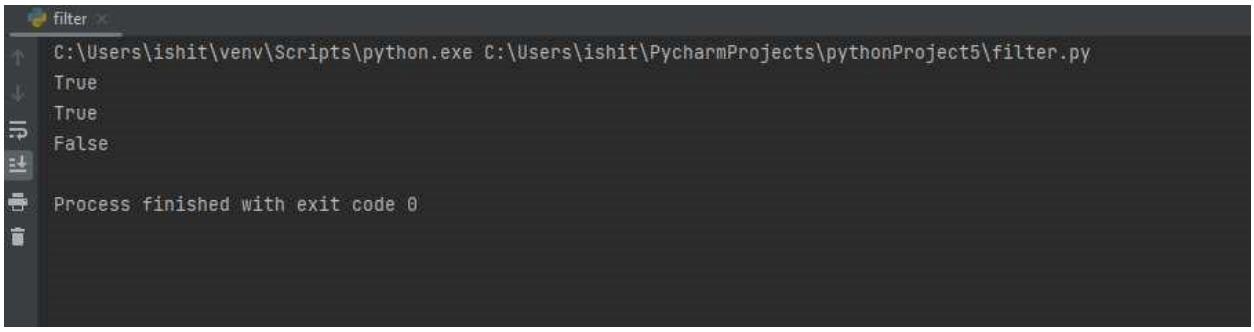
Experiment No. 8

```python
class SimpleBloomFilter:
    def __init__(self, size: int, num_hashes: int):
        self.size = size
        self.num_hashes = num_hashes
        self.bit_array = [0] * size

    def _hash(self, item: str, seed: int) -> int:
        # A simple hash function using built-in hash
        return (hash(item) + seed) % self.size

    def add(self, item: str):
        for i in range(self.num_hashes):
            index = self._hash(item, i)
            self.bit_array[index] = 1

    def __contains__(self, item: str) -> bool:
        for i in range(self.num_hashes):
            index = self._hash(item, i)
            if self.bit_array[index] == 0:
                return False
        return True
```

```python
# Example usage:
if __name__ == "__main__":
    bloom = SimpleBloomFilter(size=1000, num_hashes=5)

    # Adding items
    bloom.add("apple")
    bloom.add("banana")

    # Checking for membership
    print("apple" in bloom)  # Output: True
    print("banana" in bloom)  # Output: True
    print("cherry" in bloom)  # Output: False (might be True due to false positives)
```

Output:


filter
C:\Users\ishit\venv\Scripts\python.exe C:\Users\ishit\PycharmProjects\pythonProject5\filter.py
True
True
False
Process finished with exit code 0