Program Assgnment 2

spec

PART 1

- Create the Huffman tree by following alphabets and their weight
- execute the code by ./tree (without any parameters)

A = 11	B = 5	C = 2	D = 3	E = 12	F = 3	G = 5
H = 6	I = 8	J = 1	K = 2	L = 4	M = 8	N = 7
O = 2	P = 2	Q = 1	R = 9	S = 6	T = 2	U = 4
V = 1	W = 10	X = 10	Y = 1	Z = 1		

Output format (Part1)

```
DSOO-Program2-Demo: ./tree

A = 11 | B =  5 | C =  2 | D =  3 | E = 12 | F =  3 | G =  5 | H =  6 | I =  8 | J =  1 |
K =  2 | L =  4 | M =  8 | N =  7 | O =  2 | P =  2 | Q =  1 | R =  9 | S =  6 | T =  2 |
U =  4 | V =  1 | W = 10 | X = 10 | Y =  1 | Z =  1 |

A : 1111
B : 11100
C : 101001
D : 00101
E : 000
F : 00100
G : 11101
H : 0011
I : 1000
J : 0110110
K : 101000
L : 10010
M : 0111
N : 0101
O : 101010
P : 011010
Q : 0110111
R : 1011
S : 0100
T : 101011
U : 10011
V : 011000
W : 1100
X : 1101
Y : 0110011
Z : 0110010

WEPL : 550
```

without the parameter

Ten elements in a Row.
Follow the letter sequence.

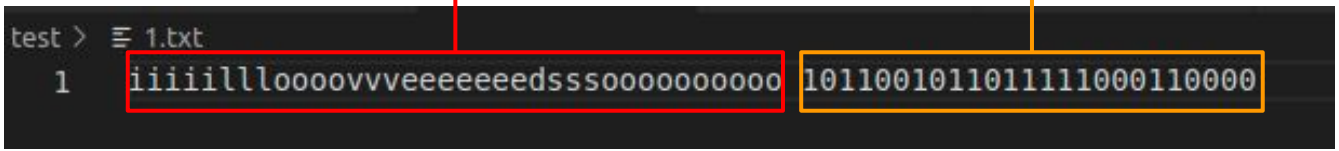
Code list
Follow the letter sequence.

Count the WEPL

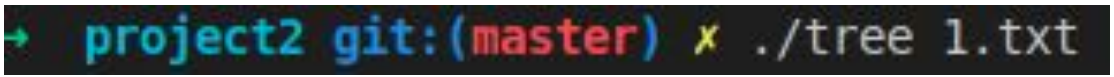
0.txt

PART 2,3

- Create the Huffman tree by the .txt file contexts
- .txt file include two parts
  - characters
  - Huffman code



- You need to read .txt file when you run the code.
  - by the following PATH (e.g., “./test/1.txt”)
- Execute the code with the file path (e.g., ./tree 1.txt)



Output format (Part2,3)

```
test > ≡ 1.txt
  1   iiiiilllooooovvveeeeeeeedsssooooooooooo 10110010110111111000110000
```

read the .txt file

```
DSOO-Program2-Demo: ./tree 1.txt
characters : iiiiilllooooovvveeeeeeeedsssooooooooooo

d =  1 | e =  7 | i =  5 | l =  3 | o = 14 | s =  3 | v =  3 |

d : 1000
e : 111
i : 101
l : 1001
o : 0
s : 1100
v : 1101

Huffman code : 10110010110111111000110000
decode : ilovedsoo
WEPL : 90
```

print code list

Ten elements in a Row.
Follow the letter sequence. (capital letter first)

Print the characters and Huffman code which read in the .txt file

Decode the Huffman code by your Tree
and calculate the WEPL

Output format (cannot properly decoded)

```
DSOO-Program2-Demo: ./tree 1.txt
characters : iiiiillloooovvveeeeeeeedsssooooooooooo

d =  1 | e =  7 | i =  5 | l =  3 | o = 14 | s =  3 | v =  3 |

d : 1000
e : 111
i : 101
l : 1001
o : 0
s : 1100
v : 1101

Huffman code : 10110010110111110001100001
decode : ilovedsoo -wrong decode-
WEPL : 90
```

print out -wrong decode- in the final, when you couldn’t decoded properly