Nama : Jeri Amanda NPM : G1F021007

Matkul : Algoritma dan Struktur Data

| INPUT CHARACTER | STACK | POSTFIX EXPRESSION |
|--------------------|-------|-----------------------|
| A | Empty | A |
| * | * | A |
| В | * | АВ |
| _ | _ | A B * |
| (| -(| A B * |
| С | -(| A B * C |
| + | -(+ | A B * C |
| D | -(+ | A B * C D |
|) | _ | A B * C D + |
| + | + | A B * C D + – |
| Е | + | A B * C D + – E |
| End of Input | Empty | A B * C D + – E + |

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1. Write an algorithm to convert an infix expression to postfix and infix to prefix

POSTFIX EXPRESSION :- A B * C D + - E +

| INPUT CHARACTER | STACK | EXPRESSION |
|-----------------|-------|-------------|
| F | | F |
| ۸ | ٨ | F |
|) | ^) | FE |
| Е | ^) | FE |
| _ | ^)- | FE |
| D | ^)- | FED |
| (| ^)- | FED- |
| _ | _ | FED-^ |
| С | _ | FED-^C |
| + | + | FED-^C- |
|) | +) | FED-^C- |
| В | +) | FED-^C-B |
| + | +)+ | FED-^C-B |
| A | +)+ | FED-^C-BA |
| (| + | FED-^C-BA+ |
| End of Input | empty | FED-^C-BA++ |

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PREFIX EXPRESSION: ++AB-C^-DEF

2. Write an algorithm to evaluate a postfix and a prefix expression

A. Prefix

$$+-20*341$$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$
 $+-20*341$

B. Postfix