Main.java

```java
class Customer {
  private int accountNo;
  private String accName;
  private double balance;

  public Customer(int accountNo, String accName, double balance) {
    this.accountNo = accountNo;
    this.accName = accName;
    this.balance = balance;
  }

  public synchronized void deposit(double amount) {
    balance += amount;
    System.out.println("Deposit successful. New balance: " + balance);
    notify(); // notify waiting thread
  }

  public synchronized void withdraw(double amount) {
    while (balance < amount) {
      try {
        wait(); // wait until deposit is made
      } catch (InterruptedException e) {
        e.printStackTrace();
      }
    }
    lance -= amount;
```
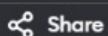
```
java -cp /tmp/B8kqChdC6X/Main
Deposit successful. New balance: 1500.0
Withdrawal successful. New balance: 0.0


=== Code Execution Successful ===
```

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```java
import java.util.Scanner;

public class PalindromeGenerator {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.print("Enter a number: ");
    int num = scanner.nextInt();

    int reversedNum;
    int sum;

    while (true) {
      reversedNum = reverseNumber(num);
      sum = num + reversedNum;

      if (isPalindrome(sum)) {
        System.out.println("Palindrome found: " + sum);
        break;
      }

      num = sum;
    }
  }

  private static int reverseNumber(int num) {
```

```
java -cp /tmp/37j3nkTX0D/PalindromeGenerator
Enter a number: 233828947
Palindrome found: 124424421

=== Code Execution Successful ===
```

```java
import java.util.Scanner;

public class SquareArray {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the number of elements: ");
        int n = scanner.nextInt();

        int[][] array = new int[n][2];

        for (int i = 0; i < n; i++) {
            System.out.print("Enter number " + (i + 1) + ": ");
            int num = scanner.nextInt();

            array[i][0] = num;
            array[i][1] = num * num;
        }

        System.out.println("Array:");
        for (int i = 0; i < n; i++) {
            System.out.println("[" + array[i][0] + ", " + array[i][1] + "]");
        }
    }
}
```

Output:

```
java -cp /tmp/Cm12kpYXkq/SquareArray
Enter the number of elements: 5
Enter number 1: 25
Enter number 2: 50
Enter number 3: 45
Enter number 4: 68
Enter number 5: 90
Array:
[25, 625]
[50, 2500]
[45, 2025]
[68, 4624]
[90, 8100]

=== Code Execution Successful ===
```

Main.java
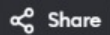
```java
import java.util.Scanner;

class BankAccount {
    private String depositorName;
    private int accountNumber;
    private String accountType;
    private double balance;

    public BankAccount() {
        this.balance = 500.00; // minimum balance
    }

    public void readAccountDetails() {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter depositor name: ");
        depositorName = scanner.nextLine();

        System.out.print("Enter account number: ");
        accountNumber = scanner.nextInt();

        System.out.print("Enter account type (Savings/Current): ");
        accountType = scanner.next();
    }

    public void depositAmount() {
```

Output

```
java -cp /tmp/WmE6yWzBaQ/Main
Enter depositor name: akshith
Enter account number: 902839288
Enter account type (Savings/Current): 234586
Account Details:
Depositor Name: akshith
Account Number: 902839288
Account Type: 234586
Balance: 500.0
Enter amount to deposit:
```

Main.java

Run | Share
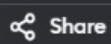
```java
import java.util.Scanner;

public class UniquePermutations {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a number: ");
        int num = scanner.nextInt();

        String strNum = String.valueOf(num);
        char[] chars = strNum.toCharArray();

        permutation(chars, 0, chars.length - 1);
    }

    public static void permutation(char[] chars, int l, int r) {
        if (l == r)
            System.out.println(new String(chars));
        else {
            for (int i = l; i <= r; i++) {
                swap(chars, l, i);
                permutation(chars, l + 1, r);
                swap(chars, l, i); // backtrack
            }
        }
    }
}
```

Output

