# Data Flow Diagram



Run Scanners

-INPUT: File or Package

-If INPUT is not package

--FOSSOLOGY (FILE)

--NINKA (FILE)

-ELSE

--Unpack (Package) as TEMP

--For FILES in TEMP

---FOSSOLOGY (FILE)

---NINKA (FILE)

(FOSSOLOGY and NINKA are external modules, they are treated as black boxes)

Comments: Run Scanner will collect the file or package from the end-user and send the file or package to both Fossology and Ninka, both tools are used to located license declarations in files of code. For more information and mock-up please see <https://github.com/TheFinks/Fossology-Ninka/tree/master/code_mockups> .

Combine License Docs

-INPUT (FOSSOLGY\_OUT, NINKA\_OUT)

-READ (FOSSOLOGY\_OUT) as R1

-READ (NINKA\_OUT) as R2

-COMPARE (R1, R2) #compares R1 and R2 line by line, assumes the files are sorted in the same order

--IF R1 has license AND R2 has NONE or ERROR

---WRITE license (R1) TO COMBINED\_OUT

--ELSE IF R2 has license and R1 has NONE or ERROR

---WRITE license (R2) TO COMBINED\_OUT

--ELSE IF license (R1) == license (R2)

---WRITE license (R1) TO COMBINED\_OUT #R1 and R2 are identical, either one works

--ELSE IF license (R1) != license(R2) #assuming R1 and R2 have licenses

---WRITE "LICENSE\_DECLARED = NOASSERTION, COMMENTS = CONFLICT" TO COMBINED\_OUT

#not the actual output format, just an example for representation purposes

Comments: Combine License Docs will be used to accept the output of both the Fossology scanning tool and the Ninka scanning tool. After accepting both documents this tool will compare and combine the output from both scanners.

SPDX GENERATOR

-INPUT (COMBINED\_INFO) #Combined License Documentation

-CREATE FILE FINAL\_DOC, FORMAT = JSON, SCHEMA = SPDX

-IF COMBINED\_INFO.FILE\_FORMAT == PACKAGE

--FOR LINE IN COMBINED INFO #Multiple lines for a package

---WRITE (LINE.LICENSE\_DECLARED) TO FINAL\_DOC.LICENSE\_DECLARED

---WRITE (LINE.COMMENTS) TO FINAL\_DOC.COMMENTS #Even if no conflict, it can check for other comments that may be put in later

-ELSE

--WRITE (LINE.LICENSE\_DECLARED) TO FINAL\_DOC.LICENSE\_FOUND

--WRITE (LINE.COMMENTS) TO FINAL\_DOC.COMMENT

Comments: The SPDX generator will accept the output from the Combine License Docs tool and convert the document into a JSON SPDX file. For more information and a mock-up please see <https://github.com/TheFinks/Fossology-Ninka/tree/master/code_mockups> .