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EX 6 APPLICATION OF STACK

(Evaluating Arithmetic Expression)

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#include <stdio.h>
#include <string.h>
#define MAX 20
int Stack[MAX], top = -1;
char expr[MAX];
void Push(int ele);
int Pop();
int main()
int i, a, b, c, e;
printf("Enter the postfix expression : ");
gets(expr);
for(i = 0; i < strlen(expr); i++)
if(expr[i]=='+'||expr[i]=='-'||expr[i]=='*'||expr[i]=='/')
b = Pop();
a = Pop();
switch(expr[i])
{
case '+':
c = a + b;
Push(c);
break;
case '-':
c = a - b;
Push(c);
break;
case '*':
c = a * b;
Push(c);
break:
case '/':
c = a / b;
Push(c);
break;
```

```
}
}
else
printf("Enter the value of %c : ", expr[i]);
scanf("%d", &e);
Push(e);
printf("The result is %d", Pop());
return 0;
}
void Push(int ele)
top = top + 1;
Stack[top] = ele;
int Pop()
int e;
e = Stack[top];
top = top - 1;
return e;
}
```