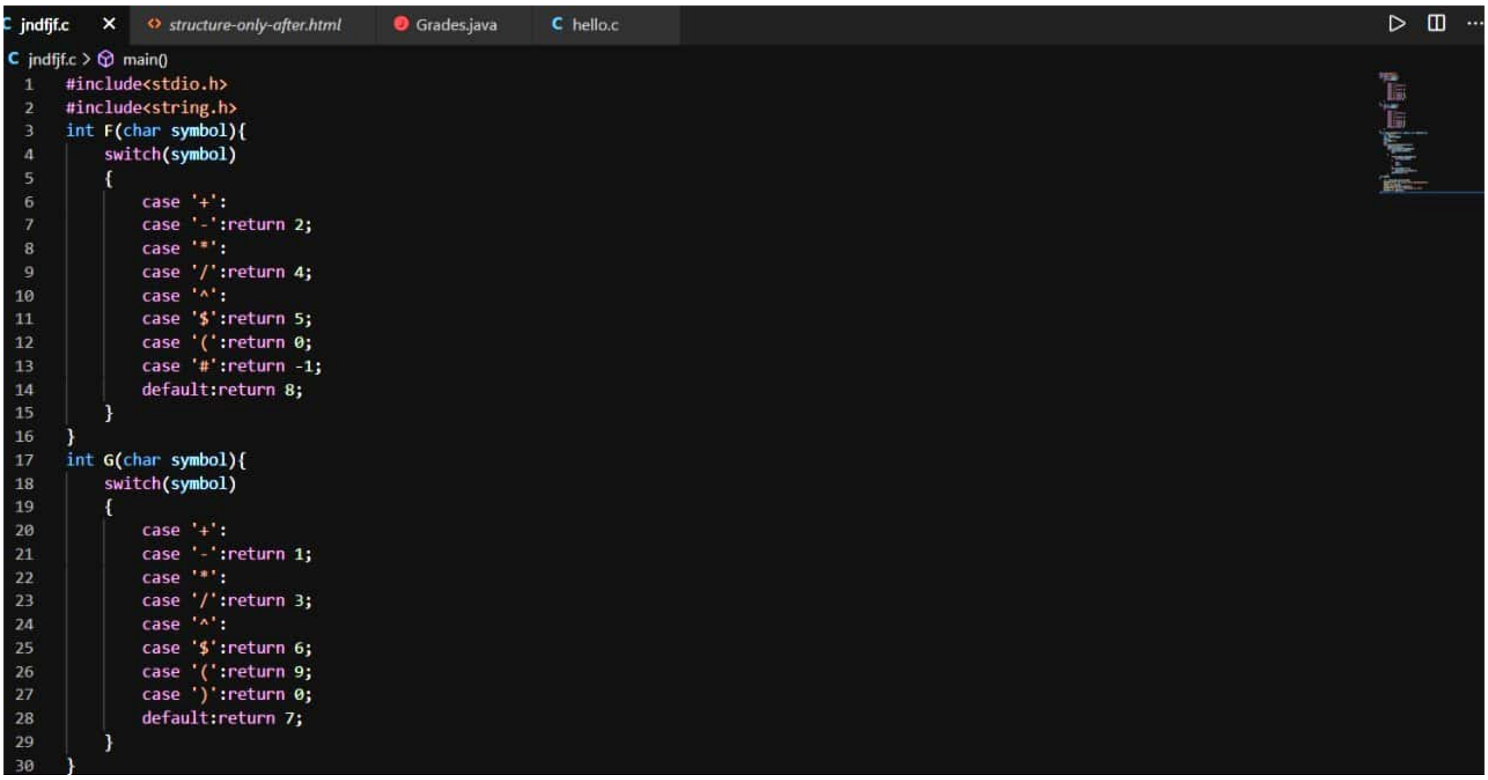
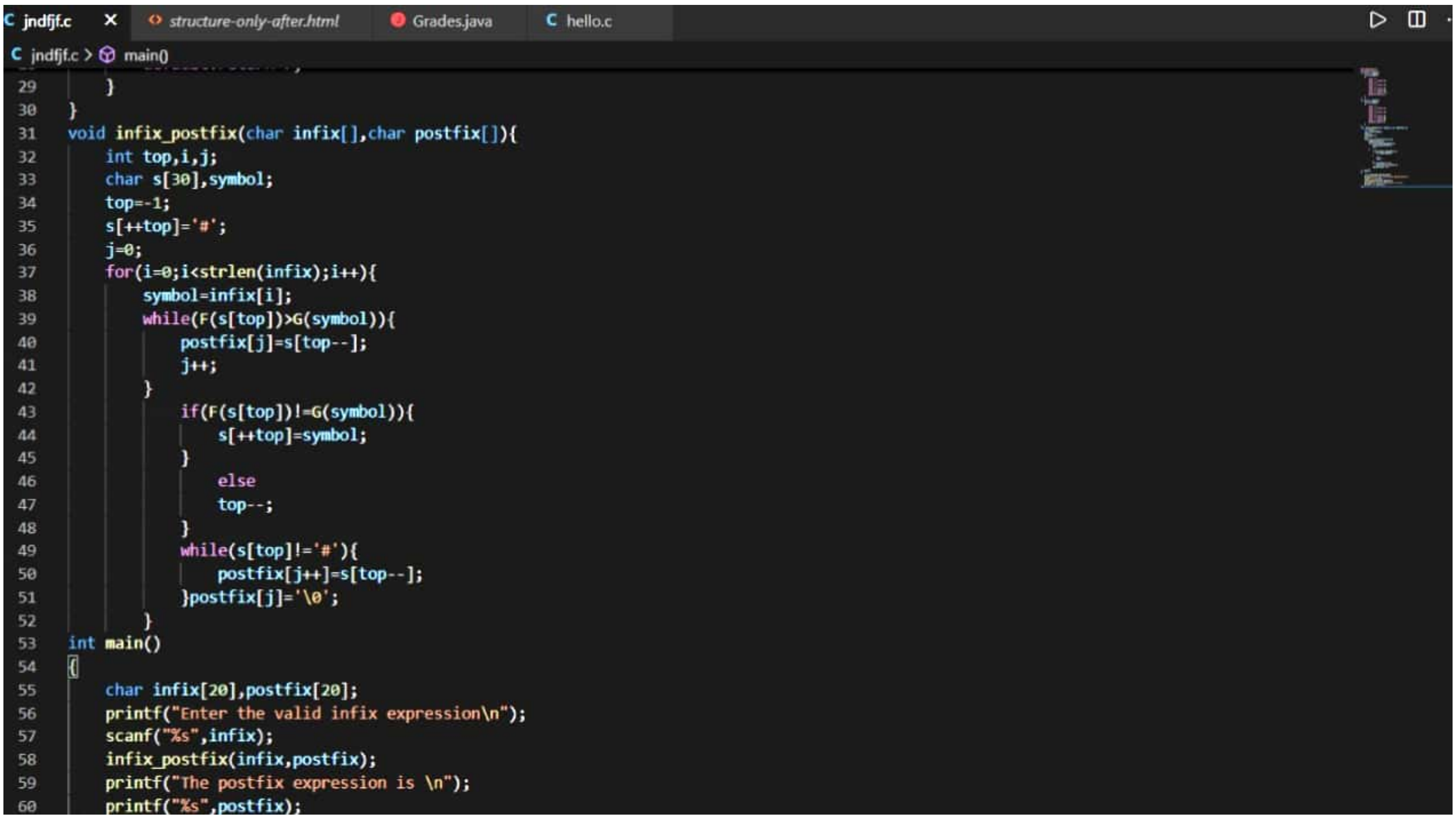
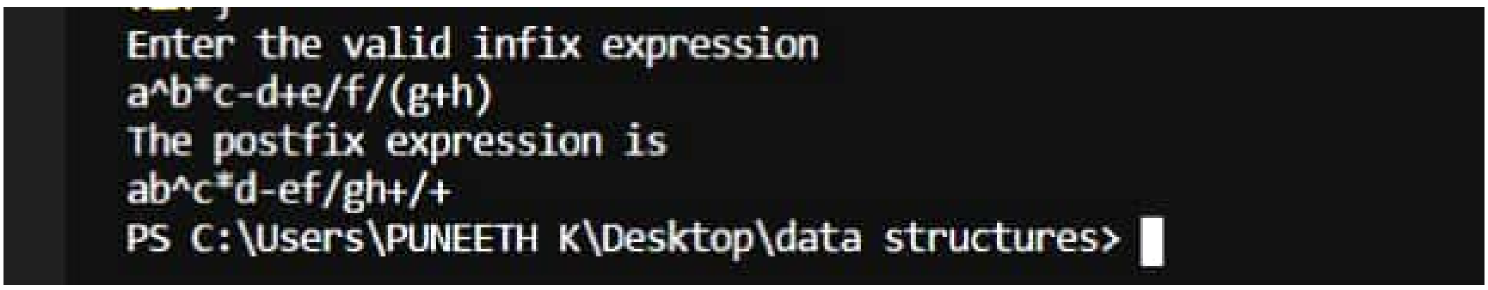


```c
#include<stdio.h>
#include<string.h>
int F(char symbol){
    switch(symbol)
    {
        case '+':
        case '-':return 2;
        case '*':
        case '/':return 4;
        case '^':
        case '$':return 5;
        case '(':return 0;
        case '#':return -1;
        default:return 8;
    }
}
int G(char symbol){
    switch(symbol)
    {
        case '+':
        case '-':return 1;
        case '*':
        case '/':return 3;
        case '^':
        case '$':return 6;
        case '(':return 9;
        case ')':return 0;
        default:return 7;
    }
}
```



```c
    }
}
void infix_postfix(char infix[],char postfix[]){
    int top,i,j;
    char s[30],symbol;
    top=-1;
    s[++top]='#';
    j=0;
    for(i=0;i<strlen(infix);i++){
        symbol=infix[i];
        while(F(s[top])>G(symbol)){
            postfix[j]=s[top--];
            j++;
