

DV1667

**Anti Virus
Program
Requirements**

| ID | Name | Description | Dependency | Test | TBI |
|-----|-------------------|--|--|---|-----|
| A.1 | fileRecursive | Recursive iteration through directory hierarchy where all files get saved to a vector. | Valid file path entered by the user. | Printing the entire directory hierarchy via printing to console when executing function. | YES |
| B.1 | virusDescriptions | iterates through a database of viruses and extracts the virus description in hexadecimal values and saves them to a vector. | Valid file path to database entered by the user. Valid syntax in the database. | Printing extracted descriptions in the console. | YES |
| B.2 | convertHex | Iterates through a vector of hexadecimal values and converts them to decimal and then converts that information to ascii values and returns a vector with the ascii. | Valid vector returned from virusDescriptions function. Valid hexadecimal values in description. Hexadecimal total length divisible by 2. | Printing converted hexadecimal values in console and comparing them to manually converted values. | YES |
| C.1 | virusNames | Iterates through a database of viruses and extracts the virus names and saves them in a vector. | Valid file path to database entered by the user. Valid syntax in database. | Printing names in the console. | YES |
| D.1 | flagFiles | Flags files and saves them to a log file based on if the information contained in a file matches with the names or descriptions of known viruses from a database. | A.1, B.1, B.2, C.1 functioning properly. Valid file path entered by the user. Valid database entered by the user. | Comparing log file to manually examined viruses and "uninfected" files. | YES |
| E.1 | User input | User manually enters the targeted | Program being able to compile. | Compiling program. | YES |

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|-----|--------------|--|--------------------------------|--|-----|
| | | directory hierarchy and virus database locations. | | | |
| E.2 | Error checks | Checks if database and directory hierarchy exists. Creates log file. Checks for syntax errors in virus descriptions. | Program being able to compile. | Program aborts when presented with known errors and runs when functioning. | YES |

Working with requirements

I worked with these requirements by setting up a plan of what functions and features the AV program needed to have and what each of the requirements would depend on for the program to work. This was useful as to get a full picture of the program before initiating the coding process.