Frequently Asked Java Programs

1. Hello World Program

```
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello, World!");
    }
}
```

2. Factorial of a Number

```
import java.util.Scanner;

public class Factorial {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = scanner.nextInt();
        long factorial = 1;

        for (int i = 2; i <= num; i++) {
            factorial *= i;
        }

        System.out.println("Factorial of " + num + " is: " + factorial);
    }
}
```

3. Check if the Number is Prime

```
import java.util.Scanner;
public class PrimeCheck {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = scanner.nextInt();
        boolean isPrime = true;

        if (num <= 1) {
            isPrime = false;
        } else {
            for (int i = 2; i <= Math.sqrt(num); i++) {
                if (num % i == 0) {
                    isPrime = false;
                    break;
                }
            }
        }
        if (isPrime)
            System.out.println(num + " is a prime number.");
        else
            System.out.println(num + " is not a prime number.");
    }
```

4. Fibonacci Series

```
import java.util.Scanner;

public class Fibonacci {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter the number of terms: ");
        int n = scanner.nextInt();
        int a = 0, b = 1;

        System.out.print("Fibonacci Series: " + a + " " + b);
        for (int i = 2; i < n; i++) {
            int next = a + b;
            System.out.print(" " + next);
            a = b;
            b = next;
        }
    }
}
```


5. Palindrome Check

```
import java.util.Scanner;

public class PalindromeCheck {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a string: ");
        String str = scanner.nextLine();
        String reversedStr = new
StringBuilder(str).reverse().toString();

        if (str.equals(reversedStr)) {
            System.out.println(str + " is a palindrome.");
        } else {
            System.out.println(str + " is not a palindrome.");
        }
    }
}
```

6. Reverse a String

```
import java.util.Scanner;

public class ReverseString {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a string: ");
        String str = scanner.nextLine();

        String reversedStr = new
StringBuilder(str).reverse().toString();
        System.out.println("Reversed string: " + reversedStr);
    }
}
```

7. Armstrong Number

```
import java.util.Scanner;

public class ArmstrongCheck {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = scanner.nextInt();
        int originalNum = num;
        int result = 0;

        while (originalNum != 0) {
            int digit = originalNum % 10;
            result += Math.pow(digit, 3);
            originalNum /= 10;
        }

        if (result == num) {
            System.out.println(num + " is an Armstrong
number.");
        } else {
            System.out.println(num + " is not an Armstrong
number.");
        }
    }
```


8. Sum of Digits

```
import java.util.Scanner;

public class SumOfDigits {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = scanner.nextInt();
        int sum = 0;

        while (num != 0) {
            sum += num % 10;
            num /= 10;
        }

        System.out.println("Sum of digits: " + sum);
    }
}
```

9. Check if a Number is Even or Odd

```
import java.util.Scanner;

public class EvenOddCheck {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int num = scanner.nextInt();

        if (num % 2 == 0) {
            System.out.println(num + " is even.");
        } else {
            System.out.println(num + " is odd.");
        }
    }
}
```


10. Bubble Sort

```
import java.util.Scanner;

public class BubbleSort {
    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[] arr = new int[n];

        System.out.println("Enter the elements:");
        for (int i = 0; i < n; i++) {
            arr[i] = scanner.nextInt();
        }

        for (int i = 0; i < n - 1; i++) {
            for (int j = 0; j < n - i - 1; j++) {
                if (arr[j] > arr[j + 1]) {
                    int temp = arr[j];
                    arr[j] = arr[j + 1];
                    arr[j + 1] = temp;
                }
            }
        }

        System.out.println("Sorted array:");
        for (int i : arr) {
            System.out.print(i + " ");
        }
```