Experiment 15: Create a python program to implement Morse Code Translator.

CODE:

```python
MORSE_CODE_DICT ={

    'A':'.-', 'B':'-...', 'C':'-.-.', 'D':'-..', 'E':'.', 'F':'..-.','G':'--.', 'H':'....','I':'..',
'J':'.---', 'K':'-.-','L':'.-..','M':'--', 'N':'-.', 'O':'---', 'P':'.--.', 'Q':'--.-', 'R':'.-.',
'S':'...', 'T':'-', 'U':'..-', 'V':'...-', 'W':'.--', 'X':'-..-', 'Y':'-.--', 'Z':'--..', '1':'.----', '2':'..---', '3':'...--', '4':'....-', '5':'.....', '6':'-....', '7':'--...', '8':'---..', '9':'----.',
'0': '-----', ' ':'/'

}
def text_to_morse(text):

    morse_code=''

    for char in text.upper():

        if char in MORSE_CODE_DICT:

            morse_code += MORSE_CODE_DICT[char] + ' '

        else:

            morse_code += char + ' '

    return morse_code.strip()


def morse_to_text(morse_code):

    morse_code = morse_code.split(' ')

    text = ''

    for code in morse_code:
```

```python
        for key,value in MORSE_CODE_DICT.items():
            if code==value:
                text+=key
    return text


def main():
    print("Morse Code Translator")
    choice = input("1. Text to morse code translation\n2. Morse to text Translation\n Enter choice: ")
    if choice=='1':
        input_text = input("Enter the text to translate to Morse code: ")
        result = text_to_morse(input_text)
        print(f"Morse Code: {result}")
    elif choice=='2':
        input_morse = input("Enter the Morse code to translate to text(use space between Morse code symbols): ")
        result = morse_to_text(input_morse)
        print(f"Text: {result}")
    else:
        print("Invalid choice. Please enter '1' or '2'")


if __name__=="__main__":
    main()
```

OUTPUT:

```
Morse Code Translator
1. Text to morse code translation
2. Morse to text Translation
 Enter choice: 1
Enter the text to translate to Morse code: HELLO WORLD
Morse Code: .... . .-.. .-.. --- / .-- --- .-. .-.. -..
```

```
Morse Code Translator
1. Text to morse code translation
2. Morse to text Translation
 Enter choice: 2
Enter the Morse code to translate to text(use space between Morse code symbols)
 : .... . .-.. .-.. --- / .-- --- .-. .-.. -..
Text: HELLO WORLD
```