1.Registration Form

import java.util.Scanner;

class Details{

String name;

int age;

String country;

Scanner sc=new Scanner(System.in);

public Details(){

System.out.println("Enter the details name:");

name=sc.nextLine();

System.out.println("Enter the details age:");

age=sc.nextInt();

System.out.println("Enter the details country:");

country=sc.nextLine();

}

public void display(){

System.out.println("welcome "+name+" your age is "+age+" and country is "+country);

}

}

public class Registration{

public static void main(String[] args) {

Details d=new Details();

d.display();

}

}

2. Find Square and Cube

import java.util.Scanner;

class Cal{

double n;

public Cal(){

Scanner sc=new Scanner(System.in);

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

n=sc.nextDouble();

}

public void square(){

double s=n\*n;

System.out.println("The square of "+n+" is "+s);

}

public void cube(){

double c=n\*n\*n;

System.out.println("The cube of "+n+" is "+c);

}

}

public class Square\_cube {

public static void main(String[] args) {

Cal c1=new Cal();

c1.square();

c1.cube();

}

}

3. Boolean Result

import java.util.Scanner;

class Cla{

int a;

int b;

public Cla(){

Scanner sc = new Scanner(System.in);

System.out.println("Enter an integer\_1");

a = sc.nextInt();

System.out.println("Enter an integer\_1");

b = sc.nextInt();

}

public void display(){

boolean d;

if(a<b){

d=true;

}

else{

d=false;

}

System.out.println("The result of wheather X is less than Y is "+d);

}

}

public class Greatest\_of\_two {

public static void main(String[] args) {

Cla c = new Cla();

c.display();

}

}

4. MaxValueofSignedByte

public class DataTypeDemo {

public static void main(String[] args) {

byte number = 125;

System.out.println("Initial value of number: " + number);

number = Byte.MAX\_VALUE;

System.out.println("Maximum value of a signed byte: " + number);

}

}

5. Account Details

class Account {

private int id;

private String account\_type;

private double balance;

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getAccount\_type() {

return account\_type;

}

public void setAccount\_type(String account\_type) {

this.account\_type = account\_type;

}

public double getBalance() {

return balance;

}

public void setBalance(double balance) {

this.balance = balance;

}

public Account() {}

public Account(int id, String account\_type, double balance) {

this.id = id;

this.account\_type = account\_type;

this.balance = balance;

}

public boolean withdraw(double amount) {

if(balance >= amount) {

balance -= amount;

return true;

}

else{

return false;

}

}

public String GetDetaiIs(){

return "\nid:"+id+"\nAccount\_type:"+account\_type+"\nBalance:"+balance;

}

}

public class Banking {

public static void main(String[] args) {

Account account1 = new Account(1, "account1", 5100);

Account account2 = new Account(2, "account2", 200);

System.out.println(account1.GetDetaiIs());

double amounttowithdraw=4000;

if(account1.withdraw(amounttowithdraw)) {

System.out.println("New Balance: " + account1.getBalance());

} else {

System.out.println("Insufficient Balance");

}

}

}

6. StringConcatenate

import java.util.Scanner;

public class Concatenate {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter First Name: ");

String num1 = sc.next();

System.out.print("Enter Last Name: ");

String num2 = sc.next();

String s=num1+" "+num2;

System.out.println("Full Name:"+s);

}

}

7. Reverse a sentence

import java.util.Scanner;

public class Reverse\_String {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

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

String s=sc.nextLine();

String[] sp=s.split(" ");

for(int i=sp.length-1;i>=0;i--){

System.out.print(sp[i]);

System.out.print(" ");

}

}

}

8. CalculatorProgram

class Calculator {

public int Addition(int a, int b) {

return a + b;

}

public int Subtraction(int a, int b) {

return a - b;

}

public int Multiplication(int a, int b) {

return a \* b;

}

public double Division(int a, int b, double[] remainder) {

remainder[0] = a % b;

return (double) a / b;

}

}

public class Program {

public static void main(String[] args) {

java.util.Scanner scanner = new java.util.Scanner(System.in);

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

char operator = scanner.next().charAt(0);

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

int operand1 = scanner.nextInt();

int operand2 = scanner.nextInt();

Calculator calculator = new Calculator();

double[] remainder = new double[1];

double result = 0;

boolean validOperator = true;

switch (operator) {

case '+':

result = calculator.Addition(operand1, operand2);

