

```
1 import tkinter as tk
2
3 def convert():
4     value = entry.get()
5     try:
6         if from_base.get() == 'Decimal':
7             decimal_value = int(value)
8         elif from_base.get() == 'Binary':
9             decimal_value = int(value, 2)
10        elif from_base.get() == 'Octal':
11            decimal_value = int(value, 8)
12        elif from_base.get() == 'Hexadecimal':
13            decimal_value = int(value, 16)
14
15        if to_base.get() == 'Decimal':
16            result.set(str(decimal_value))
17        elif to_base.get() == 'Binary':
18            result.set(bin(decimal_value)[2:])
19        elif to_base.get() == 'Octal':
20            result.set(oct(decimal_value)[2:])
21        elif to_base.get() == 'Hexadecimal':
22            result.set(hex(decimal_value)[2:].upper())
23    except ValueError:
24        result.set("Invalid Input")
25
26 # Create the main window
27 root = tk.Tk()
28 root.title("Number Converter")
29
30 # Variables
31 from_base = tk.StringVar()
32 to_base = tk.StringVar()
33 result = tk.StringVar()
34
35 # Base options
36 bases = ['Decimal', 'Binary', 'Octal', 'Hexadecimal']
37
38 # Widgets
39 tk.Label(root, text="Convert from:").grid(row=0, column=0, padx=10, pady=5)
40 from_dropdown = tk.OptionMenu(root, from_base, *bases)
41 from_dropdown.grid(row=0, column=1, padx=10, pady=5)
42 from_base.set('Decimal') # Set a default value
43
44 tk.Label(root, text="Convert to:").grid(row=1, column=0, padx=10, pady=5)
45 to_dropdown = tk.OptionMenu(root, to_base, *bases)
46 to_dropdown.grid(row=1, column=1, padx=10, pady=5)
47 to_base.set('Binary') # Set a default value
48
49 tk.Label(root, text="Enter value:").grid(row=2, column=0, padx=10, pady=5)
50 entry = tk.Entry(root)
51 entry.grid(row=2, column=1, padx=10, pady=5)
52
53 tk.Button(root, text="Convert", command=convert).grid(row=3, column=0, columnspan=2,
54    pady=10)
55
56 tk.Label(root, text="Result:").grid(row=4, column=0, padx=10, pady=5)
57 result_label = tk.Label(root, textvariable=result)
58 result_label.grid(row=4, column=1, padx=10, pady=5)
59 root.mainloop() # Start the GUI application
```