```
java -cp /tmp/PjHzxrlkRH/UniquePermutations
Enter a number: 34
34
43

=== Code Execution Successful ===
```

```java
1  import java.util.ArrayList;
2  import java.util.List;
3
4  public class PerfectSquares {
5      public static void main(String[] args) {
6          int start = 1; // start of the range
7          int end = 100; // end of the range
8
9          List<Integer> perfectSquares = new ArrayList<>();
10
11         for (int i = start; i <= end; i++) {
12             if (isPerfectSquare(i) && sumOfDigits(i) < 10) {
13                 perfectSquares.add(i);
14             }
15         }
16
17         System.out.println("List of perfect squares with sum of digits less than 10
            :");
18         for (int num : perfectSquares) {
19             System.out.println(num);
20         }
21     }
22
23     public static boolean isPerfectSquare(int num) {
24         int sqrt = (int) Math.sqrt(num);
25         return sqrt * sqrt == num;
```

Output

```
java -cp /tmp/NGwe5Xjewx/PerfectSquares
List of perfect squares with sum of digits less than 10:
1
4
9
16
25
36
81
100

=== Code Execution Successful ===
```

Main.java

```java
import java.util.Scanner;

public class NthPrime {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.print("Enter the value of n: ");
    int n = scanner.nextInt();

    int count = 0;
    int num = 2;
    while (true) {
      if (isPrime(num)) {
        count++;
        if (count == n) {
          System.out.println("The " + n + "th prime number is: " + num);
          break;
        }
      }
      num++;
    }
  }

  public static boolean isPrime(int num) {
    if (num <= 1) {
      return false;
```

Output

```
java -cp /tmp/u4kpOW20nb/NthPrime
Enter the value of n: 3
The 3th prime number is: 5

=== Code Execution Successful ===
```

```java
import java.util.Scanner;

public class FactorPrinter {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.print("Enter a number: ");
    int num = scanner.nextInt();

    System.out.print("Enter the value of n: ");
    int n = scanner.nextInt();

    int count = 0;
    int[] factors = new int[num];
    for (int i = 1; i <= num; i++) {
      if (num % i == 0) {
        factors[count] = i;
        count++;
      }
    }

    System.out.println("Number of factors: " + count);

    if (n <= count) {
      System.out.println("The " + n + "th factor is: " + factors[n - 1]);
    } else {
```
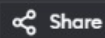
Output:

```
java -cp /tmp/CbSWVwEjIh/FactorPrinter
Enter a number: 24
Enter the value of n: 3
Number of factors: 8
The 3th factor is: 3

=== Code Execution Successful ===
```

Main.java

Share   Run

Output

```java
1  import java.util.Scanner;
2
3  public class CollegeUserDetails {
4    public static void main(String[] args) {
5      Scanner scanner = new Scanner(System.in);
6
7      System.out.print("Enter the total number of users: ");
8      int totalUsers = scanner.nextInt();
9
10     System.out.print("Enter the number of staff users: ");
11     int staffUsers = scanner.nextInt();
12
13     // Calculate the number of non-teaching staff users
14     int nonTeachingStaffUsers = staffUsers / 3;
15
16     // Calculate the number of student users
17     int studentUsers = totalUsers - staffUsers - nonTeachingStaffUsers;
18
19     System.out.println("Total users: " + totalUsers);
20     System.out.println("Staff users: " + staffUsers);
21     System.out.println("Non-teaching staff users: " + nonTeachingStaffUsers);
22     System.out.println("Student users: " + studentUsers);
23   }
24 }
```

```
java -cp /tmp/mE8DlxwZzD/CollegeUserDetails
Enter the total number of users: 25
Enter the number of staff users: 20
Total users: 25
Staff users: 20
Non-teaching staff users: 6
Student users: -1

=== Code Execution Successful ===
```
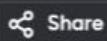
Output

```java
import java.util.Scanner;

public class DayConverter {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);

    System.out.print("Enter the number of days: ");
    int days = scanner.nextInt();

    int years = days / 365;
    int remainingDays = days % 365;

    int weeks = remainingDays / 7;
    int remainingDaysAgain = remainingDays % 7;

    System.out.println(days + " days is equal to:");
    System.out.println(years + " years");
    System.out.println(weeks + " weeks");
    System.out.println(remainingDaysAgain + " days");
  }
}
```

```
java -cp /tmp/qEI2MpJ79C/DayConverter
Enter the number of days: 12
12 days is equal to:
0 years
1 weeks
5 days

=== Code Execution Successful ===
```