**SIMATS SCHOOL OF ENGINEERING**

**DEPARTMENT OF INFORMATION SECURITY**

**CSA0983 – PROGRAMMING IN JAVA WITH DEADLOCKS**

**Assignment - 2**

1 ] Write a program to reverse a number using loop?(Get the input from user)

Sample Input:

Number: 14567

Sample Output:

Reverse Number: 76541

import java.util.Scanner;

public class ReverseNumber {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int number = scanner.nextInt();

int reversedNumber = 0;

while (number != 0) {

int remainder = number % 10;

reversedNumber = reversedNumber \* 10 + remainder;

number /= 10;

}

System.out.println("Reversed Number: " + reversedNumber);

}

}

2.] write a java program Find the LCM and GCD of n numbers? Sample Input: N value = 2 Number 1 = 16 Number 2 = 20 Sample Output: LCM = 80 GCD = 4

import java.math.BigInteger;

import java.util.Scanner;

public class LCMGCD {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of N: ");

int n = scanner.nextInt();

BigInteger[] numbers = new BigInteger[n];

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

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

numbers[i] = scanner.nextBigInteger();

}

BigInteger lcm = findLCM(numbers);

BigInteger gcd = findGCD(numbers);

System.out.println("LCM = " + lcm);

System.out.println("GCD = " + gcd);

}

public static BigInteger findLCM(BigInteger[] numbers) {

BigInteger lcm = numbers[0];

for (int i = 1; i < numbers.length; i++) {

lcm = lcm.multiply(numbers[i]).divide(lcm.gcd(numbers[i]));

}

return lcm;

}

public static BigInteger findGCD(BigInteger[] numbers) {

BigInteger gcd = numbers[0];

for (int i = 1; i < numbers.length; i++) {

gcd = gcd.gcd(numbers[i]);

}

return gcd;

}

}

3] Write a java program to print the below pattern?

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

import java.util.Scanner;

public class Pattern {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int numRows = scanner.nextInt();

// Iterate over each row

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

// Print spaces for the current row

for (int j = 0; j < numRows - i - 1; j++) {

System.out.print(" ");

}

int value = 1;

// Print the values for the current row

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

System.out.print(value + " ");

// Calculate the next value using Pascal's triangle formula

value = value \* (i - j) / (j + 1);

}

System.out.println();

}

}

}