**1. Create an empty dictionary.**

my\_dict = {}

print(my\_dict)

**Output:**

{}

**2. Create a dictionary with your name and age.**

person = {"name": "Krishna", "age": 21}

print(person)

**Output:**

CopyEdit

{'name': 'Krishna', 'age': 21}

**3. Add a key "city" with value "Hyderabad" to a dictionary.**

person["city"] = "Hyderabad"

print(person)

**Output:**

bash

{'name': 'Krishna', 'age': 21, 'city': 'Hyderabad'}

**4. Access the value of key "name" from a dictionary.**

print(person["name"])

**Output:**

Krishna

**5. Change the value of key "age" to 30 in a dictionary.**

person["age"] = 30

print(person)

**Output:**

{'name': 'Krishna', 'age': 30, 'city': 'Hyderabad'}

**6. Delete the key "city" from a dictionary.**

del person["city"]

print(person)

**Output:**

{'name': 'Krishna', 'age': 30}

**7. Check if key "name" exists in a dictionary.**

print("name" in person)

**Output:**

True

**8. Get all keys from a dictionary using a method.**

print(person.keys())

**Output:**

dict\_keys(['name', 'age'])

**9. Get all values from a dictionary using a method.**

print(person.values())

**Output:**

dict\_values(['Krishna', 30])

**10. Get all key-value pairs from a dictionary.**

print(person.items())

**Output:**

dict\_items([('name', 'Krishna'), ('age', 30)])

**11. Use get() to access a key that exists.**

print(person.get("name"))

**Output:**

Krishna

**12. Use get() to access a key that doesn’t exist and give default value.**

print(person.get("city", "Not Found"))

**Output:**

Not Found

**13. Make a dictionary of 3 fruits and their colors.**

fruits = {"apple": "red", "banana": "yellow", "grape": "purple"}

print(fruits)

**Output:**

{'apple': 'red', 'banana': 'yellow', 'grape': 'purple'}

**14. Update one key’s value using update().**

fruits.update({"banana": "green"})

print(fruits)

**Output:**

{'apple': 'red', 'banana': 'green', 'grape': 'purple'}

**15. Remove a key using pop().**

fruits.pop("grape")

print(fruits)

**Output:**

{'apple': 'red', 'banana': 'green'}

**16. Clear all items from a dictionary using a method.**

fruits.clear()

print(fruits)

**Output:**

{}

**17. Copy a dictionary using a method.**

original = {"a": 1, "b": 2}

copy\_dict = original.copy()

print(copy\_dict)

**Output:**

arduino

{'a': 1, 'b': 2}

**18. Write a loop to print all keys in a dictionary.**

for key in person:

print(key)

**Output:**

name

age

**19. Write a loop to print all values in a dictionary.**

for value in person.values():

print(value)

**Output:**

CopyEdit

Krishna

30

**20. Write a loop to print keys with their values.**

for key, value in person.items():

print(key, value)

**Output:**

name Krishna

age 30

**21. Make a dictionary with numbers 1–5 as keys and their squares as values.**

squares = {i: i\*\*2 for i in range(1, 6)}

print(squares)

**Output:**

{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

**22. Count the number of keys in a dictionary using len().**

print(len(squares))

**Output:**

5

**23. Merge two dictionaries using update().**

a = {"x": 1}

b = {"y": 2}

a.update(b)

print(a)

**Output:**

arduino

{'x': 1, 'y': 2}

**24. Make a dictionary of a student’s name, marks, and grade.**

student = {"name": "Krishna", "marks": 92, "grade": "A"}

print(student)

**Output:**

{'name': 'Krishna', 'marks': 92, 'grade': 'A'}

**25. Access a value using [] operator.**

print(student["marks"])

**Output:**

92

**26. What happens if you access a non-existent key with []?**

# print(student["age"]) # Uncommenting gives error

**Output:**

KeyError: 'age'

**27. What happens if you access a non-existent key with get()?**

print(student.get("age"))

**Output:**

None

**28. Check if a dictionary is empty.**

empty = {}

print(len(empty) == 0)

**Output:**

True

**29. Create a dictionary with mixed data types as values.**

mix = {"name": "Krishna", "age": 21, "marks": [90, 92, 88]}

print(mix)

**Output:**

{'name': 'Krishna', 'age': 21, 'marks': [90, 92, 88]}

**30. Loop over a dictionary and print values greater than 50.**

data = {"a": 40, "b": 70, "c": 90}

for k, v in data.items():

if v > 50:

print(k, v)

**Output:**

b 70

c 90

**31. Create a dictionary from two lists (keys & values).**

keys = ["a", "b", "c"]

values = [1, 2, 3]

result = dict(zip(keys, values))

print(result)

**Output:**

arduino

{'a': 1, 'b': 2, 'c': 3}

**32. Dictionary comprehension for squares of numbers 1–5.**

squares = {x: x\*\*2 for x in range(1, 6)}

print(squares)

**Output:**

{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

**33. Add a nested dictionary inside a dictionary.**

nested = {"student": {"name": "Krishna", "age": 21}}

print(nested)

**Output:**

{'student': {'name': 'Krishna', 'age': 21}}

**34. Access a value from the nested dictionary.**

print(nested["student"]["name"])

**Output:**

Krishna

**35. Dictionary with duplicate values but unique keys.**

dup\_vals = {"a": 10, "b": 10, "c": 20}

print(dup\_vals)

**Output:**

arduino

{'a': 10, 'b': 10, 'c': 20}

**36. Difference between pop() and del:**

d = {"x": 1, "y": 2}

d.pop("x") # Removes and returns the value

del d["y"] # Just deletes the key

print(d)

**Output:**

{}

**37. Find the maximum value in a dictionary.**

d = {"a": 10, "b": 50, "c": 20}

print(max(d.values()))

**Output:**

50

**38. Sum all values in a dictionary.**

print(sum(d.values()))

**Output:**

80

**39. Find all keys with a certain value in a dictionary.**

d = {"a": 10, "b": 20, "c": 10}

for k, v in d.items():

if v == 10:

print(k)

**Output:**

css

a

c

**40. Count occurrences of each character in a word using dictionary.**

word = "hello"

count = {}

for char in word:

count[char] = count.get(char, 0) + 1

print(count)

**Output:**

arduino

{'h': 1, 'e': 1, 'l': 2, 'o': 1}