Python Mid Assessment

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Q. Design a logger system that receives a stream of messages along with their timestamps. Each unique message should only be printed at most every 10 seconds (i.e. a message printed at timestamp `t` will prevent other identical messages from being printed until timestamp `t + 10`).
All messages will come in chronological order. Several messages may arrive at the same timestamp.
Implement the `Logger` class:

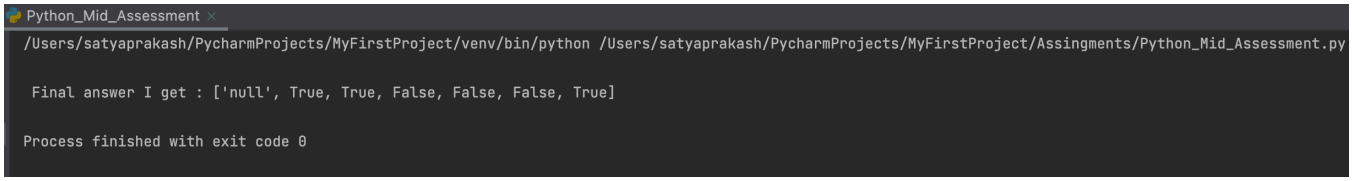
- `Logger()` Initializes the `logger` object.
- `bool shouldPrintMessage(int timestamp, string message)` Returns `true` if the `message` should be printed in the given `timestamp`, otherwise returns `false`.

CODE :

Python_Mid_Assessment.py

```python
class Logger:
    def __init__(self):
        self.dict = {}  # declaring dictionary inside a constructor

    def should_print_message(self, time_stamp, message):
        if message not in self.dict.keys():
            self.dict[message] = time_stamp + 10
            return True
        else:
            if time_stamp >= self.dict[message]:
                self.dict[message] = time_stamp + 10
                return True
            else:
                return False


log = Logger()  # creating object of the Logger class
commands = ["Logger", "shouldPrintMessage", "shouldPrintMessage", "shouldPrintMessage", "shouldPrintMessage",
            "shouldPrintMessage", "shouldPrintMessage"]
time_and_message = [[], [1, "foo"], [2, "bar"], [3, "foo"], [8, "bar"], [10, "foo"], [11, "foo"]]

answer = []# creating empty string which will store Ture, False and null value

for value in time_and_message:
    if value:
        answer.append(log.should_print_message(value[0], value[1]))  # calling should print method and append in answer
    else:
        answer.append("null")

print(f"\n Final answer I get : {answer}")
```

OUTPUT :


Python_Mid_Assessment
/Users/satyaprakash/PycharmProjects/MyFirstProject/venv/bin/python /Users/satyaprakash/PycharmProjects/MyFirstProject/Assingments/Python_Mid_Assessment.py
Final answer I get : ['null', True, True, False, False, False, True]
Process finished with exit code 0