1.Harshad number 22

```java
Import java.util.Scanner;
Public class HarshadNumberCheck {
    Public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Int num = sc.nextInt();
        Int sum = 0, temp = num;
        While (temp > 0) {
            Sum += temp % 10;
            Temp /= 10;
        }
        If (num % sum == 0) {
            System.out.println("Harshad Number");
        } else {
            System.out.println("Not Harshad Number");
        }
    }
}
```

2.Abundant number 11

```java
Import java.io.*;
Import java.util.*;
```

```java
Public class Solution {

    Public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        Int n = scanner.nextInt();

        Scanner.close();

        Int sumOfProperDivisors = 0;

        For (int I = 1; I <= n / 2; i++) {

            If (n % I == 0) {

                sumOfProperDivisors += I;

            }

        }

        If (sumOfProperDivisors > n) {

            System.out.println("Abundant Number");

        } else {

            System.out.println("Not Abundant Number");

        }

    }

}
```

3.SUM OF DIGIT 10

```java
Import java.io.*;

Import java.util.*;
```

```java
Public class Solution {

  Public static void main(String[] args) {

    Scanner scanner = new Scanner(System.in);

    String nStr = scanner.nextLine();

    Int sum = 0;

    Try {

      Int n = Integer.parseInt(nStr);

      If (n < 100) {

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

      } else {

        While (n > 0) {

          Sum += n % 10;

          N /= 10;

        }

        System.out.println("Sum of digit is " + sum);

      }

    } catch (NumberFormatException e) {

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

    }

    Scanner.close();

  }
```

}

4.Fibonacci series 144

```java
Import java.util.Scanner;

Public class FibonacciRangeSum {

    Public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        Int n = sc.nextInt();

        Int m = sc.nextInt();

        If (n < 1 || n > 20 || m < 1 || m > 20 || n > m) {

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

            Return;

        }

        Int[] fib = new int[m + 1];

        Fib[1] = 0;

        If (m >= 2) {

            Fib[2] = 1;

        }

        For (int I = 3; I <= m; i++) {

            Fib[i] = fib[I – 1] + fib[I – 2];

        }

        Int sum = 0;
```

```java
    For (int I = n; I <= m; i++) {

        Sum += fib[i];

    }

    System.out.println("The Sum of Fibonacci value is " + sum +
".0");

  }

}
```

5.Multiplication table 79

```java
Import java.util.Scanner;

Public class MultiplicationTable {

   Public static void main(String[] args) {

      Scanner sc = new Scanner(System.in);

      Int n = sc.nextInt();

      If (n < 1 || n > 9) {

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

         Return;

      }

      For (int I = 1; I <= n; i++) {

         System.out.println(n + " x " + I + " = " + (n * i));

      }

   }
```

}

6.sum of even number 1

```java
Import java.io.*;

Import java.util.*;

Public class Solution {

    Public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        Int n = sc.nextInt();

        Int m = sc.nextInt();

        Sc.close();

        If (n <= 0 || n >= 30 || m <= 0 || m >= 30 || n > m) {

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

        } else {

            Int sumOfEvens = 0;

            For (int I = n; I <= m; i++) {

                If (I % 2 == 0) {

                    sumOfEvens += I;

                }

            }

            System.out.println(sumOfEvens);

        }
```

```
    }
}
```

7.Armstrong number or not 13

```java
Import java.util.Scanner;

Public class ArmstrongNumberCheck {
    Public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        Int number = scanner.nextInt();
        If (number < 100 || number > 999) {
            System.out.println("No");
            Return;
        }
        Int originalNumber = number;
        Int sumOfCubes = 0;
        While (number > 0) {
            Int digit = number % 10;
            sumOfCubes += digit * digit * digit;
            number /= 10;
        }
        If (sumOfCubes == originalNumber) {
            System.out.println("Yes");
```

```java
        } else {

            System.out.println("No");

        }

    }

}
```

8.swap 2 digit number

```java
Import java.util.Scanner;

Public class SwapTwoDigits {

    Public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        String input = scanner.next();

        If (input.length() < 2) {

            System.out.println("STDOUT");

            Return;

        }

        Char firstDigit = input.charAt(0);

        Char secondDigit = input.charAt(1);

        Int swappedNumber = (secondDigit – '0') * 10 + (firstDigit – '0');

        System.out.println(swappedNumber);

    }

}
```

9.Count Digits in an Integer 1

```java
Import java.io.*;

Import java.util.*;

Public class Solution {

    Public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        Long num = sc.nextLong();

        If (num >= 1 && num <= 10000000) {

            String s = String.valueOf(num);

            Int digitCount = s.length();

            System.out.println("The count of the given integer is: " + digitCount);

        } else {

            System.out.println("Enter a Valid Input");

        }

        Sc.close();

    }

}
```

10.Print a pattern 4

```java
Import java.util.Scanner;

Public class Solution {
```

```java
Public static void main(String[] args) {

    Scanner scanner = new Scanner(System.in);

    Int n = scanner.nextInt();

    If (n < 0 || n > 9) {

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

    } else {

        Char currentChar = 'A';

        For (int I = 1; I <= n; i++) {

            For (int j = 1; j <= I; j++) {

                System.out.print(currentChar + " ");

                currentChar++;

            }

            System.out.println();

        }

    }

    Scanner.close();

  }

}
```

11.Alphabet Diamond 1

```java
Import java.util.Scanner;

Public class AlphabetPattern {
```

```java
Public static void main(String[] args) {

    Scanner sc = new Scanner(System.in);

    Int n = sc.nextInt();   // Input

    For (int I = 1; I <= n; i++) {

        For (int s = 0; s < n – I; s++) {

            System.out.print(" ");

        }

        For (int j = 0; j < I; j++) {

            System.out.print((char) ('A' + j) + " ");

        }

        System.out.println();

    }

    For (int I = n – 1; I >= 1; i--) {

        For (int s = 0; s < n – I; s++) {

            System.out.print(" ");

        }

        For (int j = 0; j < I; j++) {

            System.out.print((char) ('A' + j) + " ");

        }

        System.out.println();

    }
```

```
        Sc.close();

    }

}
```