EXPERIMENT NO : 8

DATE :

AIM : Write a Java program to store employee details including employee number, name, and salary, and search for an employee by employee number

import java.util.ArrayList;

import java.util.Scanner;

class Employee {

int empNumber;

String empName;

double empSalary;

Employee(int empNumber, String empName, double empSalary) {

this.empNumber = empNumber;

this.empName = empName;

this.empSalary = empSalary;

}

void displayEmployeeDetails() {

System.out.println("Employee Number: " + empNumber);

System.out.println("Employee Name: " + empName);

System.out.println("Employee Salary: " + empSalary);

}

}

public class EmployeeDetails {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

ArrayList<Employee> employeeList = new ArrayList<>();

System.out.print("Enter the number of employees: ");

int numberOfEmployees = scanner.nextInt();

scanner.nextLine();

for (int i = 0; i < numberOfEmployees; i++) {

System.out.println("\nEnter details for employee " + (i + 1));

System.out.print("Enter employee number: ");

int empNumber = scanner.nextInt();

scanner.nextLine();

System.out.print("Enter employee name: ");

String empName = scanner.nextLine();

System.out.print("Enter employee salary: ");

double empSalary = scanner.nextDouble();

scanner.nextLine();

employeeList.add(new Employee(empNumber, empName, empSalary));

}

System.out.print("\nEnter employee number to search: ");

int empNumberToSearch = scanner.nextInt();

boolean found = false;

for (Employee emp : employeeList) {

if (emp.empNumber == empNumberToSearch) {

emp.displayEmployeeDetails();

found = true;

break;

}

}

if (!found) {

System.out.println("Employee not found with employee number: " + empNumberToSearch);

}

scanner.close();

}

}

EXPERIMENT NO : 9

DATE :

AIM : Write a Java program to store ‘n‘ strings in an array. Search for a given string. If found, print

its index; otherwise, display ”String not found.

import java.util.Scanner;

public class StringSearch {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of strings you want to store: ");

int n = scanner.nextInt();

scanner.nextLine();

String[] strings = new String[n];

System.out.println("Enter the strings:");

for (int i = 0; i < n; i++) {

System.out.print("String " + (i + 1) + ": ");

strings[i] = scanner.nextLine();

}

System.out.print("\nEnter the string to search: ");

String searchString = scanner.nextLine();

boolean found = false;

for (int i = 0; i < n; i++) {

if (strings[i].equals(searchString)) {

System.out.println("String found at index: " + i);

found = true;

break;

}

}

if (!found) {

System.out.println("String not found.");

}

scanner.close();

}

}

EXPERIMENT NO : 10

DATE :

AIM : Write a Java program to perform various string manipulations, including finding the

length, converting to uppercase and lowercase, extracting characters and substrings, and

reversing the string.

import java.util.Scanner;

public class StringManipulations {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a string: ");

String inputString = scanner.nextLine();

int length = inputString.length();

System.out.println("Length of the string: " + length);

String upperCaseString = inputString.toUpperCase();

System.out.println("String in uppercase: " + upperCaseString);

String lowerCaseString = inputString.toLowerCase();

System.out.println("String in lowercase: " + lowerCaseString);

char firstChar = inputString.charAt(0);

System.out.println("First character: " + firstChar);

String substring = inputString.substring(2, 5);

System.out.println("Substring from index 2 to 5: " + substring);

String reversedString = new StringBuilder(inputString).reverse().toString();

System.out.println("Reversed string: " + reversedString);

scanner.close();

}

EXPERIMENT NO : 11

DATE :

AIM : Write a Java program to implement hierarchical inheritance for a book management

system. Define a base class ‘Publisher‘, a derived class ‘Book‘, and two subclasses ‘Liter

ature‘ and ‘Fiction‘. Include methods to read and display book details and demonstrate

the functionality using user input

import java.util.Scanner;

// Base class: Publisher

class Publisher {

String publisherName;

// Constructor

Publisher(String publisherName) {

this.publisherName = publisherName;

}

// Method to display publisher details

void displayPublisher() {

System.out.println("Publisher: " + publisherName);

}

}

// Derived class: Book (Inherits Publisher)

class Book extends Publisher {

String bookTitle;

String authorName;

// Constructor

Book(String publisherName, String bookTitle, String authorName) {

super(publisherName); // Call to Publisher class constructor

this.bookTitle = bookTitle;

this.authorName = authorName;

}

// Method to display book details

void displayBook() {

displayPublisher();

System.out.println("Book Title: " + bookTitle);

System.out.println("Author: " + authorName);

}

}

// Subclass 1: Literature (Inherits Book)

class Literature extends Book {

String genre;

Literature(String publisherName, String bookTitle, String authorName, String genre) {

super(publisherName, bookTitle, authorName);

this.genre = genre;

}

void display() {

System.out.println("\n[Literature Book Details]");

displayBook();

System.out.println("Genre: " + genre);

}

}

// Subclass 2: Fiction (Inherits Book)

class Fiction extends Book {

String category;

Fiction(String publisherName, String bookTitle, String authorName, String category) {

super(publisherName, bookTitle, authorName);

this.category = category;

}

void display() {

System.out.println("\n[Fiction Book Details]");

displayBook();

System.out.println("Category: " + category);

}

}

// Main class

public class BookManagement {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

// Get Literature book details

System.out.println("Enter details for Literature book:");

System.out.print("Publisher Name: ");

String pub1 = sc.nextLine();

System.out.print("Book Title: ");

String title1 = sc.nextLine();

System.out.print("Author Name: ");

String author1 = sc.nextLine();

System.out.print("Genre: ");

String genre = sc.nextLine();

// Get Fiction book details

System.out.println("\nEnter details for Fiction book:");

System.out.print("Publisher Name: ");

String pub2 = sc.nextLine();

System.out.print("Book Title: ");

String title2 = sc.nextLine();

System.out.print("Author Name: ");

String author2 = sc.nextLine();

System.out.print("Category: ");

String category = sc.nextLine();

// Create objects

Literature litBook = new Literature(pub1, title1, author1, genre);

Fiction ficBook = new Fiction(pub2, title2, author2, category);

// Display book details

litBook.display();

ficBook.display();

sc.close();

}

}