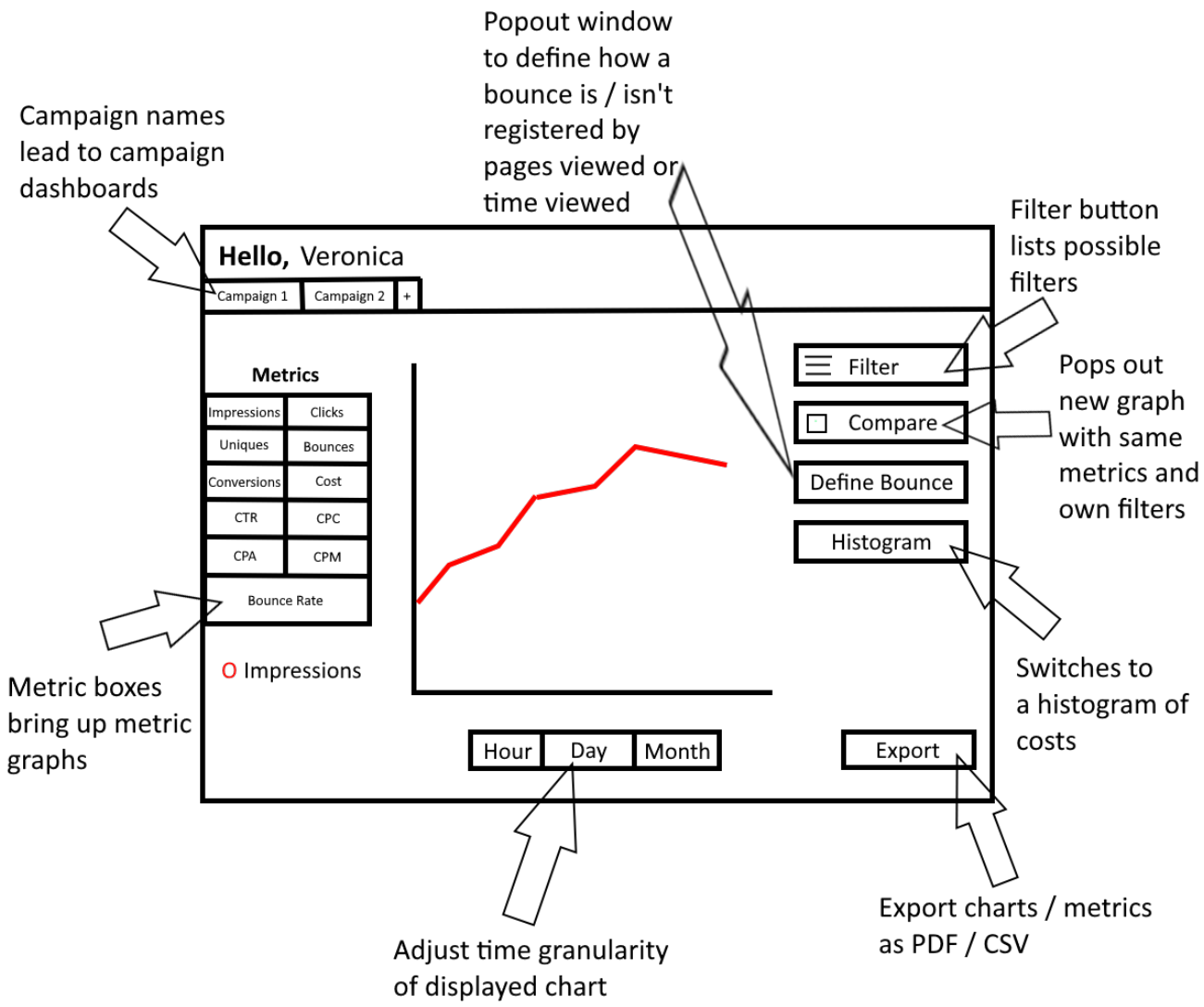
1.1.4. Enums



1.2. UML Use-Case Diagram



1.3. Storyboard



1.4. Scenarios

Veronica Haileys is a first-time entrepreneur:

