

Mastercard D&S Platforms Team India

COVID-19 Project Test Plan

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POINT OF CONTACTS

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PM-D Point of Contact	
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. Pie Charts for the Demographics break-up of each country

On clicking a country name on the Demographics page, Pie Charts for the demographic break-up of COVID-19 cases for that country are displayed. The following pie charts are shown:

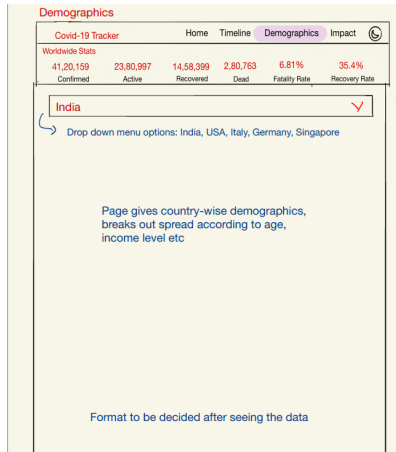
- I. Gender Demographics
- li. Age Demographics
- lii. Percentage of Diabetic People Infected
- lv. Percentage of Smokers Infected

2. Country-name cards for 5 countries

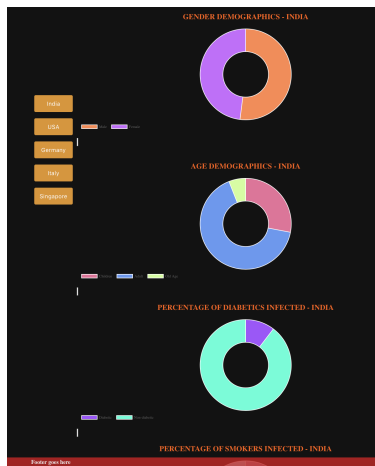
The Country name cards for each of the 5 countries are provided on the left section of the Timeline page to display the graphs for the selected country.

Mockups

1. Timeline Page



2. Pie charts 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 charts during Zoom In/Out	Demographics Charts	
Check Percentage display when cursor is hovered over chart		

FRONT END TESTING

Requirement	Case #	Test Steps	Expected Results	Screenshot	Status	Bugs/ Notes
Demographic s Page	1	Click on 'Demogra phics' page button in the Header bar at the top	<input type="checkbox"/> All 4 charts for India should be displayed at the top <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 ('Demographics') 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 charts	1	Click on country card at the left	<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 should be 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 4 charts for the selected country should be clearly visible <input type="checkbox"/> The Title 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"/> Colour for the plot of each dataset should be different and distinguishable 			
	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 section (Percentage) 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 Demographics page using Chrome browser/driver	<input type="checkbox"/> Title on the Chrome tab should read COVID19 Visualiser <input type="checkbox"/> The icon on the tab should be MC logo			

Chart Test Cases for each Country:

Country	Test Case	Graph Category	Expected Results	Screenshot	Notes/Bugs
India	1.11	Gender Demographics	<input type="checkbox"/> Title of the chart is 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 chart is updated		
	1.12	Age Demographics			
	1.13	Percentage of Diabetics affected			
	1.14	Percentage of Smokers affected			

			<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 chart		
Italy	1.21	Gender Demographics	<input type="checkbox"/> Title of the chart is 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 chart is updated <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 chart		
	1.22	Age Demographics			
	1.23	Percentage of Diabetics affected			
	1.24	Percentage of Smokers affected			
Germany	1.31	Gender Demographics	<input type="checkbox"/> Title of the chart is legible (Font size, colour, spelling is correct) <input type="checkbox"/> Legend is clearly visible		
	1.32	Age Demographics			
	1.33	Percentage of Diabetics affected			
	1.34	Percentage of Smokers affected			

			<input type="checkbox"/> Labels in the Legend are legible (Font size, colour, spelling is correct) <input type="checkbox"/> Data on the chart is updated <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 chart		
Singapore	1.41	Gender Demographics	<input type="checkbox"/> Title of the chart is 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 chart is updated <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 chart		
	1.42	Age Demographics			
	1.43	Percentage of Diabetics affected			
	1.44	Percentage of Smokers affected			

USA	1.51	Gender Demographics	<input type="checkbox"/> Title of the chart is 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 chart is updated <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 chart		
	1.52	Age Demographics			
	1.53	Percentage of Diabetics affected			
	1.54	Percentage of Smokers affected			

PERFORMANCE TESTING

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

AUTOMATION TESTING

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

ANALYTIC TESTING

Scenario	DB	Description	Value	Expected	Actual	Status
1	CovidViz	Test Chart	Data is NULL	'No Data available' should be displayed		
2			Data is 0	0 should be displayed		
3			Data input is Negative	'Invalid Data' should be displayed		
4			Data is 1 (100%)	Complete circle should be coloured indicating 100% representation for the data		

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.