

Mastercard D&S Platforms Team India

COVID-19 Project Test Plan

May 24, 2020



TABLE OF CONTENTS

POINT OF CONTACTS	3
INTRODUCTION	4
FEATURE SUMMARY	5
DO NOT FORGET LIST	8
FRONT END TESTING	9
PERFORMANCE TESTING	15
AUTOMATED TESTING	16
ANALYTIC TESTING	17

POINT OF CONTACTS

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Key Clients	Mastercard Internal Team

INTRODUCTION

The scope of this project is to create an interactive dashboard which can enable users to perform the following tasks:

1. Study the spread of the COVID-19 Pandemic over time and across 5 countries (India, Italy, Germany, Singapore, USA)
2. Perform detailed analysis by further stratification of the spread based on demographic indicators (age, income, population density)
3. Study recoveries and deaths in addition to the positive cases over time and across the selected geographies
4. Analyse the impact of the spread on 3 Industries (Airlines, Travel & Entertainment, Food)
5. Study and Compare the Government Policy actions and interventions on the 5 countries, as well as their impact on various indicators

The final deliverables of the project are:

1. Working link of the final web dashboard
2. All the code scripts on the Github repository of the project
3. Proper Documentation of each code snippet for the entire project
4. Presentation of the project with individual experience and learning

The task of the SQE during the course of this project would be to ensure the following:

1. Prepare the test plans for the features and components of the project
2. Write automated tests for the working of all Front-End features of the dashboard and ensure they are working properly across browsers and locations
3. Write Front-End Testing to verify graphs and all statistical information is being displayed properly
4. Write and execute analytic testing to verify data on graphs
5. Perform API testing for all APIs to ensure that the entire code pipeline is running smoothly and all use cases and edge cases have been handled.

FEATURE SUMMARY

Requirements

1. Time Series Graphs for Industry Indices on the Impact Page

On clicking a country name on the Impact page, all the plots for each of the industry indices get updated with the selected country. The plots for the indices of the following industries are displayed:

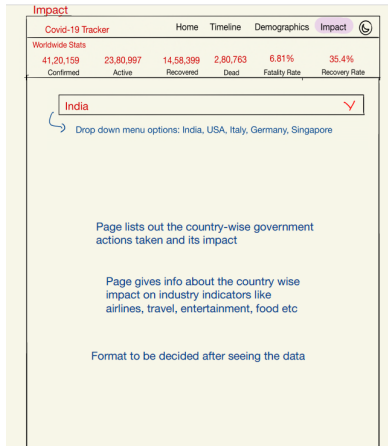
- I. Airline Industry
- li. Travel Industry
- lii. Entertainment
- Iv. Food Industry
- V. Retail Industry

2. Country-name cards for 5 countries

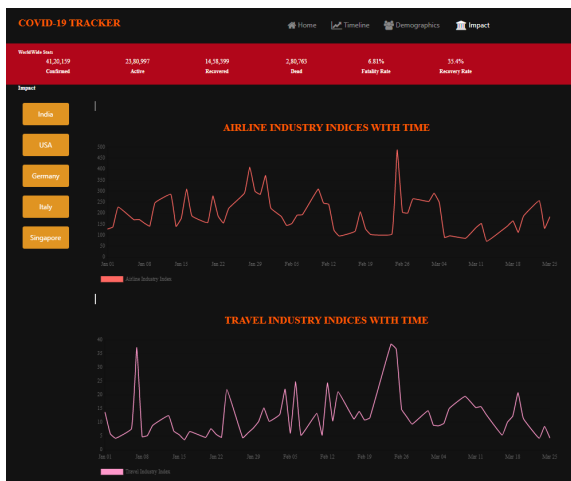
The Country name cards for each of the 5 countries are provided on the left section of the Impact page to display the graphs for the selected country.

Mockups

1. Impact Page



2. Time Series Graphs with the Country card buttons



Github Project Task Link

The task status for this feature can be accessed at this [link](#).

DO NOT FORGET LIST

	Feature	Status
Check scaling of graphs during Zoom In/Out	Industry Indices Graphs	
Check if the graphs are updated		
Check if the selected country's card changes color to indicate selection	Country card	

FRONT END TESTING

Requirement	Case #	Test Steps	Expected Results	Screenshot	Status	Bugs/ Notes
Impact Page	1	Click on 'Impact' page button in the Header bar at the top	<ul style="list-style-type: none"> <input type="checkbox"/> All 5 plots for India should be displayed at the top (default) <input type="checkbox"/> 5 Country Cards should be displayed at the left <input type="checkbox"/> Worldwide Stats bar should be displayed at the top <input type="checkbox"/> Title of the page ('Impact') should be legible (Font, Spelling, Color, Size should be correct) <input type="checkbox"/> Title of the website ('COVID-19 TRACKER') should be legible (Font, Spelling, Color, Size should be correct) 			
Country-wise plots	1	Click on country card at the left	<ul style="list-style-type: none"> <input type="checkbox"/> All country names should fit within the boundary of the card <input type="checkbox"/> Spelling, font size and colour for all countries should 			

