

FIRST YEAR

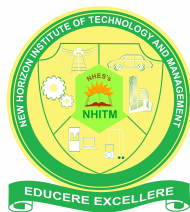
NEW HORIZON INSTITUTE OF TECHNOLOGY AND
MANAGEMENT, THANE

PYTHON INTERNSHIP PROJECT, AY (2019-20), GROUP 1

CODE-O-MORSE

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SUPERVISED BY
MRS. SHILPA RAO



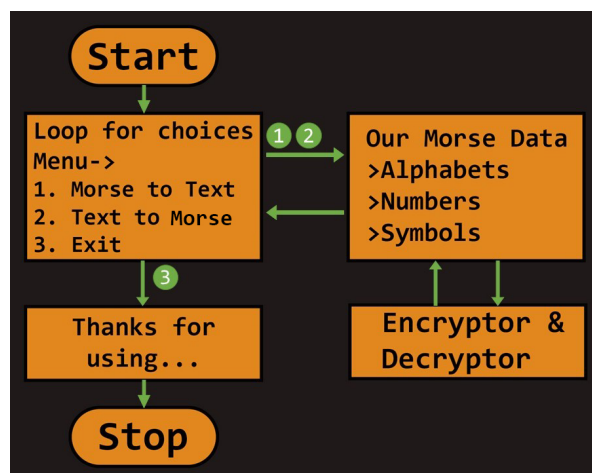
JULY 7, 2020

1 INTRODUCTION

Morse is a method used in telecommunication to encode text characters as standardized sequences of two different signal duration called *dots* and *dashes* or *Dits* and *Dahs*. It was invented by *Samuel Morse*, in year 1840s Before invention of telegraph, messages had to be sent by messengers, who memorized it or carried them in writing, and it took days to be delivered. But Morse code changed our way of communication. In its time of invention, it was the fastest form of communication. Most of the Defense Organizations still use it for communication. The International Morse code encodes 26 English letters A through Z, some non-english letters, arabic numerals and a small set of punctuation and procedural signals. There is no distinction between upper and lower case letters

A •—	J •---	S •••
B —•••	K —•—	T —
C —•—•	L —•••	U ••—
D —••	M ——	V •••—
E •	N —•	W •—•
F •••—	O ——•	X —••—
G —•—	P —•—•	Y —•—•
H ••••	Q —•—•	Z —•—•
I ••	R •—•	

2 METHODOLOGY



- Simple *do-while loop* is used for controlling the input and output
- A *dictionary* that contains data for Alphabets, Numbers and Symbols with their corresponding morse codes is the main database
- A function named *morse* is defined having this dictionary and the *encryptor* and *decryptor* for conversion

3 IMPLEMENTATIONS

- It can be used on any IDE that supports *Python*. This code was implemented on interactive environment IDE supporting Python 3.8 called *IDLE Console*
- This code contains only 2 characters, hence transmission requires small bandwidth.
- Its simplicity adds more advantages while converting and transmitting.
- It is a cheap and wireless mode which can be received at any desirable speed.

4 DEMANDS

- Used in Aviation for establishing communication between pilot and service station
- Kids can play spy games using Mores code by sending messages to each other that aren't readable by their parents
- SoS signals can be sent through any mode of signal transmitter in any difficult situation if you re trapped or ship wrecked
- Army uses Mores code to send precise intel about enemy territory using Telegraph sound setup

5 PROJECTIONS

- Planning to add the actual sound of *.(dot)* and *-(dash)* along with the morse output, but not vice versa
- Can make a GUI version of our code and then convert it into *.exe* or *.apk* format

6 RESULT(OUTPUT)

Choose your convertor

- 1.Morse to Text
- 2.Text to Morse
- 3.Exit

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020)
Type "help", "copyright", "credits" or "license()" for more
>>>
= RESTART: C:\Users\mayan\OneDrive\Desktop\Python_Codes\Code-o-Morse\
Choose your convertor
1.Morse to Text
2.Text to Morse
3.Exit
|
```

1. If option selected is 1
And the input in Morse is

.... . .-.. .-.. — — — .- — — .-.. -.. ;
HELLOWORLD will be displayed as output,
as this is the option to convert MORSE to TEXT
Then a message is displayed *You want to use it again: y/n:*

- If option selected is *n* then the message is displayed *Thanks for using*
- If option selected is *y* then the list is displayed again

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC.v.1924]
Type "help", "copyright", "credits" or "license()" for more
>>>
= RESTART: C:\Users\mayan\OneDrive\Desktop\Python_Codes\Code-o-Morse\
Choose your convertor
1.Morse to Text
2.Text to Morse
3.Exit
1
Enter your input in morse:.... . -.. -.. --- --- --- .- --- -.. -..
Morse to text:
.... . -.. -.. --- --- --- .- --- -.. -.. : HELLOWORLD
You want to use it again: y/n: |
```

2. If option selected is 2
And the input in Text is
HELLO WORLD ;
.... . .-.. .-.. — — — .- — — .-.. -.. will

be displayed as output, as this is the option to convert TEXT to MORSE

Then a message is displayed *You want to use it again: y/n:*

- If option selected is *n* then the message is displayed *Thanks for using*
- If option selected is *y* then the list is displayed again

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02)
Type "help", "copyright", "credits" or "license()" for more
>>>
= RESTART: C:\Users\mayan\OneDrive\Desktop\Python_Codes\Code-o-Morse\
Choose your convertor
1.Morse to Text
2.Text to Morse
3.Exit
2
Enter your input in text:HELLO WORLD
Text to Morse:
HELLO WORLD : .... . -.. -.. --- --- --- .- --- -.. -..
You want to use it again: y/n: |
```

3. If option selected is 3
Then the message is displayed
Thanks for using

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020)
Type "help", "copyright", "credits" or "license()" for more
>>>
= RESTART: C:\Users\mayan\OneDrive\Desktop\Python_Codes\Code-o-Morse\
Choose your convertor
1.Morse to Text
2.Text to Morse
3.Exit
3
Thanks for using...
>>> |
```

7 CONCLUSION

This project was made using *Python Language* in *IDLE Console* supporting *Python 3.8*. Python is simple, yet very strong and powerful language mainly used in *Machine Learning* and *Artificial Intelligence*. The code execution was done successfully as planned. Additionally, more information on *Morse Code* was gained. An effective communication can be made using *Morse Code* too.