

ASSIGNMENT NO.5

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A)

CODE:-

```
#include <iostream>

#include <string>

using namespace std;

// Structure to store product details
struct Product {
    int id;
    string name;
    int quantity;
    double price;
};

// Class to manage inventory
class Inventory {
    Product products[100]; // Array to store products
    int count;             // Number of products added
public:
    Inventory() {
        count = 0;
    }

    // Add a new product
    void addProduct(int id, string name, int qty, double price) {
        products[count].id = id;
```

```

    products[count].name = name;
    products[count].quantity = qty;
    products[count].price = price;
    count++;
    cout << "Product added: " << name << endl;
}

// Update quantity of a product
void updateQuantity(int id, int qty) {
    for (int i = 0; i < count; i++) {
        if (products[i].id == id) {
            products[i].quantity = qty;
            cout << "Quantity updated for: " << products[i].name << endl;
            return;
        }
    }
    cout << "Product not found." << endl;
}

// Calculate total value of all products
double totalValue() {
    double total = 0;
    for (int i = 0; i < count; i++) {
        total += products[i].quantity * products[i].price;
    }
    return total;
}

// Print the full inventory
void printInventory() {
    cout << "\n--- Inventory List ---\n";
    for (int i = 0; i < count; i++) {

```

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        cout << "ID: " << products[i].id
            << ", Name: " << products[i].name
            << ", Quantity: " << products[i].quantity
            << ", Price: ₹" << products[i].price << endl;
    }
}
};

// Main function

int main() {
    Inventory store;

    store.addProduct(101, "Laptop", 50, 80000);
    store.addProduct(102, "Smartphone", 100, 50000);
    store.addProduct(103, "Tablet", 30, 40000);
    store.printInventory();
    store.updateQuantity(101, 45); // Update Laptop quantity
    store.printInventory();
    cout << "\nTotal Inventory Value: ₹" << store.totalValue() << endl;
    return 0;
}

```

OUTPUT:-

```
Added product: Laptop
Added product: Smartphone
Added product: Tablet
```

```
Inventory List:
```

```
ID: 101, Name: Laptop, Qty: 50, Price: $800
ID: 102, Name: Smartphone, Qty: 100, Price: $500
ID: 103, Name: Tablet, Qty: 30, Price: $400
Updated quantity for Laptop
```

```
Inventory List:
```

```
ID: 101, Name: Laptop, Qty: 45, Price: $800
ID: 102, Name: Smartphone, Qty: 100, Price: $500
ID: 103, Name: Tablet, Qty: 30, Price: $400
Total inventory value: $98000
```