NOTE: SCENARIO IS WHAT THE PUZZLE TAKER SEES.

SCENARIO:

Consider a Python program that checks for tar files containing budgets and then extracts the tar files into a specific folder. In the following snippet of code the `TarFile.extract` function extracts a member from the archive to the current working directory and the `TarFile.getmembers` function returns the members of the archive as a list of `TarInfo` objects. Consider the snippet of code below and answer the following questions, assuming that the code has all required permissions to execute.

```
01   # import whatever is needed
02
03   def extract_budgets(working_directory, tar_file):
04     os.chdir(working_directory)
05     with tarfile.open(tar_file) as archive:
06       for file in archive.getmembers():
07         archive.extract(file, working_directory)
```

Questions:
1. What will the function do when executed?

2. Which of the following is true if someone calls the `extract_budgets` function with a specific directory and an arbitrary valid tar file?

a. The function does not extract files with absolute path in the archive.
b. While extracting tar files, it is possible that files are created outside of path.
c. If the archive does not contain any member with absolute path, all members will be extracted into the given directory.
d. None of the above.

[Other statistical questions will be imported here while creating survey.]

NOTE: ANSWER IS TO BE SHOWN TO THE PUZZLE TAKER AT THE END OF THE SESSION.

ANSWER:
1. It will extract all the files into the budgets directory

2. b
While extracting tar files, it is possible that files are created outside of path, e.g. members that have absolute filenames starting with "/" or filenames with two dots "..". In the answers, files with absolute path are excluded, but not those with two dots.

NOTE: THE REST OF THIS DOCUMENT CONTAINS EXTRA INFORMATION FOR THE PROJECT RESEARCHERS. IT IS NOT TO BE SHOWN TO THE PUZZLE TAKERS.

TAGS:
Python, tar, extraction

CATEGORIES:
Blindspot - YES
Type - File
Number of distinct functions - 4
Number of total functions - 4
Blindspot function - `tarFile.extract()`
Function call omitted - NO
Blindspot type - Validation missing
Number of parameters in the blindspot function - 2 parameters
Cyclomatic complexity - 4

NAME:
TarFile.extract(member, path="")

DESCRIPTION:
Extracts a member from the archive to a given directory (or working directory if path is omitted), using its full name. Its file information is extracted as accurately as possible. `Member` may be a filename or a `TarInfo` object. You can specify a different directory using `path`.

BLINDSPOT:
It is possible that files are created outside of path, e.g. members that have absolute filenames starting with "/" or filenames with two dots "..". This would allow individuals to place malicious or benign files outside of the expected folder.

CORRECT USE EXAMPLE:
#N/A

MORE INFORMATION:
#N/A

REFERENCES:
1. https://docs.python.org/2/library/tarfile.html
2. http://stackoverflow.com/questions/10060069