

## ALGORITHM:

Start

Input temperature value.

Select the source unit (C, F, or K).

Select the target unit (C, F, or K).

Perform the conversion using the appropriate formula:

- Celsius to Fahrenheit:  $F = (C \times 9/5) + 32$   $F = (C \times 9/5) + 32$   $F = (C \times 9/5) + 32$
- Celsius to Kelvin:  $K = C + 273.15$   $K = C + 273.15$   $K = C + 273.15$
- Fahrenheit to Celsius:  $C = (F - 32) \times 5/9$   $C = (F - 32) \times 5/9$   $C = (F - 32) \times 5/9$
- Fahrenheit to Kelvin:  $K = (F - 32) \times 5/9 + 273.15$   $K = (F - 32) \times 5/9 + 273.15$   $K = (F - 32) \times 5/9 + 273.15$
- Kelvin to Celsius:  $C = K - 273.15$   $C = K - 273.15$   $C = K - 273.15$
- Kelvin to Fahrenheit:  $F = (K - 273.15) \times 9/5 + 32$   $F = (K - 273.15) \times 9/5 + 32$   $F = (K - 273.15) \times 9/5 + 32$

Display the converted result with the appropriate unit.

Ask if the user wants to perform another conversion.

- If yes, go to step 2.
- If no, exit.

End

## PSUEDOCODE:

BEGIN

PRINT "Temperature Conversion Tool"

DO

PRINT "Enter temperature value: "

INPUT temp\_value

PRINT "Select source unit (C, F, K): "

INPUT source\_unit

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PRINT "Select target unit (C, F, K): "
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```
INPUT target_unit
```

```
IF source_unit = 'C' AND target_unit = 'F' THEN
```

```
    result = (temp_value * 9/5) + 32
```

```
ELSE IF source_unit = 'C' AND target_unit = 'K' THEN
```

```
    result = temp_value + 273.15
```

```
ELSE IF source_unit = 'F' AND target_unit = 'C' THEN
```

```
    result = (temp_value - 32) * 5/9
```

```
ELSE IF source_unit = 'F' AND target_unit = 'K' THEN
```

```
    result = (temp_value - 32) * 5/9 + 273.15
```

```
ELSE IF source_unit = 'K' AND target_unit = 'C' THEN
```

```
    result = temp_value - 273.15
```

```
ELSE IF source_unit = 'K' AND target_unit = 'F' THEN
```

```
    result = (temp_value - 273.15) * 9/5 + 32
```

```
ELSE
```

```
    PRINT "Invalid unit selection!"
```

```
    CONTINUE
```

```
ENDIF
```

```
PRINT "Converted Temperature: ", result, target_unit
```

```
PRINT "Do you want to convert another temperature? (yes/no)"
```

```
INPUT choice
```

```
WHILE choice = "yes"
```

```
END
```

**FLOWCHART:**

