1. Write a program which accepts an integer number as input from the user and perform the following conditional checks:
a. Print Tom if number is odd and exists between 20 to 30
b. Print Jerry, if number is even and exists between 20 and 30

Ans)

```
import java.util.Scanner;

public class OddAreEven {
 public void checkEvenOdd(int n) {
  if(n>=20 && n<=30) {
   if(n%2==0) {
    System.out.println("Jerry");
   }
   else {
    System.out.println("TOM");
   }
  }
  else {
   System.out.println("invalid number please enter the number between 20 to 30");
  }

 }

 public static void main(String[] args) {
  Scanner in = new Scanner(System.in);
  System.out.println("Enter number between 20 to 30");
  int n = in.nextInt();
  new OddAreEven().checkEvenOdd(n);

 }

}
```

2. Write a program which accepts a number as input and check whether the given number is palindrome or not If it is a palindrome then
a. Add all the even numbers and check whether the sum is more than 25. b. Print success and failure messages for all 3 conditions
Input: ‘2468642‘
Output: ‘2468642 is palindrome and the sum of even numbers is greater than 25‘
Input: ‘12345‘
Output: ‘12345 is not palindrome‘
Input: ‘12345654321‘
Output: ‘12345654321 is palindrome and sum of even numbers is less than25‘

Ans)

```
import java.util.Scanner;

public class Palindrome {
 public void checkPalindrome(Long num) {
  long temp = num;
  long res = 0;
  long sum = 0;
  while(temp>0) {
```

```
  long rem = temp%10;
  if(rem%2==0) {
   sum += rem;
  }
  res = (res*10)+rem;
  temp /=10;
 }
 if(res==num) {
  if(sum>25)
  System.out.println(num+" is palindrome and the sum of even numbers is greater than 25");
  else
   System.out.println(num+" is palindrome and sum of even numbers is less than25");
 }
 else {
  System.out.println(num +" not a palindrome");
 }

}

 public static void main(String[] args) {
  Scanner in = new Scanner(System.in);
  System.out.println("Enter the number: ");
  long num = in.nextLong();
  new Palindrome().checkPalindrome(num);

 }

}
```

3. Write a program that reads an unspecified number of integer arguments using Scanner Class and adds them together. The program should display the total of the given input number and should only consider integer value.The program should display an error message if there are any non-integer values
Input : 12 23 2 4
Output : 41

Ans)

```
import java.util.Scanner;

public class SumOfNumbers {

 public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter integers separated by spaces (enter q to finish) ");
         int sum = 0;
         while (scanner.hasNext()) {
            if (scanner.hasNextInt()) {
                int num = scanner.nextInt();
                sum += num;
            }
            else {
                String input = scanner.next();
                if (input.equals("q"))
                    break;
```

```
            else
            System.out.println("Error: is not an integer.");

            break;

        }
 }
        System.out.println("Sum of the integers entered: " + sum);

 }
}
```

4. Write a program to find whether input integer is Unique or not. A Unique number is a positive integer (without leading zeros) with no duplicate digits. For example, 7, 135, 214 are all unique numbers whereas 33, 3121, 300 are not.

Ans)

```
import java.util.HashSet;
import java.util.Scanner;

public class UniqueNumber {
 public boolean isUnique(int num) {
  int flag = 0;
  String numStr = String.valueOf(num);
        HashSet set = new HashSet();
        for (char c : numStr.toCharArray()) {
         if(set.contains(c)) {
          return false;
         }
         set.add(c);
        }
        return true;

 }

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

        System.out.print("Enter a positive integer: ");
        int num = in.nextInt();
        if(num<0) {
         System.out.println("it not a unique number");
        }
        else {
         if(new UniqueNumber().isUnique(num)) {
          System.out.println("it is unique number");
         }
         else {
          System.out.println("it not a unique number");
         }
        }

 }

}
```