20 Real-world Python Dictionary Programs

1. Store and Display Contact Details

```
contacts = {"Alice": "9876543210", "Bob": "8765432109"}
for name, number in contacts.items():
    print(f"{name}: {number}")
```

2. Student Marks Database

```
students = {"John": 87, "Mike": 92, "Sara": 78}
name = input("Enter student name: ")
print("Marks:", students.get(name, "Not Found"))
```

3. E-commerce Product Inventory

```
inventory = {"Laptop": 10, "Phone": 25, "Tablet": 15}
product = input("Enter product name: ")
print("Available:", inventory.get(product, "Out of Stock"))
```

4. Currency Converter

```
rates = {"USD": 83.1, "EUR": 90.5, "GBP": 105.3}
currency = input("Enter currency (USD/EUR/GBP): ")
amount = float(input("Enter amount: "))
if currency in rates:
    print("INR:", amount * rates[currency])
else:
    print("Currency not supported")
```

5. Employee Salary Record

```
salaries = {"E001": 50000, "E002": 60000, "E003": 45000}
id = input("Enter employee ID: ")
print("Salary:", salaries.get(id, "Not Found"))
```

6. Bookstore Management

```
books = {"Harry Potter": 5, "Narnia": 3, "Percy Jackson": 4}
book = input("Enter book name: ")
if book in books and books[book] > 0:
    books[book] -= 1
```

```
    print("Book issued")
else:
    print("Book not available")
```

7. Voting System

```
votes = {"Alice": 120, "Bob": 90, "Charlie": 150}
winner = max(votes, key=votes.get)
print("Winner:", winner)
```

8. Grocery Price Lookup

```
prices = {"Milk": 45, "Bread": 25, "Eggs": 5}
item = input("Enter item name: ")
print("Price:", prices.get(item, "Item not found"))
```

9. Hospital Room Allocation

```
rooms = {"101": "Available", "102": "Occupied", "103": "Available"}
room = input("Enter room number: ")
print("Status:", rooms.get(room, "Invalid Room"))
```

10. Railway Station Codes

```
stations = {"NDLS": "New Delhi", "BCT": "Mumbai Central", "SBC": "Bangalore"}
code = input("Enter station code: ")
print("Station Name:", stations.get(code.upper(), "Not Found"))
```

11. Car Rental System

```
cars = {"Sedan": 5, "SUV": 3, "Hatchback": 2}
type = input("Enter car type: ")
if type in cars and cars[type] > 0:
    cars[type] -= 1
    print("Car booked")
else:
    print("Not available")
```

12. Movie Ticket Booking

```
seats = {"A1": "Available", "A2": "Booked", "A3": "Available"}
seat = input("Enter seat number: ")
```

```
print("Seat Status:", seats.get(seat.upper(), "Invalid Seat"))
```

13. Online Exam Scoreboard

```
scores = {"student1": 78, "student2": 85, "student3": 90}
for student, score in scores.items():
    print(f"{student}: {score}")
```

14. Airport Code Directory

```
airports = {"DEL": "Delhi", "BOM": "Mumbai", "BLR": "Bangalore"}
code = input("Enter airport code: ")
print("Airport:", airports.get(code.upper(), "Code not found"))
```

15. School Timetable

```
timetable = {
    "Monday": "Math, Science",
    "Tuesday": "English, History",
    "Wednesday": "Math, Geography"
}
day = input("Enter day: ")
print("Subjects:", timetable.get(day.capitalize(), "No classes"))
```

16. Covid Vaccination Tracker

```
vaccination = {"Aadhar1": "Done", "Aadhar2": "Pending"}
aadhar = input("Enter Aadhar ID: ")
print("Status:", vaccination.get(aadhar, "Not Found"))
```

17. Music Playlist Tracker

```
playlist = {"song1": 3.5, "song2": 4.2, "song3": 5.0}
for song, duration in playlist.items():
    print(f"{song} - {duration} min")
```

18. City Temperature Checker

```
temps = {"Delhi": 42, "Mumbai": 35, "Chennai": 38}
city = input("Enter city name: ")
print("Temperature:", temps.get(city, "No data"))
```

19. ATM Bank Balance

```
accounts = {"1234": 5000, "5678": 3000}
acc = input("Enter account number: ")
print("Balance:", accounts.get(acc, "Invalid account"))
```

20. Resume Skill Set

```
resume = {"name": "Alice", "skills": ["Python", "ML", "SQL"]}
print("Skills:", ", ".join(resume["skills"]))
```