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CS 302 – 1001

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- **Section 5, Exercise 1 Report**

- Create a test plan involving the execution of 5 expressions for which you must provide the infix and postfix notations, alongside their result in your report document.

- *Example 1:*

- Postfix Expression: $3\ 4\ +\ 5\ 2\ /\ *$
 - Infix Expression: $(3 + 4) * (5/2)$
 - Result: 17.5

- *Example 2:*

- Postfix Expression: $4\ 5\ 7\ 2\ +\ -\ *$
 - Infix Expression: $4 * (5 - (7 + 2))$
 - Result: -16

- *Example 3:*

- Postfix Expression: $5\ 7\ +\ 6\ 2\ -\ *$
 - Infix Expression: $(5 + 7) * (6 - 2)$
 - Result: 48

- *Example 4:*

- Postfix Expression: $4\ 2\ 3\ 5\ 1\ -\ +\ *\ +$
 - Infix Expression: $4 + 2 * (3 + 5 - 1)$
 - Result: 18

- *Example 5:*

- Postfix Expression: $2\ 3\ +\ 4\ 5\ ^\ 7\ 4\ -\ * \ 5\ /\ +$
 - Infix Expression: $2 + 3 + (((4^5) * (7 - 4))/5)$
 - Result: 619.4

- Terminal View:

```
g++ -Wall -std=c++11 postfix.o -lm -o postfix
Abrahams-MacBook-Pro-2:postfix didgit_10$ ./postfix

////////////////////////
/////   Postfix Arithmetic   /////
////////////////////////

Enter a postfix arithmetic operation (please include whitespace in-between characters):
3 4 + 5 2 / *

The result is: 17.5

Enter a postfix arithmetic operation (please include whitespace in-between characters):
4 5 7 2 + - *

The result is: -16

Enter a postfix arithmetic operation (please include whitespace in-between characters):
5 7 + 6 2 - *

The result is: 48

Enter a postfix arithmetic operation (please include whitespace in-between characters):
4 2 3 5 1 - + * +

The result is: 18

Enter a postfix arithmetic operation (please include whitespace in-between characters):
2 3 + 4 5 ^ 7 4 - * 5 / +

The result is: 619.4

Enter a postfix arithmetic operation (please include whitespace in-between characters):
█
```