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Question No 3 : Expression Evaluation

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <ctype.h>
#define MAX_SIZE 100
int stack[MAX_SIZE];
int top = -1;

void push(int value) {
    if (top == MAX_SIZE - 1) {
        printf("Stack is overflow\n");
        return;
    }
    stack[++top] = value;
}

int pop() {
    if (top == -1) {
        printf("Stack is underflow\n");
        return -1;
    }
    return stack[top--];
```

```
}

int evaluatePostfix(char *expression) {
    for (int i = 0; expression[i]; i++) {
        if (isdigit(expression[i])) {
            push(expression[i] - '0');
        } else {
            int num2 = pop();
            int num1 = pop();
            switch (expression[i]) {
                case '+':
                    push(num1 + num2);
                    break;
                case '-':
                    push(num1 - num2);
                    break;
                case '*':
                    push(num1 * num2);
                    break;
                case '/':
                    push(num1 / num2);
                    break;
                return -1;
            }
        }
    }
```

```
    return pop();
}

int main() {
    char expression[] = "10+2*";
    int result = evaluatePostfix(expression);

    if (result != -1) {
        printf("Result is : %d\n", result);
    }

    return 0;
}
```

Output: