

1. A shopkeeper wants to calculate the total bill for a customer. The shopkeeper has a list of items, where each item has a price and quantity. Write a program to calculate the total cost using appropriate data types

input:

```
items = [
    {"name": "Apples", "price": 30.5, "quantity": 2},
    {"name": "Bananas", "price": 10.0, "quantity": 5},
    {"name": "Milk", "price": 45.75, "quantity": 1},
    {"name": "Bread", "price": 25.0, "quantity": 2}
]

total_cost = 0.0

print("Itemized Bill:")
print("-----")
for item in items:
    item_total = item["price"] * item["quantity"]
    total_cost += item_total
    print(f"{item['name']}: ₹{item['price']} x {item['quantity']}
        = ₹{item_total:.2f}")

print("-----")
print(f"Total Bill: ₹{total_cost:.2f}")
```

Output:

```
Itemized Bill:
-----
Apples: ₹30.5 x 2 = ₹61.00
Bananas: ₹10.0 x 5 = ₹50.00
Milk: ₹45.75 x 1 = ₹45.75
Bread: ₹25.0 x 2 = ₹50.00
-----
Total Bill: ₹206.75
```

2. school needs to check if a student has passed or failed based on their marks. If marks are greater than or equal to 50, the student passes; otherwise, they fail. Write a program that outputs whether the student passed or failed

Input:

```
# Input marks
marks = float(input("Enter the student's marks: "))

# Check pass or fail
if marks >= 50:
    print("The student has passed.")
else:
    print("The student has failed.")
```

Output:

```
Enter the student's marks: 27
The student has failed.
```

3. Write a python program to swap the value of two variables (with temporary variable and without temporary variable)

Input:

```
a = int(input("Enter value of a: "))
b = int(input("Enter value of b: "))

print("\nBefore swapping:")
print("a =", a, "b =", b)

temp = a
a = b
b = temp

print("\nAfter swapping using temporary variable:")
print("a =", a, "b =", b)

a, b = b, a

print("\nAfter swapping without temporary variable:")
print("a =", a, "b =", b)
```

Output:

```
Enter value of a: 26
```

```
Enter value of b: 19
```

```
Before swapping:
```

```
a = 26 b = 19
```

```
After swapping using temporary variable:
```

```
a = 19 b = 26
```

```
After swapping without temporary variable:
```

```
a = 26 b = 19
```