File Integrity Monitor (FIM)

Start

Ask user what they want to do:
- A.   Collect new Baseline, or
- B.   Begin monitoring files with saved Baseline

Collect new Baseline
1.   Calculate HASH value from target files
2.   Store the file|hash pairs in **baseline.txt**

Begin monitoring files with saved Baseline
1.   Load file:hash pairs from **baseline.txt**

Continuously monitor file integrity
1.   Loop through each file target file, calculate the hash, and compare the file|hash to what is **baseline.txt**

Notify user if a file is changed or deleted
1.   If a file's actual hash is different than what is recorded in the baseline, print to the screen (color), if a file has been changed or deleted. (integrity compromise)
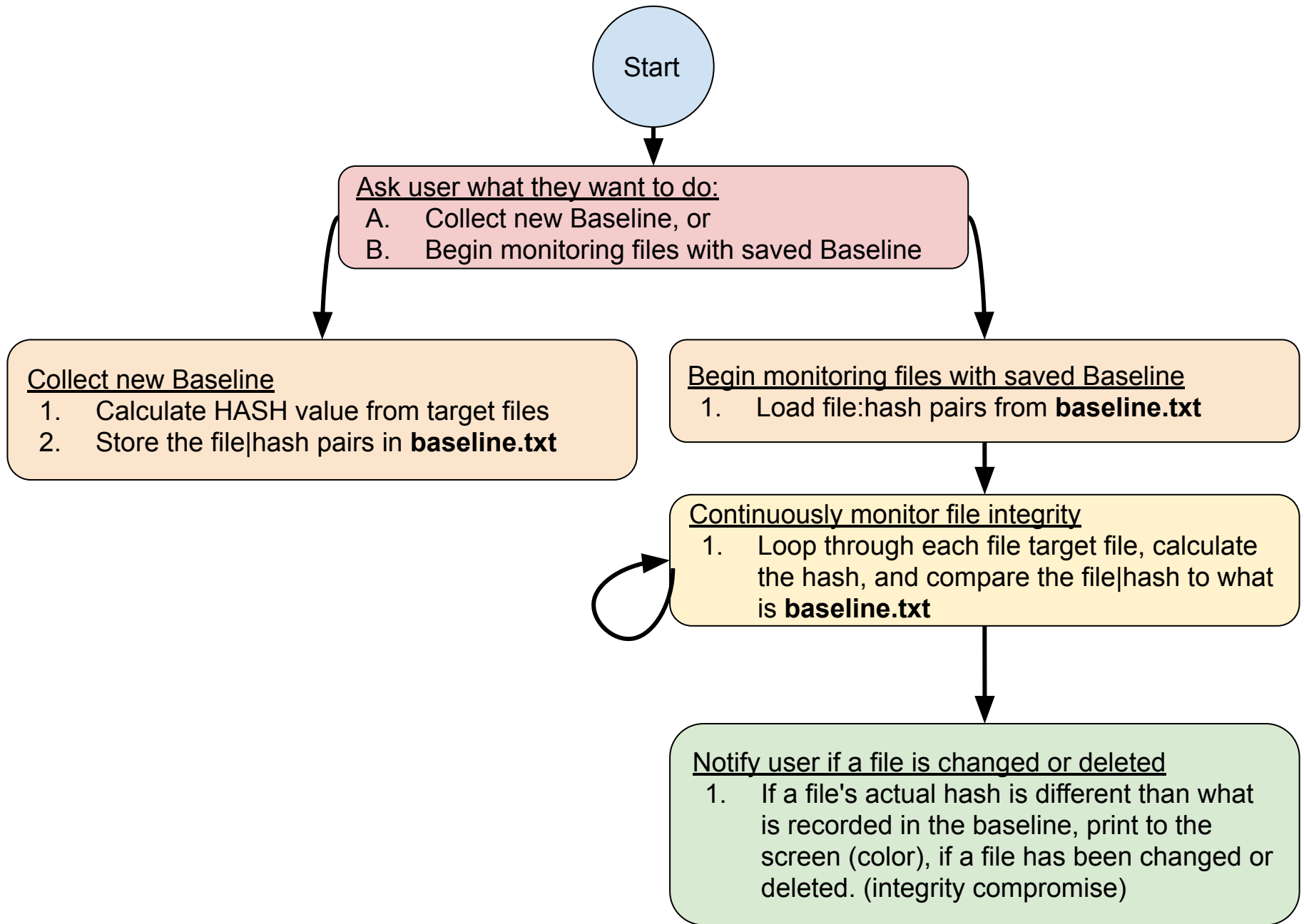
baseline.txt

C:\Users\tj_ju\OneDrive\Documents\Cybersecurity Program\FILE INTEGRITY MONITORING LAB\Files\AAA Test file.txt|
3FA3B75117E4A3905671F9607444A76F39CF4AFC445DFECFF443A5D379BB68AEE294D884225DFA61330A634BB66BFE9B5B4E4AA8FF23CBA9BC96ED584B07E7CB
C:\Users\tj_ju\OneDrive\Documents\Cybersecurity Program\FILE INTEGRITY MONITORING LAB\Files\bbb Test file.txt|
897490EA7636B23AF708A373CF78B835C231EE611FFDAF28D9D3CB18189A306CB0E20100E15A7C9EEE8BBDA6BBFF3680E306C21BD13F01ECB2C4392D5D3685F0
C:\Users\tj_ju\OneDrive\Documents\Cybersecurity Program\FILE INTEGRITY MONITORING LAB\Files\HHHH Test file.txt|
4922BDADB9A52FABA7EC3D4E33F8284720A219C0A1F1A7750A444C12691B4201C02971F31A1DF586046C7BF22395C6940F63C731FA385DE0A2677B1A5B136AD9
C:\Users\tj_ju\OneDrive\Documents\Cybersecurity Program\FILE INTEGRITY MONITORING LAB\Files\TJ Test
file.txt|CBC8512463754514C34894BF491199092D81A7296D7768DA16AFE4C8DFC3126004E19CC20312FB57EC800CF78545B035B7392D0E947C5526729806649BDB91F4
C:\Users\tj_ju\OneDrive\Documents\Cybersecurity Program\FILE INTEGRITY MONITORING LAB\Files\XXX.txt|
432C3C4EBF78B00212C583305C82DADC253C132CC8038D699B8B3DDA79B5FC247CD43B02D262A534533F22EB1F9B2821B0387AF191D06CA9D3A5AD167D44A4D8