

Test case 1: "" nothing added

```
Select an option:
A - Part A
B - Part B
C - Part C
0 - Exit
Enter your choice: c
You selected Part C.
Enter text to encode and decode:
No input provided. Nothing to encode/decode.
```

Test case 2: "A"

```
Select an option:
A - Part A
B - Part B
C - Part C
0 - Exit
Enter your choice: C
You selected Part C.
Enter text to encode and decode: A
Encoded: 0
Decoded: A
Original and Decoded are equal: True
```

Test case 3: "AAAAAAAAAAAAAAAA"

```
Enter your choice: C
You selected Part C.
Enter text to encode and decode: AAAAAAAAAAAAAA
Encoded: 0000000000000000
Decoded: AAAAAAAAAAAAAA
Original and Decoded are equal: True
```

Test case 4: "BBBBBBBBBBBBBBBA"

```
You selected Part C.
Enter text to encode and decode: BBBBBBBBBBBBBBA
Encoded: 1111111111110
Decoded: BBBBBBBBBBBBBBA
Original and Decoded are equal: True
```

Test case 5: "ABABABABABABABAB"

```
You selected Part C.  
Enter text to encode and decode: ABABABABABABABAB  
Encoded: 0101010101010101  
Decoded: ABABABABABABABAB  
Original and Decoded are equal: True
```

Test case 6: "12345"

```
You selected Part C.  
Enter text to encode and decode: 12345  
Encoded: 001111011001  
Decoded: 12345  
Original and Decoded are equal: True
```

Test case 7: "321as\$\$\$#@"

```
You selected Part C.  
Enter text to encode and decode: 321as$$$#@  
Encoded: 011010111000011111101101010001  
Decoded: 321as$$$#@  
Original and Decoded are equal: True
```

Test case 8: "!@#\$\$%"

```
Enter text to encode and decode: !@#$$%  
Encoded: 000111110110  
Decoded: !@#$$%  
Original and Decoded are equal: True
```