AI Assisted Coding

Assignment-9.5

HallTicket Number : 2303A52169

Batch : 45

CODE -

```
#Generate a python function to reverse a string and include doc string documentation
def reverse_string(text):
"""
Reverses the given string.
Args:
text (str): The string to be reversed.
Returns:
str: The reversed string.
"""
return text[::-1]
# Assert test cases
assert reverse_string("hello") == "olleh", "Test case 1 failed"
assert reverse_string("Python") == "nohtyP", "Test case 2 failed"
assert reverse_string("") == "", "Test case 3 failed"
assert reverse_string("A9_5") == "5_9A", "Test case 4 failed"
print("All test cases passed!")


#Generate a python function check_strength to the check the strength of a password and include doc string documentation
def check_strength(password):
"""
Checks the strength of a password.
Args:
password (str): The password to be checked.
Returns:
str: The strength of the password ("Weak", "Medium", "Strong").
"""
if len(password) < 6:
```

```
return "Weak"
elif len(password) < 12:
return "Medium"
else:
return "Strong"
# Assert test cases
assert check_strength("12345")
assert check_strength("password")
assert check_strength("P@ssw0rd123")
assert check_strength("abc")
assert check_strength("longpassword")
print("All test cases passed!")
```

```
#Create a module math_utils.py and include a function to calcuate the
square(n), q(n) and factorial(n) and doc string documentation.
def square(n):
"""
Calculates the square of a number.
Args:
n (int): The number to be squared.
Returns:
int: The square of the number.
"""
return n * n
def q(n):
"""Calculates the cube of a number.
```

```
Args:
n (int): The number to be cubed.
Returns:
int: The cube of the number.
"""
return n * n * n
def factorial(n):
"""
Calculates the factorial of a number.
```

```
Args:
n (int): The number to calculate factorial for.
```

```
Returns:
int: The factorial of the number.
"""
if n == 0:
return 1
else:
return n * factorial(n-1)
# Assert test cases
assert square(5)
assert q(3)
assert factorial(5)
assert factorial(0)
print("All test cases passed!")
```

```
#create a module attendance.py and include functions mark_present(student),
# mark_absent(student),get_attendace(student). Include docstring
documentation in the function.
class Attendance:
def __init__(self):
self.attendance_record = {}
def mark_present(self, student):
"""
Marks a student as present.
```

```
Args:
student (str): The name of the student to be marked present.
"""
self.attendance_record[student] = "Present"
def mark_absent(self, student):
"""
Marks a student as absent.
```

```
Args:
student (str): The name of the student to be marked absent.
"""
self.attendance_record[student] = "Absent"
def get_attendance(self, student):
"""
Gets the attendance status of a student.
```

```
Args:
student (str): The name of the student to check attendance for.
Returns:
str: The attendance status of the student ("Present", "Absent", or "Not
Recorded").
"""
return self.attendance_record.get(student, "Not Recorded")
# Assert test cases
attendance = Attendance()
attendance.mark_present("Alice")
attendance.mark_absent("Bob")
assert attendance.get_attendance("Alice")
assert attendance.get_attendance("Bob")
assert attendance.get_attendance("Charlie")
print("All test cases passed!")
```

```
#Consider the function: def read_file(filename): with open(filename, 'r') as f:
return f.read() and include docstring documentation in the function.
def read_file(filename):
"""
Reads the content of a file.
```

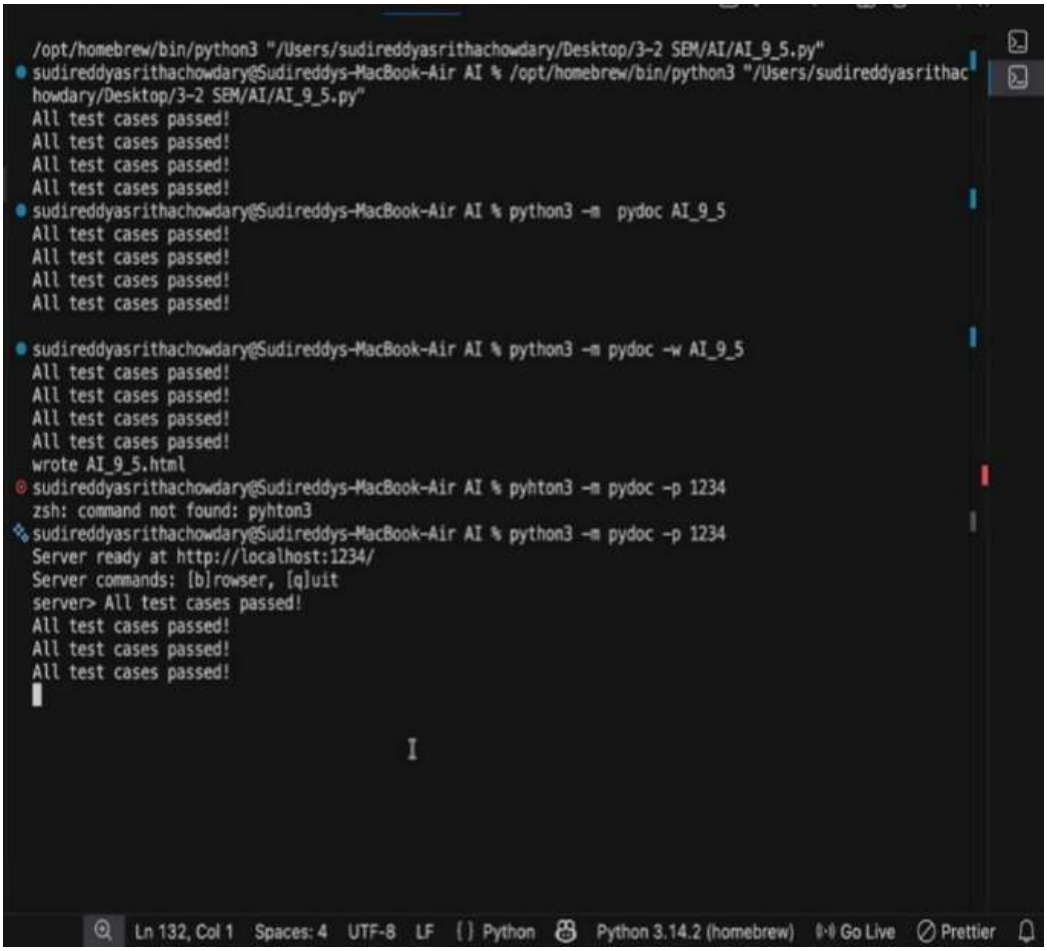
```
Args:
filename (str): The name of the file to be read.
Returns:
str: The content of the file.
"""
with open(filename, 'r') as f:
return f.read()
```

```
if __name__ == "__main__":
# Assert test cases
# Note: These test cases assume that the files exist.
```

```
assert read_file("test1.txt")
assert read_file("test2.txt")
```

```
print("All test cases passed!")
```

