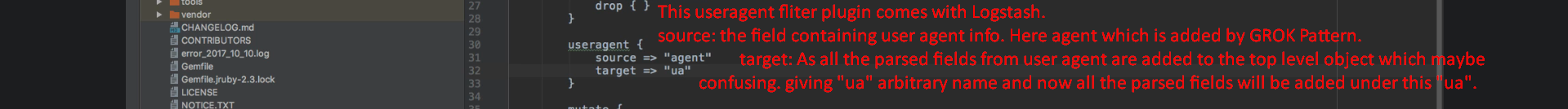
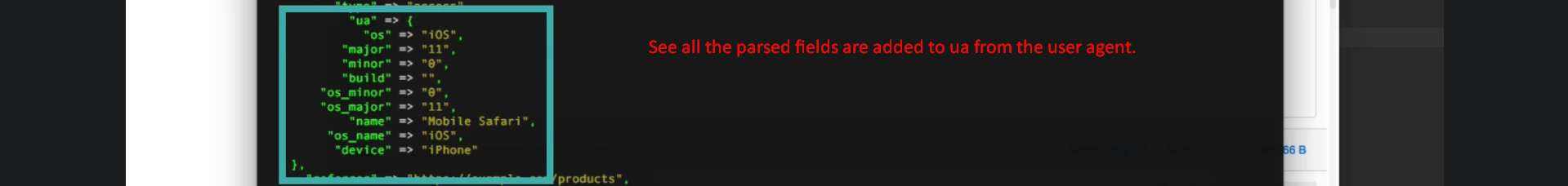
1. 
2. **Agenda**:
   1. We’re going to do some data enrichment using user agent.
3. The user agent is the last part of the access log entry including info like
   1. Brower
   2. its version
   3. OS of the device.
4. User agent is very complicated in itself so difficult to parse it ourselves as there are a huge number of browsers, different versions, different devices and different Oss.  
   But we didn’t do the parsing with GROK pattern already?  
   No: GROK Pattern only matches the user agent as a whole string.  
   For instance, GROK Pattern doesn’t figure out which browser the visitor used.  
   In theory, we can use GROK Pattern and the request will be another GROK Pattern but that is not feasible due to the complexity of user agent String.
5. Logstash ships with a file containing regular expressions for this purpose and that file contains around 5,000 lines.
6. Fortunately, Logstash does all of this heavy lifting for us when using user **agent filter plugin**.
7. 
8. 
9. We can use this info for different purposes like -
   1. We can send this info to elasticsearch and Kibana and draw pie charts or other statistics diagram to know about
      1. Which devices are being used mostly by the Visitors like Mobiles or PCs.
      2. Which Oss are being used mostly.