TOPSTechnologies

Reading and Writing Files

Presented for :

TOPs Technologies

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Advance Python Programming

Que 1

n Python, you can read data from a file using different methods: read(), readline(), and readlines().

1. Using read()

- Reads the entire file as a single string.
- You can specify the number of characters to read.

basic syntax:

```
with open("example.txt", "r") as file:
content = file.read()  # Reads the whole file
print(content)
```

2. Using readline()

- Reads one line at a time.
- Useful when reading large files line by line.

basic syntax:

```
with open("example.txt", "r") as file:
line1 = file.readline()  # Reads the first line
print(line1)

line2 = file.readline()  # Reads the second line
print(line2)
```

3. Using readlines()

- Reads all lines into a list, where each line is a list element.

Basic Syntax:

```
with open("example.txt", "r") as file:
lines = file.readlines()  # Reads all lines into a list
print(lines)
```

Que. 2

In Python, you can write to a file using write() and writelines().

1. Using write()

- Writes a single string to a file.
- Overwrites the file if it already exists.
- If the file does not exist, it creates a new one.

Basic syntax:

```
with open("example.txt", "w") as file:
    file.write("Hello, this is a test file.\n")
    file.write("This is the second line.\n")
```

Appending to a File (a mode)

If you want to add content without overwriting the file, use append mode (a):

syntax:

```
with open("example.txt", "a") as file:
    file.write("Appending a new line.\n")
```

2. Using writelines()

- Writes a list of strings to a file.
- Each list element is written as a separate line.
- Does not automatically add newlines (\n), so you must include them.

example:

```
lines = ["First line\n", "Second line\n", "Third line\n"]

with open("example.txt", "w") as file:
file.writelines(lines)
```

basic syntax:

```
lines = ["First line\n", "Second line\n", "Third line\n"]

with open("example.txt", "w") as file:
file.writelines(lines)
```