User_data_list = [

{“user_id”: 101, “name”: “Ananya”, “age”: 21, “interests”: [“tech”, “music”], “location”:

“Chennai”},

{“user_id”: 102, “name”: “Rahul”, “age”: 24, “interests”: [“fitness”, “tech”], “location”:

“Bangalore”},

{“user_id”: 103, “name”: “Sneha”, “age”: 19, “interests”: [“art”, “music”], “location”:
“Mumbai”},

{“user_id”: 104, “name”: “Karthik”, “age”: 22, “interests”: [“tech”, “gaming”], “location”:
“Hyderabad”},

{“user_id”: 105, “name”: “Divya”, “age”: 23, “interests”: [“health”, “fitness”], “location”:

“Coimbatore”},

{“user_id”: 106, “name”: “Manoj”, “age”: 20, “interests”: [“tech”, “robotics”], “location”:

“Pune”},

{“user_id”: 107, “name”: “Lakshmi”, “age”: 25, “interests”: [“literature”, “art”], “location”:

“Madurai”},

{“user_id”: 108, “name”: “Arjun”, “age”: 26, “interests”: [“finance”, “tech”], “location”:

“Delhi”},

{“user_id”: 109, “name”: “Neha”, “age”: 22, “interests”: [“fashion”, “music”], “location”:

“Kolkata”},

{“user_id”: 110, “name”: “Vikram”, “age”: 21, “interests”: [“tech”, “entrepreneurship”],

“location”: “Trichy”},

{“user_id”: 111, “name”: “Meera”, “age”: 20, “interests”: [“health”, “psychology”], “location”:

“Salem”},

{“user_id”: 112, “name”: “Sundar”, “age”: 24, “interests”: [“robotics”, “tech”], “location”:

“Chennai”},

{“user_id”: 113, “name”: “Nithya”, “age”: 23, “interests”: [“writing”, “reading”], “location”:

“Tirunelveli”},

{“user_id”: 114, “name”: “Harish”, “age”: 22, “interests”: [“tech”, “cybersecurity”], “location”:

“Delhi”},

{“user_id”: 115, “name”: “Ayesha”, “age”: 21, “interests”: [“language”, “culture”], “location”: “Kochi”},

{“user_id”: 116, “name”: “Rohit”, “age”: 25, “interests”: [“tech”, “data”], “location”: “Pune”}, {“user_id”: 117, “name”: “Priya”, “age”: 20, “interests”: [“environment”, “science”], “location”: “Nagpur”},

{“user_id”: 118, “name”: “Faizal”, “age”: 23, “interests”: [“sports”, “fitness”], “location”:

“Thiruvananthapuram”},

{“user_id”: 119, “name”: “Gita”, “age”: 19, “interests”: [“math”, “logic games”], “location”:

“Ahmedabad”},

{“user_id”: 120, “name”: “Ramesh”, “age”: 22, “interests”: [“tech”, “cloud computing”], “location”: “Vizag”}

]

Function to get recommendations based on interests def get_personalized_recommendations(user_data):

All_items = {

“tech”: [“AI Course”, “Python Projects”, “Web Dev with Django”],

“music”: [“Top 100 Songs”, “Indie Playlist”, “Learn Guitar”],

“fitness”: [“Yoga for Beginners”, “HIIT Program”, “Nutrition Tips”],

“art”: [“Sketching 101”, “Oil Painting”, “Digital Art Basics”],

“gaming”: [“Unity Basics”, “Game Design Course”],

“robotics”: [“Arduino Projects”, “Robot Path Planning”],

“finance”: [“Finance 101”, “Investing for Beginners”],

“fashion”: [“Fashion Design Basics”, “Style Trends 2024”],

“entrepreneurship”: [“Startup Fundamentals”, “Business Model Canvas”],

“health”: [“Mindfulness”, “Nutrition & Wellness”],

“cybersecurity”: [“Ethical Hacking”, “Network Security”],

“language”: [“French A1”, “Spanish for Beginners”],

“data”: [“SQL Mastery”, “Big Data Essentials”],

“science”: [“Climate Science”, “Physics Explained”],

```
    “sports”: [“Fitness Trainer Course”, “Sports Psychology”],

    “math”: [“Discrete Math”, “Logic & Proofs”],

    “reading”: [“Top 10 Books”, “Book Reviews”],

    “writing”: [“Fiction Writing”, “Creative Writing Workshop”],

    “psychology”: [“Intro to Psychology”, “Cognitive Science”],

    “environment”: [“Sustainability 101”, “Green Energy”],

    “cloud computing”: [“AWS Basics”, “Docker Fundamentals”]

}

Preferences = user_data.get(“interests”, [])

Recommendations = []    for interest in preferences:

    Recommendations.extend(all_items.get(interest, []))



Return list(set(recommendations))  # Remove duplicates
```

Function to get user by ID def get_user_by_id(user_id): for user in user_data_list: if user[‘user_id’] == user_id:

Return user

Return None # Return None if user ID not found

User Input for fetching recommendations

User_id_input = int(input(“Enter the user ID to get personalized recommendations: “)) user = get_user_by_id(user_id_input) if user:

Print(f”\n Recommendations for {user[‘name’]} (User ID: {user[‘user_id’]}):”)

Recommendations = get_personalized_recommendations(user) for rec in recommendations:

Print(f” – {rec}”) else: print(“User not found. Please check the user ID and try again.”)