Daily Practice Problem Date 16/12/2023

Problem 1: Reverse Linked List

```
package ishwarchavan.com;

public class ReverseLinkedList {    //class created

	static Node head;

	static class Node {    //node created

		int data;
		Node next;

		Node(int d) {
			data = d;
			next = null;
		}
	}
	Node reverse(Node node) {    /* Function to reverse the linked list */
		Node prev = null;
		Node current = node;
		Node next = null;
		while (current != null) {   //condition checking
			next = current.next;
			current.next = prev;
			prev = current;
			current = next;
		}
		node = prev;
		return node;   //return node
	}

	void printList(Node node) {   // prints content of double linked list
		while (node != null) {
			System.out.print(node.data + " ");
			node = node.next;
		}
	}

	public static void main(String[] args) {     //main program started
		ReverseLinkedList list = new ReverseLinkedList ();
		list.head = new Node(1);
		list.head.next = new Node(2);
		list.head.next.next = new Node(3);
		list.head.next.next.next = new Node(4);

		System.out.println("Given Linked list");
		list.printList(head);
		head = list.reverse(head);    //function and calling
		System.out.println("");
		System.out.println("Reversed linked list ");
		list.printList(head);
	}
}
```

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Problem 2: Power of two

```
package ishwarchavan.com;
import java.io.*;

public class isPowerOfTwo {    //class created
	static boolean isPowerOfTwo(int n){  //constructor created
```

```
            if (n == 0)  //if true then return false
                  return false;

            while (n != 1) {   //condition checking
                  if (n % 2 != 0)
                        return false;
                  n = n / 2;
            }
            return true;
      }

      public static void main(String args[]){   //main program started
            if (isPowerOfTwo(4))    //function calling
                  System.out.println("Yes");
            else
                  System.out.println("No");
      }
}
```

Problem 3: The number of digits one

```
package ishwarchavan.com;

public class CountDigitOne {    //class created
static int countDigitOne(int n){   //function created
      int countr = 0;
      for (int i = 1; i <= n; i++){    //loop iterating
            String str = String.valueOf(i);
            countr += str.split("1", -1) . length - 1;
      }
      return countr;    //return countr
}

public static void main(String[] args){   //main program created
      int n = 13;
      System.out.println(countDigitOne(n));   //function calling and printing output

}
}
```