- Veronica opens the application
- She logs in using the credentials provided by the marketing agency
- She submits the CSV data directory provided by her agency
- Veronica can view key information about her campaign
- She can check what terms mean, how they are calculated, and what unit of measurement they use
- She is notified of any accidental misuse of the software
- She can also view instructions on how to use the software if needed

Sharon McGee is an Etsy store owner:

- Sharon opens the application
- She logs in using the credentials provided by the marketing agency
- She submits the CSV data directory provided by her agency
- Sharon can switch to graph view
- She can view trends of campaigns for different Etsy listings overtime
- She can easily compare these trends visually using filters

Bill Hawks is a marketing agency manager:

- Bill opens the application
- He logs in using the credentials provided by the software administrators
- Bill can create new dashboard viewing accounts for his clients
- Bill can also submit and view campaign data for his team's campaign analyser to determine trends
- Agency members can now better-target campaigns based on trends and audience data

Marcus Hemmering is a returning entrepreneur who wants to look into other markets:

- Marcus opens the application
- He logs in using the credentials provided by the marketing agency
- He submits the CSV data directory provided by her agency
- Marcus can view a histogram of his total costs on campaigns overtime
- He can define what is / isn't considered a bounce
- He can also export charts to share with his employees

2. Testing

Though we set up JUnit, the only test currently implemented is one to check that the harness is working. This is because we currently have no sure-fire way of determining, for example, the bounce rate of a campaign without working it out ourselves. We plan to implement these tests as soon as possible, however, to ensure the correctness of our program.
Please find a table of tests carried out to ensure the correctness of our program for this sprint below:

ID	Test	Test Data	Expected	Actual	Action
0	Can switch from login page to dashboard page	Press login and select a directory with an impression, click and server logs	Should switch to dashboard when login	Switched to dashboard when login	N/A
1	Selecting an invalid directory is handled	Select directory with no impression log	Should display warning	Displayed warning	N/A
2	Selecting an invalid directory is handled	Select a directory with no click log	Should display warning	Displayed warning	N/A
3	Selecting an invalid directory is handled	Select directory with no server log	Should display warning	Displayed warning	N/A

ID	Test	Test Data	Expected	Actual	Action
4	Closing directory selector without selection	Select no directory	Should display warning	Error	Catch error and display warning popup
5	Closing directory selector without selection	Select no directory	Should display warning	Displayed warning	N/A
6	Correct number of impressions is calculated and displayed	Press login and select a valid directory	486104	486104	N/A
7	Correct number of clicks is calculated and displayed	Press login and select a valid directory	23923	23923	N/A
8	Correct number of uniques is calculated and displayed	Press login and select a valid directory	23806	23806	N/A
9	Correct number of bounces is calculated and displayed	Press login and select a valid directory	23867	23867	N/A
10	Correct number of conversions is calculated and displayed	Press login and select a valid directory	2026	2026	N/A
11	Correct total cost is calculated and displayed	Press login and select a valid directory	1180.98	1180.98	N/A
12	Correct CTR is calculated and displayed	Press login and select a valid directory	0.0492	0.0492	N/A
13	Correct CPA is calculated and displayed	Press login and select a valid directory	0.583	0.583	N/A
14	Correct CPC is calculated and displayed	Press login and select a valid directory	0.049	0.049	N/A
15	Correct CPM is calculated and displayed	Press login and select a valid directory	2.430	2.430	N/A
16	Correct bounce rate is calculated and displayed	Press login and select a valid directory	0.9977	0.9977	N/A

