## **Butterfly:**

## **public class Main** { public static void main(String[] args) { int n = 4; for (int i = 1; i <= n; i++) { int star = i; int space = 2 \* (n - i); for (int j = 1; j <= star; j++) { System.*out*.print("\*"); } for (int j = 1; j <= space; j++) { System.*out*.print(" "); } for (int j = 1; j <= star; j++) { System.*out*.print("\*"); } for (int j = 1; j <= space; j++) { System.*out*.print(""); } System.*out*.println(" "); } for (int i = n - 1; i >= 1; i--) { int star = i; int space = 2 \* (n - i); for (int j = 1; j <= star; j++) { System.*out*.print("\*"); } for (int j = 1; j <= space; j++) { System.*out*.print(" "); } for (int j = 1; j <= star; j++) { System.*out*.print("\*"); } for (int j = 1; j <= space; j++) { System.*out*.print(""); } System.*out*.println(" "); } } }

OUTPUT:

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HW program

public class Main {  
 public static void main(String[] args) {  
 int n = 8;  
 for (int i = 1; i <= n; i++) {  
 if (i <= 3) {  
 System.*out*.print(" ");  
 for (int j = 1; j <= i; j++) {  
 System.*out*.print("\*");  
 }  
 System.*out*.println();  
 } else if (i == 4) {  
 System.*out*.println(" \*\*\*");  
 } else if (i == 5) {  
 System.*out*.println(" \*\*\*");  
 } else {  
 System.*out*.print(" ");  
 for (int j = 1; j <= (n - i + 1); j++) {  
 System.*out*.print("\*");  
 }  
 System.*out*.println();  
 }  
 }  
 }  
}

OUTPUT:

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C0llegeManagement

class College {  
 void studentDetails() {  
 System.*out*.println("College Student Details: Name, Roll Number, Course");  
 }  
 void examTimings() {  
 System.*out*.println("College Exam Timings: 9:00 AM to 12:00 PM");  
 }  
}  
class School extends College {  
 @Override  
 void studentDetails() {  
 System.*out*.println("School Student Details: Name, Grade, Section");  
 }  
 @Override  
 void examTimings() {  
 System.*out*.println("School Exam Timings: 9:30 AM to 12:30 AM");  
 }  
}  
 class CollegeManagementSystem {  
 public static void main(String[] args) {  
 College college = new College();  
 college.studentDetails();  
 college.examTimings();  
 System.*out*.println();  
 School school = new School();  
 school.studentDetails();  
 school.examTimings();  
 }  
}

OUTPUT:

College Student Details: Name, Roll Number, Course

College Exam Timings: 9:00 AM to 12:00 PM

School Student Details: Name, Grade, Section

School Exam Timings: 9:30 AM to 12:30 AM

NEON NUMBER:

import java.util.Scanner;

public class Main{

public static void main(String [] args){

int sum=0;

Scanner sc=new Scanner(System.in);

int num=9;

int square=num\*num;

square=num\*num;

while(square!=0){

sum +=square%10;

square=square/10;

}

System.out.print(sum);

if(sum==num) {

System.out.println("it is neon number");

}

else{

System.out.println("it is not a neon number");

}

}

}

OUTPUT:

9it is neon number

=== Code Execution Successful ===

ROMAN NUMBER

//TIP To <b>Run</b> code, press <shortcut actionId="Run"/> or  
// click the <icon src="AllIcons.Actions.Execute"/> icon in the gutter.  
public class Main {  
 class Main {  
 public static int romanToInt(String s) {  
 int result = 0;  
 int num = 0;  
 for (int i = s.length() - 1; i >= 0; i--) {  
 switch (s.charAt(i)) {  
 case 'I':  
 num = 1;  
 break;  
 case 'V':  
 num = 5;  
 break;  
 case 'X':  
 num = 10;  
 break;

num = 50;  
 break;  
 case 'C':  
 num = 100;  
 break;  
 case 'D': // D was missing in your original switch, standard roman numeral  
 num = 500;  
 break;  
 case 'M':  
 num = 1000;  
 break;  
 default:  
 System.*out*.println("Invalid roman number:");  
 num = 0; // assign zero to avoid messing result  
 break;  
 }  
 if (num \* 4 < result) {  
 result -= num;  
 } else {  
 result += num;  
 }  
 }  
 return result;  
 }  
  
 public static void main(String[] args) {  
 int num = *romanToInt*("LV");  
 System.*out*.println(num); // Expected output: 55  
 }  
 }  
 }

OUTPUT:

55

class College {

String collegeName;

String collegeAddress;

public College(String name, String address) {

this.collegeName = name;

this.collegeAddress = address;

}

void facultyDetails() {

System.out.println("College Faculty: Professors, Lecturers, Admin Staff");

}

void timings() {

System.out.println("College Timings: 9 AM to 5 PM");

}

void attendance() {

System.out.println("Attendance: Mandatory for all students.");

}

void displayCollegeInfo() {

System.out.println("College Name: " + collegeName);

System.out.println("College Address: " + collegeAddress);

}

}

class School extends College {

String schoolName;

int gradeLevel;

public School(String collegeName, String collegeAddress, String schoolName, int gradeLevel) {

super(collegeName, collegeAddress);

this.schoolName = schoolName;

this.gradeLevel = gradeLevel;

}

@Override

void facultyDetails() {

System.out.println("School Faculty: Teachers, Assistants");

}

// Overriding timings method

@Override

void timings() {

System.out.println("School Timings: 8 AM to 3 PM");

}

@Override

void attendance() {

System.out.println("School Attendance: Required for all grades.");

}

void displaySchoolInfo() {

displayCollegeInfo();

System.out.println("School Name: " + schoolName);

System.out.println("Grade Level: " + gradeLevel);

}

}

public class CollegeManagementSystem {

public static void main(String[] args) {

College college = new College("aits College", "123 College St.");

college.displayCollegeInfo();

college.facultyDetails();

college.timings();

college.attendance();

System.out.println("\n--- School Details ---");

School school = new School("aits College", "123 College St.", "Greenfield High School", 10);

school.displaySchoolInfo();

school.facultyDetails();

school.timings();

school.attendance();

}

}