

DATE:30.12.23

DAY5- JAVA- QUIZ-1

- 1. Write a Java program to perform a runnable interface, take two threads t1 and t2 and fetch the name of the thread using getName() method.**

```
class MyRunnable implements Runnable {
    public void run() {
        Thread t = Thread.currentThread();
        System.out.println("Thread Name: " + t.getName());
    }
}

public class Main {
    public static void main(String[] args) {
        Thread t1 = new Thread(new MyRunnable());
        Thread t2 = new Thread(new MyRunnable());

        t1.start();
        t2.start();
    }
}
```

- 2. Given an integer N, the task is to write program to print the first N natural numbers in increasing order using two threads.**

```
import java.util.Scanner;

class PrintNumbers implements Runnable {
    private int N;

    PrintNumbers(int N) {
        this.N = N;
    }

    public void run() {
        for (int i = 1; i <= N; i++) {
            System.out.print(i + " ");
        }
    }
}

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

```

        System.out.print("Enter the value of N: ");

        int N = scanner.nextInt();

        Thread t1 = new Thread(new PrintNumbers(N));

        t1.start();

    }
}
3. Write a two-threaded program, where one thread finds all prime numbers (in 0 to 10) and another thread finds all palindrome numbers (in 10 to 50). Schedule these threads in a sequential manner to get the output.

class PrimeThread implements Runnable {
    public void run() {
        System.out.print("Prime numbers from 0 to 10: ");
        for (int i = 2; i <= 10; i++) {
            if (isPrime(i)) {
                System.out.print(i + " ");
            }
        }
    }

    private boolean isPrime(int num) {
        if (num <= 1) {
            return false;
        }
        for (int i = 2; i <= Math.sqrt(num); i++) {
            if (num % i == 0) {
                return false;
            }
        }
        return true;
    }
}

class PalindromeThread implements Runnable {
    public void run() {
        System.out.print("\nPalindrome numbers from 10 to 50: ");
        for (int i = 10; i <= 50; i++) {
            if (isPalindrome(i)) {
                System.out.print(i + " ");
            }
        }
    }

    private boolean isPalindrome(int num) {
        int original = num;
        int reversed = 0;
    }
}

```

```
while (num != 0) {  
    int digit = num % 10;  
    reversed = reversed * 10 + digit;  
    num /= 10;  
}  
return original == reversed;  
}  
}
```

```
public class Main {  
    public static void main(String[] args) {  
        Thread t1 = new Thread(new PrimeThread());  
        Thread t2 = new Thread(new PalindromeThread());  
  
        t1.start();  
        t2.start();  
    }  
}
```