ID	Test	Test Data	Expected	Actual	Action
17	Can switch from dashboard view to graph view	Click graph on view drop-down	Should switch to graph page on select	Switched to graph page on select	N/A
18	Can switch from graph view to dashboard view	Click dashboard on view drop-down	Should switch to dashboard page on select	Switched to dashboard page on select	N/A
19	Metric graph is displayed	Click graph on view drop-down	Should display metric graph	Displayed metric graph	N/A
20	Metric graph has correct y-axis	Click graph on view drop-down	Should have a y-axis of the metric's values	Had a y-axis of the metric's values	N/A
21	Metric graph has correct x-axis	Click graph on view drop-down	Should have a x-axis of dates	Had a x-axis of dates	N/A
22	Correct values are displayed on the metric graph	Click graph on view drop-down	94, 96, 115, 105, 110, ...	4, 6, 16, 1, 68, ...	Fix error in grouping entries in the log files according to a time interval.
23	Correct values are displayed on the metric graph	Click graph on view drop-down	94, 96, 115, 105, 110, ...	94, 96, 115, 105, 110, ...	N/A

3. Planning

3.1. This Increment

3.1.1. Burndown Chart

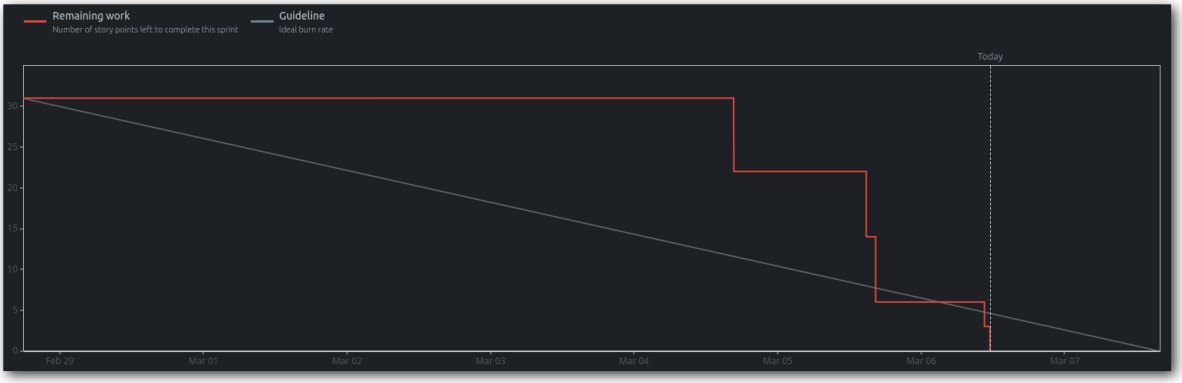
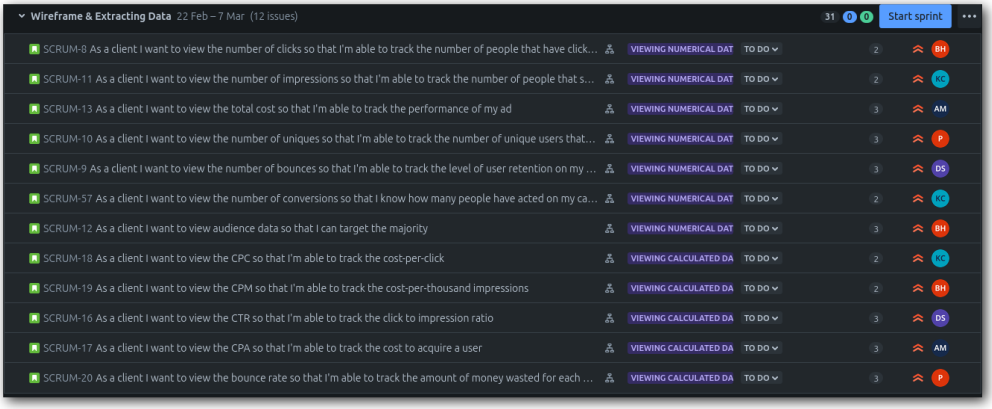


Figure 1: Final burndown chart for increment 1

3.1.2. Sprint Plan Review

Throughout the sprint, we found that we had underestimated the effort levels required to complete tasks across the board and have therefore addressed this in our review. Moreover, the task 'SCRUM-12' (shown below) was moved to the second increment's scope as it involved the filtering of data, which was unrealistic for this first sprint. We also found that certain stories were able to be implemented together, thus varying the effort levels as some implementation may already be done at that point.



