



K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION

ACADEMIC SESSION 2025-26

Odd Semester



CHECK BALANCED PARANTHESIS USING STACK

Submitted to:

Dr. SWATI

Assistant Professor

SOED

Submitted by:

PRIYANSHI

2401420029

B. Tech (2024-28)

```
def is_balanced(expression):
    stack = []
    pairs = {')': '(', '}': '{', ']': '['}

    for char in expression:
        # Push opening brackets to stack
        if char in "([{":
            stack.append(char)

        # For closing brackets
        elif char in "})]":
            if not stack: # Stack empty but closing bracket found
                return False
            if stack.pop() != pairs[char]: # Mismatched pair
                return False

    # If stack is empty → balanced
    return len(stack) == 0
```

```
# Example
exp = "{[()()]}"
print("Expression:", exp)
print("Balanced?", is_balanced(exp))
```