Task2

March 16, 2024

1 Qus.1

```python
[1]: import re

def check_password(password):
    # Check if the password length is 10 characters
    if len(password) != 10:
        return "Invalid Password"

    # Count uppercase and lowercase letters
    upper_count = sum(1 for char in password if char.isupper())
    lower_count = sum(1 for char in password if char.islower())

    # Count digits and special characters
    digit_count = sum(1 for char in password if char.isdigit())
    special_count = sum(1 for char in password if not char.isalnum())

    # Check if the password meets the criteria
    if upper_count >= 2 and lower_count >= 2 and digit_count >= 1 and␣
 ↪special_count >= 1:
        return "Valid Password"
    else:
        return "Invalid Password"

# Test the function
password = input("Enter the password: ")
result = check_password(password)
print(result)
```

```
Enter the password:  ZaidAli09@

Valid Password
```

```python
[2]: # Check if the string starts with a particular letter:
starts_with_letter = lambda string, letter: string.startswith(letter)
print(starts_with_letter("hello", "h"))  # Output: True
```

```
True
```

```python
[3]: #Check if the string is numeric:

     is_numeric = lambda string: string.isnumeric()
     print(is_numeric("123"))   # Output: True
```

True

```python
[4]: # Sort a list of tuples having fruit names and their quantity:

     fruit_list = [("mango", 99), ("orange", 80), ("grapes", 1000)]
     sorted_fruit_list = sorted(fruit_list, key=lambda x: x[1])
     print(sorted_fruit_list)
```

[('orange', 80), ('mango', 99), ('grapes', 1000)]

```python
[5]: #Find the squares of numbers from 1 to 10:

     squares = [x**2 for x in range(1, 11)]
     print(squares)
```

[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]

```python
[6]: # Find the cube root of numbers from 1 to 10:
     import math
     cube_roots = [math.pow(x, 1/3) for x in range(1, 11)]
     print(cube_roots)
```

[1.0, 1.2599210498948732, 1.4422495703074083, 1.5874010519681994,
1.7099759466766968, 1.8171205928321397, 1.912931182772389, 2.0,
2.080083823051904, 2.154434690031884]

```python
[7]: # Check if a given number is even:

     is_even = lambda num: num % 2 == 0
     print(is_even(5))   # Output: False
```

False

```python
[8]: # Filter odd numbers from the given list:

     numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
     odd_numbers = list(filter(lambda x: x % 2 != 0, numbers))
     print(odd_numbers)
```

[1, 3, 5, 7, 9]

```python
[9]: # Sort a list of integers into positive and negative integers lists:
```

```python
numbers = [1, 2, 3, 4, 5, 6, -1, -2, -3, -4, -5, 0]
positive_numbers = [x for x in numbers if x > 0]
negative_numbers = [x for x in numbers if x < 0]
print("Positive Numbers:", positive_numbers)
print("Negative Numbers:", negative_numbers)
```

```
Positive Numbers: [1, 2, 3, 4, 5, 6]
Negative Numbers: [-1, -2, -3, -4, -5]
```

[ ]: