

1. Create an empty dictionary.

```
d= {}
```

2. Create a dictionary with your name and age.

```
d = {"name": "Raksha", "age": 22}
```

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

```
d["city"] = "Hyderabad"
```

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

```
print(d["name"])
```

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

```
d["age"] = 30
```

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

```
del d["city"]
```

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

```
print("name" in d)
```

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

```
print(d.keys())
```

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

```
print(d.values())
```

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

```
print(d.items())
```

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

```
print(d.get("name"))
```

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

```
print(d.get('address', 'Not found'))
```

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

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

14. Update one key's value using `update()`.

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

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

```
fruits.pop("grape")
```

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

```
fruits.clear()
```

17. Copy a dictionary using a method.

```
copy_d = d.copy()
```

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

```
for key in d:
```

```
    print(key)
```

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

```
for value in d.values():
```

```
    print(value)
```

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

```
for key, value in d.items():
```

```
    print(f'{key}: {value}')
```

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

```
squares = {}
```

```
for i in range(1, 6):
```

```
    squares[i] = i ** 2
```

```
print(squares)
```

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

```
print(len(squares))
```

23. Merge two dictionaries using update().

```
a = {"x": 1, "y": 2}
```

```
b = {"z": 3}
```

```
a.update(b)
```

```
print(a)
```

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

```
student = {"name": "Anu", "marks": 88, "grade": "A"}
```

```
print(student)
```

25. Access a value using [] operator.

```
print(student["marks"])
```

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

It gives an error.

```
student["address"] → KeyError
```

```
KeyError: 'address'
```

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

```
print(student.get("address"))
```

Output: None

28. Check if a dictionary is empty.

```
empty_dict = {}
```

```
print(len(empty_dict) == 0)
```

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

```
mixed = {  
    "name": "Raj",  
    "age": 23,  
    "is_student": True,  
    "marks": [90, 85, 88]  
}
```

```
print(mixed)
```

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

```
scores = {"math": 75, "science": 92, "english": 45}
```

```
for subject, score in scores.items():
```

```
    if score > 50:
```

```
        print(f'{subject}: {score}')
```

31. Write a program to create a dictionary from two lists (keys & values).

```
keys = ["a", "b", "c"]  
  
values = [1, 2, 3]  
  
new_dict = dict(zip(keys, values))  
  
print(new_dict)
```

32. Write a dictionary comprehension for squares of numbers 1–5.

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

33. Add a nested dictionary inside a dictionary.

```
nested = {  
  
    "person": {  
  
        "name": "Rahul",  
  
        "age": 28  
  
    }  
  
}  
  
print(nested)
```

34. Access a value from the nested dictionary.

```
print(nested["person"]["age"])
```

35. Write a dictionary with duplicate values but unique keys.

```
dup_values = {"a": 1, "b": 2, "c": 1}  
  
print(dup_values)
```

36. Explain the difference between pop() and del with example.

```
d.pop('a') # removes and returns value
```

```
del d['b'] # just deletes
```

37. Write a program to find the maximum value in a dictionary.

```
scores = {"a": 50, "b": 85, "c": 70}
```

```
max_val = max(scores.values())
```

```
print("Max value:", max_val)
```

38. Write a program to sum all values in a dictionary.

```
total = sum(scores.values())
```

```
print("Sum:", total)
```

39. Write a program to find all keys with a certain value in a dictionary.

```
my_dict = {
```

```
    'a': 10,
```

```
    'b': 20,
```

```
    'c': 10,
```

```
    'd': 30,
```

```
    'e': 10
```

```
}
```

```
target_value = 10
```

```
print("Keys with value", target_value, "are:")
```

```
for key, value in my_dict.items():
```

```
    if value == target_value:
```

```
        print(key)
```

40. Write a program to count occurrences of each character in a word using dictionary.

```
word = "banana"
```

```
char_count = {}
```

```
for ch in word:
```

```
    if ch in char_count:
```

```
        char_count[ch] += 1
```

```
    else:
```

```
        char_count[ch] = 1
```

```
print(char_count)
```