Output:


/opt/homebrew/bin/python3 "/Users/sudireddyasrithachowdary/Desktop/3-2 SEM/AI/AI_9_5.py"
sudireddyasrithachowdary@Sudireddys-MacBook-Air AI % /opt/homebrew/bin/python3 "/Users/sudireddyasrithachowdary/Desktop/3-2 SEM/AI/AI_9_5.py"
All test cases passed!
All test cases passed!
All test cases passed!
All test cases passed!
sudireddyasrithachowdary@Sudireddys-MacBook-Air AI % python3 -m pydoc AI_9_5
All test cases passed!
All test cases passed!
All test cases passed!
All test cases passed!
sudireddyasrithachowdary@Sudireddys-MacBook-Air AI % python3 -m pydoc -w AI_9_5
All test cases passed!
All test cases passed!
All test cases passed!
All test cases passed!
wrote AI_9_5.html
sudireddyasrithachowdary@Sudireddys-MacBook-Air AI % pyhton3 -m pydoc -p 1234
zsh: command not found: pyhton3
sudireddyasrithachowdary@Sudireddys-MacBook-Air AI % python3 -m pydoc -p 1234
Server ready at http://localhost:1234/
Server commands: [b]rowser, [q]uit
server> All test cases passed!
All test cases passed!
All test cases passed!
All test cases passed!
Ln 132, Col 1
Spaces: 4
UTF-8
LF
{} Python
Python 3.14.2 (homebrew)
Go Live
Prettier


Python 3.13.7 [v3.13.7:bcee1c32211, Clang 16.0.0 (clang-1600.0.26.6)]
macOS-26.3
Module Index : Topics : Keywords
Get
Search
AI_9_5
index
/Users/sudireddyasrithachowdary/Desktop/3-2 SEM/AI/AI_9_5.py
#Generate a python function to reverse a string and include doc string documentation
Classes
builtins.object
Attendance
class Attendance(builtins.object)
#create a module attendance.py and include functions mark_present(student),
mark_absent(student),get_attendace(student). Include docstring documentation in the function.
Methods defined here:
__init__(self)
Initialize self. See help(type(self)) for accurate signature.
get_attendance(self, student)
Gets the attendance status of a student.
Args:
student (str): The name of the student to check attendance for.
Returns:
str: The attendance status of the student ("Present", "Absent", or "Not Recorded").
mark_absent(self, student)
Marks a student as absent.
Args:
student (str): The name of the student to be marked absent.
mark_present(self, student)
Marks a student as present.
Args:
student (str): The name of the student to be marked present.
Data descriptors defined here:
__dict__


Data descriptors defined here:
__dict__
dictionary for instance variables
__weakref__
list of weak references to the object
Functions
check_strength(password)
Checks the strength of a password.
Args:
password (str): The password to be checked.
Returns:
str: The strength of the password ("Weak", "Medium", "Strong").
factorial(n)
Calculates the factorial of a number.
Args:
n (int): The number to calculate factorial for.
Returns:
int: The factorial of the number.
q(n)
Calculates the cube of a number.
Args:
n (int): The number to be cubed.
Returns:
int: The cube of the number.
reverse_string(text)
Reverses the given string.
Args:
text (str): The string to be reversed.
Returns:
str: The reversed string.
square(n)
Calculates the square of a number.
Args:

Functions

check_strength(password)
Checks the strength of a password.

Args:
password (str): The password to be checked.

Returns:
str: The strength of the password ("Weak", "Medium", "Strong").

factorial(n)
Calculates the factorial of a number.

Args:
n (int): The number to calculate factorial for.

Returns:
int: The factorial of the number.

q(n)
Calculates the cube of a number.

Args:
n (int): The number to be cubed.

Returns:
int: The cube of the number.

reverse_string(text)
Reverses the given string.

Args:
text (str): The string to be reversed.

Returns:
str: The reversed string.

square(n)
Calculates the square of a number.

Args:
n (int): The number to be squared.

Returns:
int: The square of the number.

Data

attendance = <AI_9_5.Attendance object>