TASK 1

#include <iostream>

using namespace std;

int main() {

double balance = 1000; // Initial balance is $1000

int pin = 1234;

int enteredPin;

int choice;

double amount;

do {

cout << "1. Deposit Money" << endl;

cout << "2. Withdraw Money" << endl;

cout << "3. Check Balance" << endl;

cout << "4. Exit" << endl;

cin >> choice; //choose what you want to do

if (choice == 1) {

cout << "Enter deposit amount: ";

cin >> amount;

if (amount > 0) {

balance += amount;

cout << "Deposited: " << amount << endl;

} else {

cout << "Invalid deposit amount. Must be greater than 0." << endl;

}

}

else if (choice == 2) {

cout << "Enter your PIN: ";

cin >> enteredPin;

if (enteredPin == pin) {

cout << "Enter withdrawal amount: ";

cin >> amount;

if (amount > 0 && amount <= balance) {

balance -= amount;

cout << "Withdrew: " << amount << endl;

} else if (amount > balance) {

cout << "Insufficient funds for withdrawal!" << endl;

} else {

cout << "Invalid withdrawal amount. Must be greater than 0." << endl;

}

} else {

cout << "Incorrect PIN. Access denied." << endl;

}

}

else if (choice == 3) {

// Check balance with PIN verification

cout << "Enter your PIN: ";

cin >> enteredPin;

if (enteredPin == pin) {

cout << "Current balance: $" << balance << endl;

} else {

cout << "Incorrect PIN. Access denied." << endl;

}

}

else if (choice == 4) {

cout << "Thank you for using the Bank Account Management System!" << endl;

}

else {

cout << "Invalid option. Please choose a valid option (1-4)." << endl;

}

} while (choice != 4); // Keep looping until user selects Exit

return 0;

}

TASK 2

#include <iostream>

using namespace std;

int main() {

string book1 = "The Catcher in the Rye", book2 = "1984", book3 = "To Kill a Mockingbird",

book4 = "The Great Gatsby", book5 = "Moby Dick";

int available1 = 3, available2 = 2, available3 = 1, available4 = 0, available5 = 5;

int choice;

do {

// Display the menu

cout << "1. Borrow a book"<<endl;

cout << "2. Return a book"<<endl;

cout << "3. Exit"<<endl;

cout << "Please choose an option: "<<endl;

cin >> choice;

if (choice == 1) { // Borrow a book

int bookChoice;

cout << "1. " << book1 << " - Available: " << available1 << " copies"<<endl;

cout << "2. " << book2 << " - Available: " << available2 << " copies"<<endl;

cout << "3. " << book3 << " - Available: " << available3 << " copies"<<endl;

cout << "4. " << book4 << " - Available: " << available4 << " copies"<<endl;

cout << "5. " << book5 << " - Available: " << available5 << " copies"<<endl;

cout << "Enter the number of the book you want to borrow "<<endl;

cin >> bookChoice;

if (bookChoice < 1 || bookChoice > 5) {

cout << "Invalid choice"<<endl;

continue;

}

// Borrowing Logic

if (bookChoice == 1) {

if (available1 > 0) {

available1--;

cout << "You have successfully borrowed: " << book1 << endl;

} else {

cout << "Sorry, this book is currently unavailable.\n";

}

} else if (bookChoice == 2) {

if (available2 > 0) {

available2--;

cout << "You have successfully borrowed: " << book2 << endl;

} else {

cout << "Sorry, this book is currently unavailable.\n";

}

} else if (bookChoice == 3) {

if (available3 > 0) {

available3--;

cout << "You have successfully borrowed: " << book3 << endl;

} else {

cout << "Sorry, this book is currently unavailable.\n";

}

} else if (bookChoice == 4) {

if (available4 > 0) {

available4--;

cout << "You have successfully borrowed: " << book4 << endl;

} else {

cout << "Sorry, this book is currently unavailable.\n";

}

} else if (bookChoice == 5) {

if (available5 > 0) {

available5--;

cout << "You have successfully borrowed: " << book5 << endl;

} else {

cout << "Sorry this book is currently unavailable"<<endl;

}

}

} else if (choice == 2) { // Return a book

int bookChoice;

cout << "Enter the number of the book you want to return: "<<endl;

cin >> bookChoice;

if (bookChoice < 1 || bookChoice > 5) {

cout << "Invalid choice"<<endl;

continue;

}

if (bookChoice == 1) {

available1++;

cout << "You have successfully returned: " << book1 << endl;

} else if (bookChoice == 2) {

available2++;

cout << "You have successfully returned: " << book2 << endl;

} else if (bookChoice == 3) {

available3++;

cout << "You have successfully returned: " << book3 << endl;

} else if (bookChoice == 4) {

available4++;

cout << "You have successfully returned: " << book4 << endl;

} else if (bookChoice == 5) {

available5++;

cout << "You have successfully returned: " << book5 << endl;

}

} else if (choice == 3) {

cout << "Exiting the system"<<endl;

} else {

cout << "Invalid option"<<endl;

}

} while (choice != 3); // Continue the loop until the user selects 3 to exit

return 0;

}

TASK 3

#include <iostream>

using namespace std;

int main() {

//numbers

int i = 1;

while (i <= 5) { // loop for rows

int j = 1;

while (j <= i) { // loop for numbers in each row

cout << j << " ";

j++; // increment j inside the inner loop

}

cout << endl;

i++;

}

cout << endl;

//sterric

i = 1;

while (i <= 5) { // loop for rows

int j = 1;

while (j <= i) { // loop for stars in each row

cout << "\*";

j++;

}

cout << endl; // move to next line after each row

i++;

}

return 0;

}