import java.util.ArrayList;

import java.util.List;

import java.util.Scanner;

class AuctionItem {

private String itemName;

private String description;

private double currentBid;

private String currentBidder;

public AuctionItem(String itemName, String description) {

this.itemName = itemName;

this.description = description;

this.currentBid = 0.0;

this.currentBidder = "No bids yet";

}

public String getItemName() {

return itemName;

}

public String getDescription() {

return description;

}

public double getCurrentBid() {

return currentBid;

}

public String getCurrentBidder() {

return currentBidder;

}

public void placeBid(String bidder, double bidAmount) {

if (bidAmount > currentBid) {

currentBid = bidAmount;

currentBidder = bidder;

System.out.println("Bid placed successfully!");

} else {

System.out.println("Bid amount must be higher than the current bid.");

}

}

@Override

public String toString() {

return "Item: " + itemName + "\nDescription: " + description + "\nCurrent Bid: $" +

currentBid + "\nCurrent Bidder: " + currentBidder + "\n";

}

}

class OnlineAuction {

private List<AuctionItem> items;

public OnlineAuction() {

items = new ArrayList<>();

}

public void addItem(AuctionItem item) {

items.add(item);

}

public void displayItems() {

System.out.println("Available Items for Auction:");

for (AuctionItem item : items) {

System.out.println(item);

}

}

public void startAuction() {

Scanner scanner = new Scanner(System.in);

while (true) {

displayItems();

System.out.print("Enter the item number to bid on (or -1 to exit): ");

int itemIndex = scanner.nextInt();

if (itemIndex == -1) {

break;

}

if (itemIndex >= 0 && itemIndex < items.size()) {

AuctionItem selectedItem = items.get(itemIndex);

System.out.println("Selected Item: " + selectedItem.getItemName());

System.out.println(selectedItem);

System.out.print("Enter your bidder name: ");

String bidderName = scanner.next();

System.out.print("Enter your bid amount: $");

double bidAmount = scanner.nextDouble();

selectedItem.placeBid(bidderName, bidAmount);

} else {

System.out.println("Invalid item number. Please try again.");

}

}

}

}

public class OnlineAuctionSystem {

public static void main(String[] args) {

OnlineAuction auction = new OnlineAuction();

AuctionItem item1 = new AuctionItem("Antique Painting", "A beautiful antique painting.");

AuctionItem item2 = new AuctionItem("Vintage Watch", "A classic vintage wristwatch.");

AuctionItem item3 = new AuctionItem("Rare Book", "A first edition of a rare book.");

auction.addItem(item1);

auction.addItem(item2);

auction.addItem(item3);

System.out.println("Welcome to the Online Auction System!");

auction.startAuction();

System.out.println("Auction closed. Thank you for participating!");

}

}