Programming Essential 2024

Assignment 3

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Q1 :

public class Assign3Q1 {

public static void main(String[] args) {

char someChar = 'a';

System.out.println("Char is: " + someChar);

switch(Character.toLowerCase(someChar)) {

case 'a':

case 'e':

case 'i':

case 'o':

case 'u':

System.out.println(someChar + " is a vowel.");

break;

default:

if (Character.isLetter(someChar)) {

System.out.println(someChar + " is a consonant.");

}

}

}

}

Q2:

public class Assign3Q2 {

public static void main(String[] args) {

int currentMonth = 1; // Change this value to test different months

int daysInMonth;

switch(currentMonth) {

case 1: // January

case 3: // March

case 5: // May

case 7: // July

case 8: // August

case 10: // October

case 12: // December

daysInMonth = 31;

break;

case 4: // April

case 6: // June

case 9: // September

case 11: // November

daysInMonth = 30;

break;

case 2: // February

daysInMonth = 28; // Assuming non-leap year

break;

default:

System.out.println("Invalid month!");

return;

}

System.out.println("Number of days in month " + currentMonth + " is: " + daysInMonth);

}

}

Q3 :

public class FactorialCalculator {

public static void main(String[] args) {

int currentValue = 5; // The number for which we want to calculate the factorial

int factorial = 1;

if (currentValue < 0) {

System.out.println("Factorial is not defined for negative numbers.");

} else if (currentValue == 0) {

factorial = 1;

} else {

for (int i = 1; i <= currentValue; i++) {

factorial \*= i;

}

}

System.out.println("Factorial of " + currentValue + " is: " + factorial);

}

}

Q4:

public class ShapePattern {

public static void main(String[] args) {

int rows = 5; // Number of rows for the triangle

// Outer loop for the number of rows

for (int i = 1; i <= rows; i++) {

// Inner loop for printing asterisks in each row

for (int j = 1; j <= i; j++) {

System.out.print("\* ");

}

System.out.println(); // Move to the next line after each row

}

}

}

Q;5

public class FactorialCalculator {

public static void main(String[] args) {

int currentValue = 5; // The number for which we want to calculate the factorial

int factorial = 1;

int counter = 1;

while (counter <= currentValue) {

factorial \*= counter;

counter++;

}

System.out.println("Factorial of " + currentValue + " is: " + factorial);

}

}

Q6;

public class FactorialCalculator {

public static void main(String[] args) {

int currentValue = 5; // The number for which we want to calculate the factorial

int factorial = 1;

int counter = 1;

while (counter <= currentValue) {

factorial \*= counter;

counter++;

}

System.out.println("Factorial of " + currentValue + " is: " + factorial);

}

}