> **NOTE: SCENARIO IS WHAT THE PUZZLE TAKER SEES.**

SCENARIO:

You've written a Python script, shown as the snippet of code below, that makes a backup of the Python files in the current directory. The `os.path.splitext` method splits the string path into a pair (`root, ext`) such that `root + ext == path`. The `shutil.copy(src, dst)` function copies the file specified by parameter `src` to the file specified by parameter `dst`. Consider the snippet of code below and answer the following questions, assuming that the code has all required permissions to execute.

```python
01   # Import whatever is needed
02
03   for file in os.listdir("."):
04       if os.path.splitext(file)[1] == ".py":
05           print file
06           shutil.copy(file, os.path.join("backup", file))
```

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

2. Consider Mary, who works for the HR Department of an organization. What can she expect if she uses this program to backup files under the "`employee`" directory (the directory contains only files):
a. Only Mary will have access to the backup files.
b. Only people who have access to the original files will have access to the backup files.
c. The backup files might be copied to a directory different from the one Mary is expecting.
d. None of the above.

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

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

ANSWERS:
1. The program will append backup to the filename and copy it to the directory.

2. d
None of the above. Even the higher-level file copying functions (`shutil.copy()`, `shutil.copy2()`) can not copy all file metadata.

> **NOTE: THE REST OF THE DOCUMENT CONTAINS EXTRA INFORMATION FOR THE**

PROJECT RESEARCHERS. IT IS NOT TO BE SHOWN TO THE PUZZLE TAKERS.

TAGS:
python, io-operation, file-operation

NAME:
shutil.copy(src, dst)

CATEGORIES:
Blindspot - YES
Type - API protocol usage
Number of distinct functions - 4
Number of total functions - 4
Blindspot function - copy( )
Function call omitted - NO
Blindspot type - Function misuse
Number of parameters in the blindspot function - 2 parameter
Cyclomatic complexity - 3

DESCRIPTION:
Copy the file src to the file or directory dst. If dst is a directory, a file with the same basename as src is created (or overwritten) in the directory specified. Permission bits are copied. src and dst are path names given as strings.

BLINDSPOT:
This higher-level copying function can not copy all file metadata (e.g., owner and group). On POSIX platforms, this means that file owner and group categories are lost (i.e., not copied over), as well as ACLs. On Mac OS, the resource fork and other metadata are not used, which means that resources will be lost and file type and creator codes will not be correct. On Windows, file owners, ACLs and alternate data streams are not copied. Ultimately, no matter which system is used, the aforementioned metadata will be lost and the owner will be set to the person who executed the script. The security implication is that, by losing ACLs, improper parties may be able to access the file.

CORRECT USE EXAMPLE:
#N/A

MORE INFORMATION:
#N/A

REFERENCES:
1. https://docs.python.org/2/library/shutil.html