Part 1 : Website

I had built a website as a part of my HomeWork #2 (www.hariharanm.com). I tested it using webpagetest.org 's automatic webpage tester.

Performance Results (Median Run)

| | Load Time | First Byte | Start Render | Speed Index | Document Complete | | | Fully Loaded | | | | |
					Time	Requests	Bytes In	Time	Requests	Bytes In	Certificates	Cost
First View (Run 2)	2.002s	0.327s	1.192s	1291	2.002s	27	532 KB	2.412s	29	536 KB	18 KB	$$---
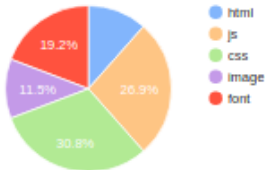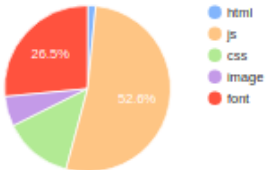
Plot Full Results

Test Results

Run 1:

Waterfall	Screen Shot
First View (1.825s)	

Run 2:

Waterfall	Screen Shot
First View (2.002s)	

Content Breakdown	Requests	Bytes

Run 3:

Waterfall	Screen Shot
First View (6.346s)	

It had scored alright on all aspects except browser caching. This means that a person who visits my website repeatedly will have to download almost everything every single time.

Leverage browser caching of static assets: 39/100

FAILED - (**No max-age or expires**) - http://hariharanm.com/
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/images/profile.jpg
FAILED - (**No max-age or expires**) - https://hariharanm.com/favicon.ico
FAILED - (**No max-age or expires**) - https://friendlychat-e70c9.firebaseapp.com/scripts/main.js
FAILED - (**No max-age or expires**) - https://friendlychat-e70c9.firebaseapp.com/__/firebase/init.js
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/css/images/bg.png
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/plugins/bootstrap/css/bootstrap.min.css
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/plugins/font-awesome/fonts/fontawesome-webfont.woff2?v=4.7.0
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/js/main.js
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/plugins/bootstrap/js/bootstrap.min.js
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/plugins/jquery-1.11.3.min.js
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/css/styles.css
FAILED - (**No max-age or expires**) - https://hariharanm.com/assets/plugins/font-awesome/css/font-awesome.css
FAILED - (**No max-age or expires**) - https://friendlychat-e70c9.firebaseio.com/.ws?v=5
WARNING - (**60.0 minutes**) - https://friendlychat-e70c9.firebaseapp.com/
WARNING - (**60.0 minutes**) - https://friendlychat-e70c9.firebaseapp.com/styles/main.css
WARNING - (**60.0 minutes**) - https://friendlychat-e70c9.firebaseapp.com/images/profile_placeholder.png
WARNING - (**24.0 hours**) - https://fonts.googleapis.com/css?family=Roboto:400,500,400italic,300italic,300,500italic,700,700italic,900,900italic
WARNING - (**24.0 hours**) - https://fonts.googleapis.com/icon?family=Material+Icons
WARNING - (**24.0 hours**) - https://fonts.googleapis.com/css?family=Roboto:regular,bold,italic,thin,light,bolditalic,black,medium&lang=en

I also found that I could have compressed my images to save a lot of bandwidth.

Use gzip compression for transferring compressable responses: 81/100

272.2 KB total in compressible text, target size = 222.7 KB - potential savings = **49.5 KB**

FAILED - (60.7 KB, compressed = 11.2 KB - savings of **49.5 KB**) - https://code.getmdl.io/1.1.3/material.min.js

Compress Images: 86/100

23.2 KB total in images, target size = 20.2 KB - potential savings = **3.0 KB**

WARNING - (11.2 KB, compressed = 8.1 KB - savings of **3.0 KB**) - https://hariharanm.com/assets/images/profile.jpg

Use Progressive JPEGs: 0/100

0.0 KB of a possible 11.2 KB (0%) were from progressive JPEG images

FAILED (11.2 KB) - https://hariharanm.com/assets/images/profile.jpg

Part 2: Android App

I decided to use an app that I had built almost a year ago (It is also on the play store
https://play.google.com/store/apps/details?id=in.alcheringa.alcher17). This app is mostly static but
contains a lot of images and animations. I decided to test whether the app can run properly on the top
devices being used today.

Unique problems	Devices	Screenshots	Parsing result

Unique problems

❶ 1 Unique failure found

▶	**4**	Built-in Explorer Test failed

Devices

	Device		Test results	Total minutes
🟧	Amazon Kindle Fire HDX 7 (2013)	4.4.3	☐1 ✔2	00:07:36
🟧	LG G Pad 7.0" (AT&T)	4.4.2	☐1 ✔2	00:07:55
🟧	Samsung Galaxy S5 (T-Mobile)	4.4.2	☐1 ✔2	00:08:10
✅	Samsung Galaxy S6 (Verizon)	6.0.1	✔3	00:03:07
🟧	Samsung Galaxy Tab 4 10.1" (WiFi)	4.4.2	☐1 ✔2	00:07:58

It failed the Built-in File Explorer test for almost all the cases. So I decided to look into the logs to find
out what the problem was.

Source	Time	PID	Level	Tag	Message
Device	04:12.240	1471	Error	GmsClient	unable to connect to service: com.google.android.gms.playlog.service.START
Device	04:14.260	255	Error	SMD	DCD ON
Device	04:17.260	255	Error	SMD	DCD ON
Device	04:19.260	17039	Error	dalvikvm-heap	Out of memory on a 50003512-byte allocation.
Device	04:19.270	17039	Error	AndroidRuntime	FATAL EXCEPTION: main
Device	04:19.270	17039	Error	AndroidRuntime	Process: in.alcheringa.alcher17, PID: 17039
Device	04:19.270	17039	Error	AndroidRuntime	java.lang.OutOfMemoryError
Device	04:19.270	17039	Error	AndroidRuntime	at android.graphics.BitmapFactory.nativeDecodeAsset(Native Method)
Device	04:19.270	17039	Error	AndroidRuntime	at android.graphics.BitmapFactory.decodeStream(BitmapFactory.java:683)
Device	04:19.270	17039	Error	AndroidRuntime	at android.graphics.BitmapFactory.decodeResourceStream(BitmapFactory.ja…
Device	04:19.270	17039	Error	AndroidRuntime	at android.graphics.drawable.Drawable.createFromResourceStream(Drawa…
Device	04:19.270	17039	Error	AndroidRuntime	at android.content.res.Resources.loadDrawable(Resources.java:3457)
Device	04:19.270	17039	Error	AndroidRuntime	at android.content.res.Resources.getDrawable(Resources.java:1921)
Device	04:19.270	17039	Error	AndroidRuntime	at in.alcheringa.alcher17.Map.onCreate(Map.java:79)
Device	04:19.270	17039	Error	AndroidRuntime	at android.app.Activity.performCreate(Activity.java:5451)

This says that I had a problem with the drawable. After watching the video, I found that the issue was with the resolution of an image I had used for a map. The image was just too huge and when it was zoomed it gave an **OutOfMemoryError**.