19-07-2024

COMPUTER
↑

INFIX	PREFIX	POSTFIX
a+b	+ab	ab+
a+b*c-d	a+*bc-d +a*bc-d -+a*bcd	a+bc*-d abc*+-d abc*+d-
(a+b)*c^2	+ab*c^2 +ab*^c2 *+ab^c2	ab+*c^2 ab+*c2^ ab+c2^*

EVALUATION OF POSTFIX EXPRESSION =>

-> Initialize Stack.

-> Scan Postfix expression from left to right each character once.

-> If scan symbol is an operand PUSH it into stack

- If it is an operator POP 2 elements from stack apply the operator & PUSH the result into stack.

Character Difference -> 48

45+
9

250++
22

-> # define max 10

```
int s[max], top = -1;
main()
{
  char a[100];
  int i, n2, n1;
  printf("enter Postfix expression: ");
  scanf("%s", a);
  for(i=0; a[i] != '\0'; i++)
  {
    if (isdigit(a[i]))
      push(a[i] - 48);
    else
    {
      n1 = pop();
      n2 = pop();
```

```
switch (a[i])
{
  case '+' : push (n2+n1); break;
  case '-' : push (n2-n1); break;
  case '*' : push (n2*n1); break;
  case '/' : push (n2/n1); break;
  default : push (pow(n2, n1));
}
}
}
printf ("%d", s[top]);
}
void push (int ele)                    // ele - element
{
  s[++top] = ele;
}
int pop ()
{
  return s[top--];
}
```