System.out.println("Result of " + operand1 + " + " + operand2 + " is " + (int) result);

break;

case '-':

result = calculator.Subtraction(operand1, operand2);

System.out.println("Result of " + operand1 + " - " + operand2 + " is " + (int) result);

break;

case '\*':

result = calculator.Multiplication(operand1, operand2);

System.out.println("Result of " + operand1 + " \* " + operand2 + " is " + (int) result);

break;

case '/':

if (operand2 != 0) {

result = calculator.Division(operand1, operand2, remainder);

System.out.println("Result of " + operand1 + " / " + operand2 + " is " + (int) result);

System.out.println("Remainder is " + (int) remainder[0]);

} else {

System.out.println("Division by zero is not allowed.");

}

break;

default:

validOperator = false;

System.out.println("Invalid Operator");

}

if (validOperator) {

System.out.println("Calculation completed successfully.");

}

scanner.close();

}

}

9. Find the Age of a person

import java.time.LocalDate;

import java.time.Period;

import java.util.Scanner;

class Person {

private String firstName;

private String lastName;

private LocalDate dob;

// Constructor

public Person(String firstName, String lastName, LocalDate dob) {

this.firstName = firstName;

this.lastName = lastName;

this.dob = dob;

}

// Getter and Setter for firstName

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

// Getter and Setter for lastName

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

// Getter and Setter for dob

public LocalDate getDob() {

return dob;

}

public void setDob(LocalDate dob) {

this.dob = dob;

}

// Read-only property for Adult

public String getAdult() {

int age = getAge(dob);

return age >= 18 ? "Adult" : "Child";

}

// Method to calculate age

public int getAge(LocalDate dob) {

return Period.between(dob, LocalDate.now()).getYears();

}

// Method to display details

public void displayDetails() {

System.out.println("First Name: " + firstName);

System.out.println("Last Name: " + lastName);

System.out.println("Age: " + getAge(dob));

System.out.println(getAdult());

}

}

public class Age\_of\_person {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter first name:");

String firstName = scanner.nextLine();

System.out.println("Enter last name:");

String lastName = scanner.nextLine();

System.out.println("Enter date of birth in yyyy/mm/dd format:");

String dobInput = scanner.nextLine();

LocalDate dob = LocalDate.parse(dobInput);

Person person = new Person(firstName, lastName, dob);

person.displayDetails();

scanner.close();

}

}

10. Gamelnheritance

class Game {

private String name;

private int maxNumPlayers;

// Auto-implemented properties

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getMaxNumPlayers() {

return maxNumPlayers;

}

public void setMaxNumPlayers(int maxNumPlayers) {

this.maxNumPlayers = maxNumPlayers;

}

// Override ToString method

@Override

public String toString() {

return "Maximum number of players for " + name + " is " + maxNumPlayers;

}

}

class GameWithTimeLimit extends Game {

private int timeLimit;

// Auto-implemented property for time limit

public int getTimeLimit() {

return timeLimit;

}

public void setTimeLimit(int timeLimit) {

this.timeLimit = timeLimit;

}

// Override ToString method

@Override

public String toString() {

return super.toString() + "\nTime Limit for " + getName() + " is " + timeLimit + " minutes";

}

}

public class Game\_hier {

public static void main(String[] args) {

java.util.Scanner scanner = new java.util.Scanner(System.in);

// Input for Game without time limit

System.out.println("Enter a game:");

String gameName = scanner.nextLine();

System.out.println("Enter the maximum number of players:");

int maxPlayers = scanner.nextInt();

scanner.nextLine(); // Consume newline

Game game = new Game();

game.setName(gameName);

game.setMaxNumPlayers(maxPlayers);

// Input for Game with time limit

System.out.println("Enter a game that has time limit:");

String timedGameName = scanner.nextLine();

System.out.println("Enter the time limit in minutes:");

int timeLimit = scanner.nextInt();

GameWithTimeLimit timedGame = new GameWithTimeLimit();

timedGame.setName(timedGameName);

timedGame.setMaxNumPlayers(maxPlayers);

timedGame.setTimeLimit(timeLimit);

// Display results

System.out.println(game.toString());

System.out.println(timedGame.toString());

scanner.close();

}

}