Description of working of the circuit:

If noticed, the morse has three states. Dot, Dash and space between. Hence we will be using the logic of three states as input. We are assigning bit “1” for dot and bits “11” for dash and bit “0” for space. The space within a letter between dashes and dots is a single bit “0”. The between letters is 2 bits “00”. Between words is three bits “000”.

For eg:

“Hello !” will be taken in input as

101010100100101101010010110101001101101100010101101101

The input will always be remaining at low (0). Using a switch it will be given high (1). Clock will be used as a timer check. Once the input is taken, everytime “00” is countered, the data before will be converted to it’s respective ASCII 7 bit character using encoders. And everytime “000” is encountered, it will be converted to space in ASCII. The final 7 bit ASCII bit is given as input for 16 segment display which will show the ASCII character for the morse code entered.