Task1

March 16, 2024

1 Qus.1

```
[4]: def flatten_and_product(lst):
         flat_list = [item for sublist in lst for item in (sublist if
      ↪isinstance(sublist, (list, tuple, set)) else [sublist])]
         flat_list.sort(key=lambda x: float('-inf') if not isinstance(x, (int,
      ↪float)) else x)
         return flat_list

     list1 = [1,2,3,4, [44,55,66, True], False, (34,56,78,89,34), {1,2,3,3,2,1}, {1:
      ↪34, "key2": [55, 67, 78, 89], 4: (45,
     22, 61, 34)}, [56, 'data science'], 'Machine Learning']

     result = flatten_and_product(list1)
     print("Sorted flattened list:", result)
```

```
Sorted flattened list: [{1: 34, 'key2': [55, 67, 78, 89], 4: (45, 22, 61, 34)},
'data science', 'Machine Learning', False, 1, True, 1, 2, 2, 3, 3, 4, 34, 34,
44, 55, 56, 56, 66, 78, 89]
```

2 Qus.2

```
[5]: def encrypt_message(message):
         encrypted_message = ""
         for char in message:
             if char.isalpha():
                 encrypted_char = chr(ord('z') - (ord(char.lower()) - ord('a')))
                 encrypted_message += encrypted_char
             elif char == ' ':
                 encrypted_message += '$'
             else:
                 encrypted_message += char
         return encrypted_message

     input_sentence = "I want to become a Data Scientist."
     input_sentence_lower = input_sentence.lower()
```

```
encrypted_sentence = encrypt_message(input_sentence_lower)
print("Encrypted sentence:", encrypted_sentence)
```

Encrypted sentence: r$dzmg$gl$yvxlnv$z$wzgz$hxrvmgrhg.

[ ]: