NISHCHAL.R

CSE-CS

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```
[1] #list creation
    nishchal = ("Nishchal", 20, 30, 40, 50)
    print(nishchal[0])
```

```
Nishchal
```

```
[3] #list indexing
    temp_list = list(nishchal)
    temp_list.remove("Nishchal")
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(20, 30, 40, 50)
```

```
[4] #List Append and Insert:
    temp_list = list(nishchal)
    temp_list.append(60)
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(20, 30, 40, 50, 60)
```

```
[5] #list removal
    temp_list = list(nishchal)
    temp_list.pop(1)
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(20, 40, 50, 60)
```

```
[6] #list sorting
    temp_list = list(nishchal)
    temp_list.sort()
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(20, 40, 50, 60)
```

colab.research.google.com/gist/2006nishu/3a3f81f0898d6b1c02dbc74d1f4537f4/data-structures.ipynb#scrollTo=MA7BaR565CZA

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```
[7] #List Append and Insert:
    temp_list = list(nishchal)
    temp_list.reverse()
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(60, 50, 40, 20)
```

```
[8] #List Removal
    temp_list = list(nishchal)
    temp_list.insert(2, 15)
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(60, 50, 15, 40, 20)
```

```
[9] #List Sorting
    temp_list = list(nishchal)
    temp_list.sort()
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(15, 20, 40, 50, 60)
```

```
[10] #List Reversal:
    temp_list = list(nishchal)
    temp_list.reverse()
    nishchal = tuple(temp_list)
    print(nishchal)
```

```
(60, 50, 40, 20, 15)
```

```
[13] #Sum of List Elements:
    temp_list = list(nishchal)
    total = sum(temp_list)
    print(total)
```

```
185
```

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Show command palette (Ctrl+Shift+P)

```
[14] #Maximum and Minimum in a List
     max_value = max(temp_list)
     min_value = min(temp_list)
     print(max_value)
     print(min_value)
```

```
60
15
```

```
[15] #Count Occurrences
     count = temp_list.count(20)
     print(count)
```

```
1
```

```
[16] #Merging Lists:
     list1 = [1, 2, 3]
     list2 = [4, 5, 6]
     merged_list = list1 + list2
     print(merged_list)
```

```
[1, 2, 3, 4, 5, 6]
```

```
[17] #Tuple Creation and Access
     nishchal_tuple = ("Nishchal", 20, 30)
     print(nishchal_tuple)
```

```
('Nishchal', 20, 30)
```

```
[18] #Tuple Unpacking
     name = nishchal_tuple[0]
     age = nishchal_tuple[1]
     print(name)
     print(age)
```

```
Nishchal
20
```

```
Nishchal
20
```

```
[19] #Convert Tuple to List and Vice Versa
     temp_list = list(nishchal_tuple)
     temp_list.append(40)
     nishchal_tuple = tuple(temp_list)
     print(nishchal_tuple)
```

```
('Nishchal', 20, 30, 40)
```

```
[20] #Tuple Concatenation
     tuple1 = (1, 2, 3)
     tuple2 = (4, 5, 6)
     concatenated_tuple = tuple1 + tuple2
     print(concatenated_tuple)
```

```
(1, 2, 3, 4, 5, 6)
```

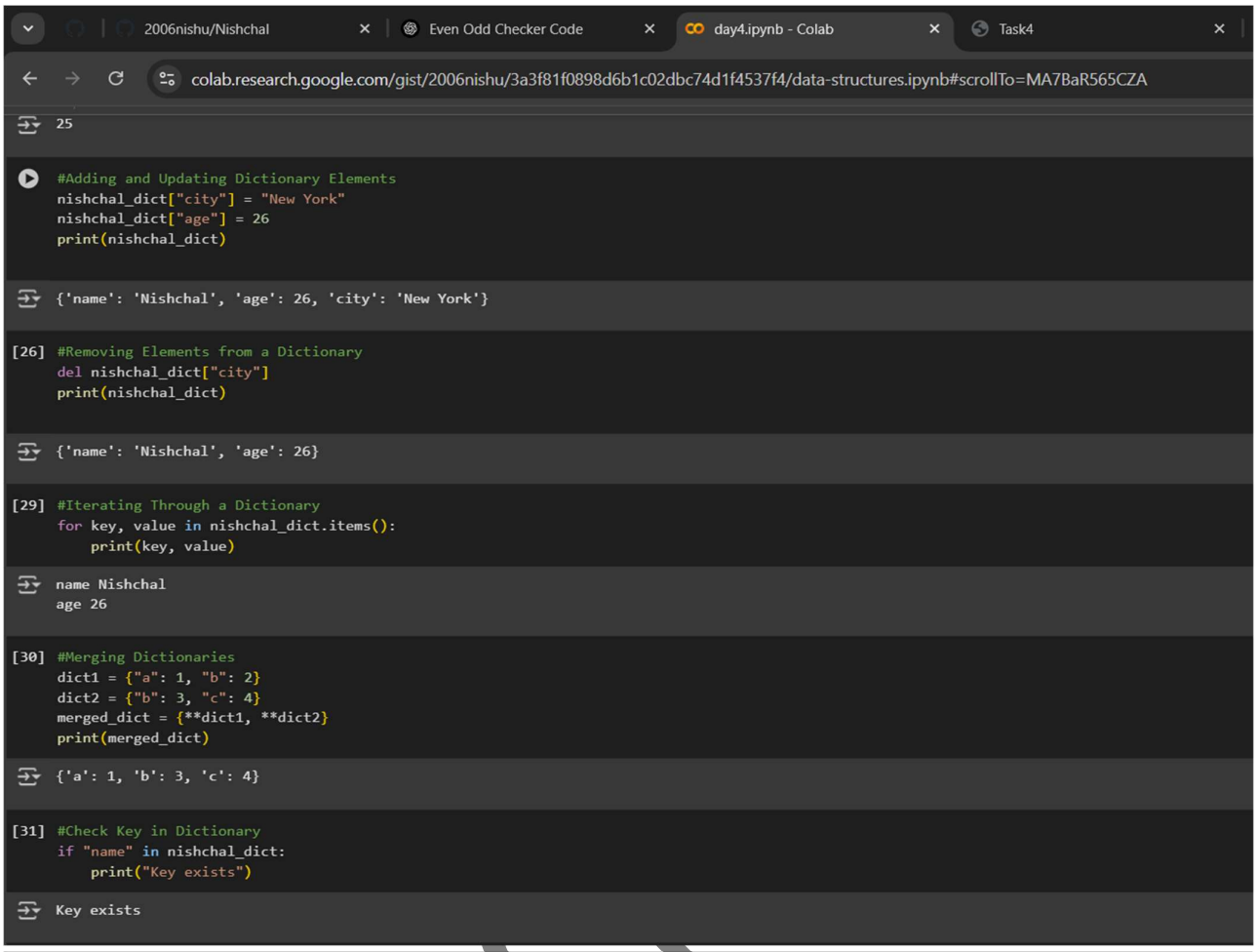
```
[ ] : "Nishchal"}
```

```
[22] #Dictionary Creation
     nishchal_dict = {"name": "Nishchal", "age": 25}
     print(nishchal_dict)
```

```
{'name': 'Nishchal', 'age': 25}
```

```
[24] #Accessing Dictionary Values
     name = nishchal_dict["name"]
     age = nishchal_dict["age"]
     print(name)
     print(age)
```

```
Nishchal
25
```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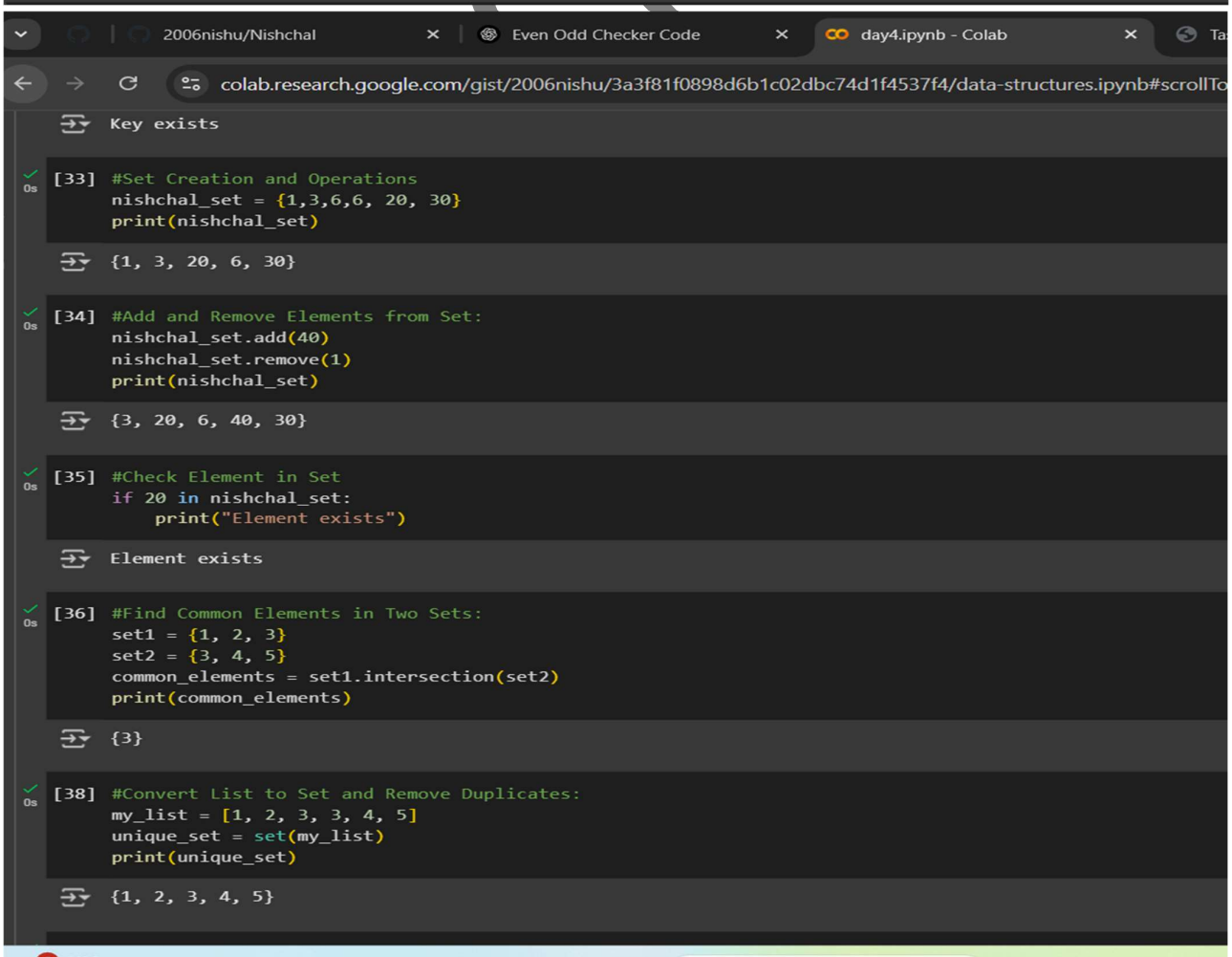
Task4
colab.research.google.com/gist/2006nishu/3a3f81f0898d6b1c02dbc74d1f4537f4/data-structures.ipynb#scrollTo=MA7BaR565CZA
25
#Adding and Updating Dictionary Elements
nishchal_dict["city"] = "New York"
nishchal_dict["age"] = 26
print(nishchal_dict)
{'name': 'Nishchal', 'age': 26, 'city': 'New York'}
[26] #Removing Elements from a Dictionary
del nishchal_dict["city"]
print(nishchal_dict)
{'name': 'Nishchal', 'age': 26}
[29] #Iterating Through a Dictionary
for key, value in nishchal_dict.items():
print(key, value)
name Nishchal
age 26
[30] #Merging Dictionaries
dict1 = {"a": 1, "b": 2}
dict2 = {"b": 3, "c": 4}
merged_dict = {**dict1, **dict2}
print(merged_dict)
{'a': 1, 'b': 3, 'c': 4}
[31] #Check Key in Dictionary
if "name" in nishchal_dict:
print("Key exists")
Key exists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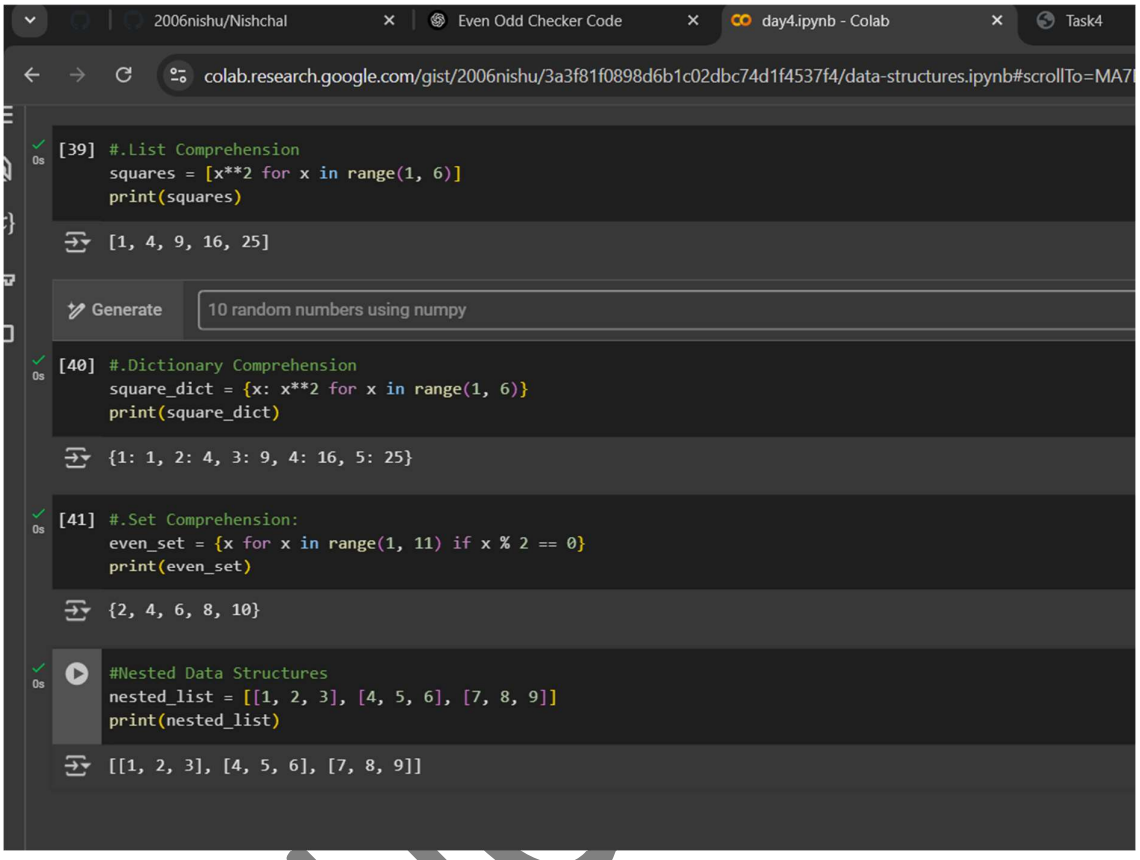
day4.ipynb - Colab
colab.research.google.com/gist/2006nishu/3a3f81f0898d6b1c02dbc74d1f4537f4/data-structures.ipynb#scrollTo
Key exists
[33] #Set Creation and Operations
nishchal_set = {1,3,6,6, 20, 30}
print(nishchal_set)
{1, 3, 20, 6, 30}
[34] #Add and Remove Elements from Set:
nishchal_set.add(40)
nishchal_set.remove(1)
print(nishchal_set)
{3, 20, 6, 40, 30}
[35] #Check Element in Set
if 20 in nishchal_set:
print("Element exists")
Element exists
[36] #Find Common Elements in Two Sets:
set1 = {1, 2, 3}
set2 = {3, 4, 5}
common_elements = set1.intersection(set2)
print(common_elements)
{3}
[38] #Convert List to Set and Remove Duplicates:
my_list = [1, 2, 3, 3, 4, 5]
unique_set = set(my_list)
print(unique_set)
{1, 2, 3, 4, 5}
31°C
Sunny
Search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Task4
colab.research.google.com/gist/2006nishu/3a3f81f0898d6b1c02dbc74d1f4537f4/data-structures.ipynb#scrollTo=MA7
[39] #.List Comprehension
squares = [x**2 for x in range(1, 6)]
print(squares)
[1, 4, 9, 16, 25]
Generate
10 random numbers using numpy
[40] #.Dictionary Comprehension
square_dict = {x: x**2 for x in range(1, 6)}
print(square_dict)
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
[41] #.Set Comprehension:
even_set = {x for x in range(1, 11) if x % 2 == 0}
print(even_set)
{2, 4, 6, 8, 10}
#Nested Data Structures
nested_list = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
print(nested_list)
[[1, 2, 3], [4, 5, 6], [7, 8, 9]]