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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 your name:");
        name = sc.nextLine();

        System.out.println("Enter your age:");
        age = sc.nextInt();
        sc.nextLine(); // Consume the leftover newline character

        System.out.println("Enter your country:");
        country = sc.nextLine();
    }

    public void display() {
        System.out.println("Welcome " + name + ", your age is " + age + " and your country is " + country + ".");
    }
}
```

```
public class Registration {
    public static void main(String[] args) {
        Details d = new Details(); // Collect details
        d.display(); // Display details
    }
}
```

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 calculate() {
        System.out.println("The square of " + n + " is " + (n * n));
        System.out.println("The cube of " + n + " is " + (n * n * n));
    }
}

public class Square_cube {
    public static void main(String[] args) {
        Cal c1 = new Cal();
        c1.calculate();
    }
}
```

3. Boolean Result

```
import java.util.Scanner;
class Cla {
    int a, b;

    public Cla() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter integer_1:");
        a = sc.nextInt();
        System.out.println("Enter integer_2:");
        b = sc.nextInt();
    }

    public void display() {
        System.out.println("The result of whether X is less than Y is " + (a < b));
    }
}
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);
        System.out.println("Maximum value of a signed byte: " + Byte.MAX_VALUE);
    }
}
```

5. Account Details

```
class Account {
    private int id;
    private String account_type;
    private double balance;

    public Account(int id, String account_type, double balance) {
        this.id = id;
        this.account_type = account_type;
        this.balance = balance;
    }

    public double getBalance() {
        return balance;
    }

    public boolean withdraw(double amount) {
        if (balance >= amount) {
            balance -= amount;
            return true;
        } else {
            return false;
        }
    }
    public String getDetails() {
        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);
        System.out.println(account1.getDetails());

        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 firstName = sc.next();
        System.out.print("Enter Last Name: ");
        String lastName = sc.next();
        System.out.println("Full Name: " + firstName + " " + lastName);
    }
}
```

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[] words = sc.nextLine().split(" ");

        for (int i = words.length - 1; i >= 0; i--) {
            System.out.print(words[i] + " ");
        }
    }
}
```

8. CalculatorProgram

```
class Calculator {
    public int add(int a, int b) {
        return a + b;
    }

    public int subtract(int a, int b) {
        return a - b;
    }

    public int multiply(int a, int b) {
        return a * b;
    }

    public double divide(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;

        switch (operator) {
            case '+':
                result = calculator.add(operand1, operand2);
                break;
            case '-':
```

```
        result = calculator.subtract(operand1, operand2);
        break;
      case '*':
        result = calculator.multiply(operand1, operand2);
        break;
      case '/':
        if (operand2 != 0) {
          result = calculator.divide(operand1, operand2, remainder);
          System.out.println("Remainder is " + (int) remainder[0]);
        } else {
          System.out.println("Division by zero is not allowed.");
          return;
        }
        break;
      default:
        System.out.println("Invalid Operator");
        return;
    }

    System.out.println("Result: " + (int) result);
    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, lastName;
    private LocalDate dob;

    // Constructor
    public Person(String firstName, String lastName, LocalDate dob) {
        this.firstName = firstName;
        this.lastName = lastName;
        this.dob = dob;
    }

    // Method to display details
    public void displayDetails() {
        int age = getAge();
        System.out.println("First Name: " + firstName);
        System.out.println("Last Name: " + lastName);
        System.out.println("Age: " + age);
        System.out.println(age >= 18 ? "Adult" : "Child");
    }

    // Method to calculate age
    private int getAge() {
        return Period.between(dob, LocalDate.now()).getYears();
    }
}

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:");
        LocalDate dob = LocalDate.parse(scanner.nextLine());

        new Person(firstName, lastName, dob).displayDetails();
        scanner.close();
    }
}
```

10. GameInheritance

```
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:");
        Game game = new Game();
        game.setName(scanner.nextLine());
        System.out.println("Enter the maximum number of players:");
        game.setMaxNumPlayers(scanner.nextInt());
        scanner.nextLine(); // Consume newline

        // Input for Game with time limit
        System.out.println("Enter a game that has time limit:");
        GameWithTimeLimit timedGame = new GameWithTimeLimit();
        timedGame.setName(scanner.nextLine());
        System.out.println("Enter the time limit in minutes:");
        timedGame.setMaxNumPlayers(game.getMaxNumPlayers());
        timedGame.setTimeLimit(scanner.nextInt());

        // Display results
        System.out.println(game);
        System.out.println(timedGame);

        scanner.close();
    }
}
```