CprE 491 - sdmay19-38

Android App Forensic Evidence Database

Weekly Report 5

10/11/2018 - 10/18/2018

Client: Neil Gong and Yong Guan

Faculty Advisors: Neil Gong and Yong Guan

Team Members:

Mitchell Kerr -- Tech Lead Connor Kocolowski -- Report Lead Emmett Kozlowski -- Meeting Scribe Jacob Stair -- Testing Lead Matthew Lawlor -- Meeting Facilitator

Past Week Accomplishments

- Defined file that contains all methods requiring dependencies (useful methods for all crawlers)
- Created an abstract structure for collecting all the metadata on an application's webpage
- APKs can now be uploaded to CyBox
- An initial website design was created to mock how end users will interact with the system. This involved making sure that the major use cases were addressed and it flowed in a user friendly format.
- A simple flask app was created to communicate with the database however there seems to be communication issues that need to be addressed further.

Pending Issues

- ApkMirror and UpToDown do not use the service-based structure yet
- When uploading files to CyBox, it is sometimes possible for the thread to lose connection
 - This issue can be fixed by having each thread attempt to upload a set number of times
- As of now, we are not creating subdirectories for the APK files. This can help with organization but it may not be necessary if a computer is going to loo
- After talking to our clients we realized that there were multiple problems with how the UI flowed and need to go back and revise it.

• There seems to be some communication issues between the initial flask app tasked with talking to the database that need to be investigated further.

Individual Contributions

| Team Member | Contribution | Weekly Hours | Total Hours |
|-------------------|--|-----------------|----------------|
| Mitchell Kerr | Obtaining all relevant metadata, including SHA and MD5 | 5 | 27 |
| Connor Kocolowski | Abstracted metadata collection to be implemented by each crawler. Created a util file that contains general methods to be used by any crawler. | 16 | 38 |
| Emmett Kozlowski | Worked on communication of basic flask app to database. I also worked on designing an initial mockup of our web portal | 5 | 24 |
| Jacob Stair | UpToDown crawler now gets almost all metadata and downloads APK files | 6 | 28 |
| Matthew Lawlor | Worked on getting APK files uploaded to CyBox. | 5 | 26 |

Plans for Coming Week

- Have the uploads become more dependable by having multiple attempts at uploading
- Working simple flask app to communicate with database
- Finalize crawlers and fully implement shared dependencies
- Revision of website UI
- Begin implementing APKPure abstraction to other crawlers