ACTUAL
2
2
3
5
5
3
N/A
3
3
3
3
5

3.2. Next Increment

3.2.1. Burndown Chart

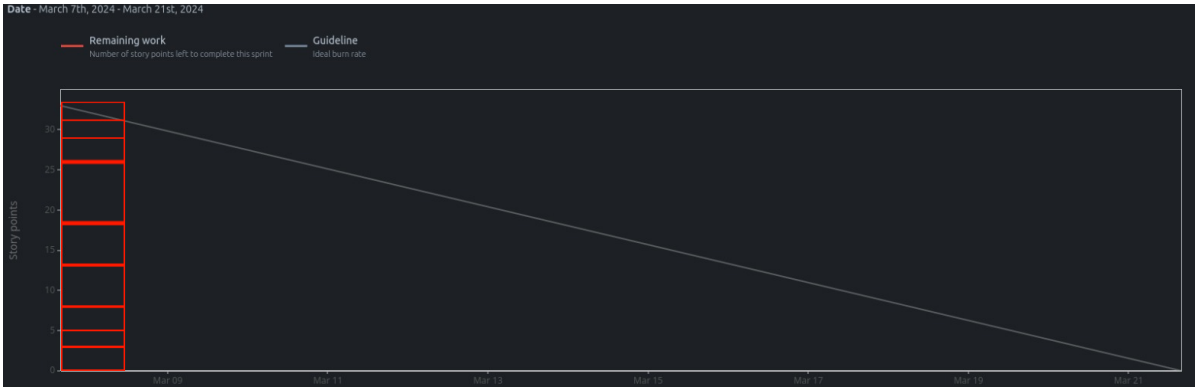


Figure 2: Day-zero burndown chart for increment 2

3.2.2. Sprint Plan

Please see our sprint plan for the upcoming increment (Figure 3). This has been made to reflect the increased levels of effort expected from the first increment, as well as taking into consideration the jobs of members outside of programming time (e.g. creating UML diagrams for the hand-in). Moreover, as we have already began the implementation of metric graphs as a proof of concept, this story has been marked as such (shown as "in progress").

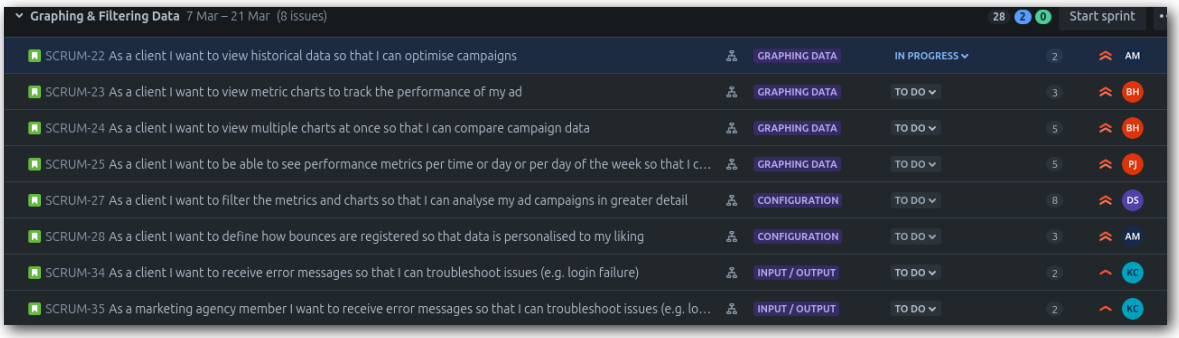


Figure 3: Sprint plan for increment 2