Matthew Robin

Lab 2

**import java.util.\*;**

**import java.util.Scanner;**

**public class AddressBook {**

**ArrayList<Person> myAddressBook;**

**Scanner keyboard = new Scanner(System.in);**

**public AddressBook() {**

**this.myAddressBook = new ArrayList<>();**

**}**

**void UserAdd() {**

**System.out.println("Please write the name of the person "**

**+ "you would like to add to your address book.");**

**Person p1 = new Person();**

**p1.firstName = keyboard.nextLine();**

**myAddressBook.add(p1);**

**}**

**void add(Person p) {**

**if (myAddressBook.contains(p)) {**

**System.out.println("This person is already in your address book.");**

**} else {**

**myAddressBook.add(p);**

**System.out.print(p.returnToString());**

**System.out.println(" is now in your address book.");**

**}**

**}**

**void userDelete() {**

**System.out.println("Please write the name of the person "**

**+ "you would like to delete from your address book.");**

**Person p2 = new Person();**

**p2.firstName = keyboard.nextLine();**

**if (myAddressBook.contains(p2)) {**

**myAddressBook.remove(p2);**

**System.out.print(p2.returnToString());**

**System.out.println(" has been deleted.");**

**} else {**

**System.out.println("This person is not in your address book "**

**+ "and could not be deleted.");**

**}**

**}**

**void delete(Person p) {**

**if (myAddressBook.contains(p)) {**

**myAddressBook.remove(p);**

**System.out.print(p.returnToString());**

**System.out.println(" has been deleted.");**

**} else {**

**System.out.println("This person is not in your address book "**

**+ "and could not be deleted.");**

**}**

**}**

**public static boolean isInteger(String s) {**

**try {**

**Integer.parseInt(s);**

**} catch (NumberFormatException e) {**

**return false;**

**}**

**// only got here if we didn't return false**

**return true;**

**}**

**void userSearch() {**

**System.out.println("Please write the first name, last name, "**

**+ "or ID number of the person you would like to find");**

**String answer = keyboard.nextLine();**

**boolean found;**

**found = false;**

**for (Person p : myAddressBook) {**

**// check if answer is int**

**if (isInteger(answer)) {**

**// convert, go straight to compare to idNumber**

**String idString = String.valueOf(p.idNumber);**

**if (answer.equals(idString)) {**

**found = true;**

**System.out.println("ID Number Match!");**

**System.out.println(p.returnToString());**

**}**

**} //Search for first and last names**

**else {**

**if (p.firstName.equals(answer)) {**

**found = true;**

**System.out.println("First Name Match!");**

**System.out.println(p.returnToString());**

**} else {**

**if (p.lastName.equals(answer)) {**

**found = true;**

**System.out.println("Last Name Match!");**

**System.out.println(p.returnToString());**

**}**

**}**

**}**

**}**

**if (found == false) {**

**System.out.println("This person is not in your address book.");**

**}**

**}**

**void search(Person p3) {**

**if (myAddressBook.contains(p3)) {**

**System.out.println(p3.returnToString());**

**} else {**

**System.out.println("This person is not in your address book.");**

**}**

**}**

**}**

**TESTER**

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public class AddressBookTester {

public static void main(String args[]) {

AddressBook test1 = new AddressBook ();

Person a1 = new Person ();

a1.firstName = "Harry";

a1.lastName = "Potter";

Person a2 = new Person ();

a2.firstName = "Tim";

a2.lastName = "Hidecker";

Person a3 = new Person ();

a3.firstName = "Matthew";

a3.lastName = "Robin";

test1.add(a1);

test1.add(a2);

test1.add(a3);

System.out.println("Deleting Harry Potter.");

test1.delete(a1);

System.out.println("Searching for Tim Hidecker.");

test1.search(a3);

System.out.println("Searching for Matthew Robin.");

test1.search(a1);

System.out.println("Calling user search:");

test1.userSearch();

}}

OUTPUT

run:

Name: Harry Potter. ID Number : 1000. is now in your address book.

Name: Tim Hidecker. ID Number : 1001. is now in your address book.

Name: Matthew Robin. ID Number : 1002. is now in your address book.

Deleting Harry Potter.

Name: Harry Potter. ID Number : 1000. has been deleted.

Searching for Tim Hidecker.

Name: Matthew Robin. ID Number : 1002.

Searching for Matthew Robin.

This person is not in your address book.

Calling user search:

Please write the first name, last name, or ID number of the person you would like to find