**OBJECT ORIANTED PROGRAMMING ASSIGNMENTS**

**KIET GROUP OF INSTITUTIONS**

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NAME: Atif Ali

SECTION: A

ROLL NO.: 2100290140040

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//UNIT 1: Assignment - 1

//program to find greatest number from 3 numbers entered from user

import java.util.Scanner;

class Greatest {

private int num1, num2, num3, greatest;

public void input() {

Scanner sc = new Scanner(System.in);

System.out.println("Enter 3 numbers: ");

num1 = sc.nextInt();

num2 = sc.nextInt();

num3 = sc.nextInt();

sc.close();

}

public void findGreatest() {

if(num1 > num2) {

if(num1 > num3)

greatest = num1;

else

greatest = num3;

} else {

if(num2 > num3)

greatest = num2;

else

greatest = num3;

}

}

public void printGreatest() {

System.out.println("The greatest of " + num1 + ", " + num2 + " and " + num3 + " is: " + greatest);

}

}

public class GreatestMain {

public static void main(String args[]) {

Greatest obj = new Greatest();

obj.input();

obj.findGreatest();

obj.printGreatest();

}

}

// UNIT 1: ASSIGNMENT - 2

// program to find the sum of numbers entered from command line

public class CmdAddition {

public static void main(String args[]) {

int a = Integer.parseInt(args[0]);

int b = Integer.parseInt(args[1]);

int sum = a + b;

System.out.println("The sum of " + a + " and " + b + " is: " + sum);

}

}

// UNIT 1: ASSIGNMENT - 3

// program to create a Room class in Java

import java.util.Scanner;

class Room {

int roomNo;

String roomType;

double roomArea;

boolean acMachine;

public void setData() {

Scanner sc = new Scanner(System.in);

System.out.println("Enter room number: ");

roomNo = sc.nextInt();

sc.nextLine();

System.out.println("Enter room type: ");

roomType = sc.nextLine();

System.out.println("Enter room area: ");

roomArea = sc.nextDouble();

sc.nextLine();

System.out.println("Is it an AC room?(y/n): ");

char ch = sc.nextLine().charAt(0);

if(ch == 'Y' || ch == 'y')

acMachine = true;

else

acMachine = false;

}

public void displayData() {

System.out.println("Details of room are: ");

System.out.println("Room number: " + roomNo);

System.out.println("Room type: " + roomType);

System.out.println("Room area: " + roomArea);

System.out.println("AC installed: " + acMachine);

}

}

public class RoomMain {

public static void main(String args[]) {

Room obj = new Room();

obj.setData();

obj.displayData();

}

}

// UNIT 1: ASSIGNMENT - 4

// create a class "SimpleObject" and display message by using constructor of this class

public class SimpleObject {

SimpleObject() {

System.out.println("Constructor called.");

System.out.println("Hello from Constructor.");

}

public static void main(String args[]) {

SimpleObject obj = new SimpleObject(); // calling the constructor

}

}

// UNIT 1: ASSIGNMENT - 5

// program to demonstrate static variables, methods and block

class Student {

// the static variable

static int totalStudents;

// instance variables

int roll;

String name;

// static methods

public static void incrementTotalStudents() {

totalStudents++;

}

Student(int roll, String name) {

this.roll = roll;

this.name = name;

incrementTotalStudents(); // calling the static method

}

// instance methods

public void showDetails() {

System.out.println("Student roll number: " + this.roll);

System.out.println("Student name: " + this.name);

}

// static block for initialization of the static variable

// this block is executed only once when the first object of the class is created

static {

System.out.println("Static block called."); // will be printed only once

totalStudents = 0;

}

}

public class StaticDemo {

public static void main(String args[]) {

// creating 3 objects of the Student class

Student s1 = new Student(21, "Nakul");

Student s2 = new Student(43, "Rajesh");

Student s3 = new Student(51, "Yusharth");

// accessing the static variable through class

System.out.println("Total number of students in class: " + Student.totalStudents);

// accessing the instance methods

System.out.println("The details of all the students are: ");

s1.showDetails();

s2.showDetails();

s3.showDetails();

}

}