        }
            if(F(s[top])!=G(symbol)){
                s[++top]=symbol;
            }
                else
                top--;
            }
            while(s[top]!='#'){
                postfix[j++]=s[top--];
            }postfix[j]='\0';
        }
int main()
{
    char infix[20],postfix[20];
    printf("Enter the valid infix expression\n");
    scanf("%s",infix);
    infix_postfix(infix,postfix);
    printf("The postfix expression is \n");
    printf("%s",postfix);
```



```
Enter the valid infix expression
a^b*c-d+e/f/(g+h)
The postfix expression is
ab^c*d-ef/gh+/+
PS C:\Users\PUNEETH K\Desktop\data structures>
```

Conversion from infix to postfix

```
#include <stdio.h>
#include <string.h>
  int F (char symbol)
  {
     switch (symbol)
     {
       case '+':
       case '-': return 2;
       case '*':
       case '/': return 4;
       case '^':
       case '$': return 5;
       case '(': return 0;
       case '#': return -1;
       default : return 8;
     }
   }
  int G (char symbol)
  {
      switch (symbol)
      {
    case '+':
    case '-': return 1;
    case '*':
    case '/': return 3;
    case '^':
    case '$': return 6;
    case '(': return 9;
    case ')': return 0.
    default : return 7;
    }
  }
```

```
void infix_postfix (char infix[], postfix[])
{ int top, i, j;
  char s[30], symbol;
   top = -1;
   s[++top] = '#';
    j = 0;
   for (i=0 ; i< strlen (infix) ; i++)
   {     symbol = infix [i];
       while (F(s[top]) > G (symbol))
       {
          postfix [j] = s[top--];
            j++;
       }
    if (F(s[top]) != G(symbol))
     {
         s[++top] = symbol;
     }
     else
      top--;
     }
   while( s[top]!= '#')
    {
     postfix [j++] = s[top--];
    }
    postfix [j] = '\0';
   }
  void main( ){
    char infix[20];
    char postfix[20];
printf("enter the valid infix expression \n");
 scanf ("%s", infix);
  infix _postfix (infix, postfix);
    printf (" the postfix expression is \n");
     printf ("%s\n", postfix);
  }
```