			<p>be clearly legible and consistent</p> <ul style="list-style-type: none"> <input type="checkbox"/> Only the 5 country names visible, without any repetitions or extraneous names <input type="checkbox"/> The selected country's card should indicate selection by changing colour <input type="checkbox"/> The plots should be updated with the selected country's data <input type="checkbox"/> All 5 plots for the selected country should be clearly visible <input type="checkbox"/> The Title, axes labels and legend should be present with legible font size and colour <input type="checkbox"/> Data on the graph is updated as per the latest day <input type="checkbox"/> Scale of the graph is appropriate as per the range of the data <input type="checkbox"/> Range of values on the Y and X axes should suit the data 			
	2	Hover cursor over the country card	<ul style="list-style-type: none"> <input type="checkbox"/> Cursor icon of the mouse should convert to hand icon to enable select option for each country <input type="checkbox"/> The country name should be 			

			highlighted when the cursor hovers over it			
	3	Hover cursor over graph	<input type="checkbox"/> Cursor should change into a tool-tip to enable detailed inspection of the graph <input type="checkbox"/> Information about that data point should be visible			
	4	Zoom In/Out on the webpage	<input type="checkbox"/> The shape of the graph should adjust itself accordingly			
Chrome Browser Tab Display (Favicon)	1	Visit 'Timeline Page' using Chrome browser/d river	<input type="checkbox"/> Title on the Chrome tab should read 'COVID19 Visualiser' <input type="checkbox"/> The icon on the tab should be MC logo			

Graph Test Cases for each Country:

Country	Test Case	Graph Category	Expected Results	Screenshot	Notes/Bugs
India	1.11	Airlines Industry Indices	<input type="checkbox"/> Title of the plot is legible (Font size, colour, spelling is correct) <input type="checkbox"/> Axes labels for both Y and X axis are legible (Font size, colour, spelling is correct)		
	1.12	Travel Industry Indices			
	1.13	Entertainment Industry Indices			
	1.14	Food Industry Indices			
	1.15	Retail Industry Indices			

			<input type="checkbox"/> Legend is clearly visible <input type="checkbox"/> Labels in the Legend are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Data on the graph is updated <input type="checkbox"/> Scale of the graph is appropriate as per the range of the data <input type="checkbox"/> Colour for the plot of each dataset should be different and distinguishable <input type="checkbox"/> Cursor should change into a tool-tip to enable detailed inspection of the graph		
Italy	1.21	Airlines Industry Indices	<input type="checkbox"/> Title of the plot is legible (Font size, colour, spelling is correct) <input type="checkbox"/> Axes labels for both Y and X axis are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Legend is clearly visible <input type="checkbox"/> Labels in the Legend are legible (Font size, colour, spelling is correct)		
	1.22	Travel Industry Indices			
	1.23	Entertainment Industry Indices			
	1.24	Food Industry Indices			
	1.25	Retail Industry Indices			

			<input type="checkbox"/> Data on the graph is updated <input type="checkbox"/> Scale of the graph is appropriate as per the range of the data <input type="checkbox"/> Colour for the plot of each dataset should be different and distinguishable <input type="checkbox"/> Cursor should change into a tool-tip to enable detailed inspection of the graph		
Germany	1.31	Airlines Industry Indices	<input type="checkbox"/> Title of the plot is legible (Font size, colour, spelling is correct) <input type="checkbox"/> Axes labels for both Y and X axis are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Legend is clearly visible <input type="checkbox"/> Labels in the Legend are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Data on the graph is updated <input type="checkbox"/> Scale of the graph is appropriate as per the range of the data <input type="checkbox"/> Colour for the plot of each		
	1.32	Travel Industry Indices			
	1.33	Entertainment Industry Indices			
	1.34	Food Industry Indices			
	1.35	Retail Industry Indices			

			<p>dataset should be different and distinguishable</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cursor should change into a tool-tip to enable detailed inspection of the graph 		
Singapore	1.41	Airlines Industry Indices	<ul style="list-style-type: none"> <input type="checkbox"/> Title of the plot is legible (Font size, colour, spelling is correct) <input type="checkbox"/> Axes labels for both Y and X axis are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Legend is clearly visible <input type="checkbox"/> Labels in the Legend are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Data on the graph is updated <input type="checkbox"/> Scale of the graph is appropriate as per the range of the data <input type="checkbox"/> Colour for the plot of each dataset should be different and distinguishable <input type="checkbox"/> Cursor should change into a tool-tip to enable detailed inspection of the graph 		
	1.42	Travel Industry Indices			
	1.43	Entertainment Industry Indices			
	1.44	Food Industry Indices			
	1.45	Retail Industry Indices			

USA	1.51	Airlines Industry Indices	<input type="checkbox"/> Title of the plot is legible (Font size, colour, spelling is correct) <input type="checkbox"/> Axes labels for both Y and X axis are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Legend is clearly visible <input type="checkbox"/> Labels in the Legend are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Data on the graph is updated <input type="checkbox"/> Scale of the graph is appropriate as per the range of the data <input type="checkbox"/> Colour for the plot of each dataset should be different and distinguishable <input type="checkbox"/> Cursor should change into a tool-tip to enable detailed inspection of the graph		
	1.52	Travel Industry Indices			
	1.53	Entertainment Industry Indices			
	1.54	Food Industry Indices			
	1.55	Retail Industry Indices			

PERFORMANCE TESTING

Requirement	Case #	Test Steps	Time Consumed	Status	Notes/Bugs
Impact Page	1	Access Impact page			
Graphs	1	Wait for each graph to load			
	2	Click on country card and wait for the selected country's graph to load			

AUTOMATION TESTING

Requirement	Scenario#	Operation	Pull Request Link
Access Impact page	1	Open Impact page by clicking on the Impact button in the header bar at the top	
Access Country graph	2	Click on each of the country cards on the left	
	3	Hover cursor over the graph	

ANALYTIC TESTING

Scenario	DB	Description	Value	Expected	Actual	Status
1	CovidViz	Test Plot	Data is NULL	'No Data available' should be displayed		
2			Data is 0	0 should be displayed		
3			Data input is Negative	The corresponding negative value should be displayed		
4			Value is 1,00,000	Complete value should be displayed without any overlap		

Testing Approach:

I will manually compare the values on the plots in the dashboard with the data tables at the Backend Database. In case of a mismatch , the error will be reported to the SDEs for debugging