Assignment 3

1. Compile & Run

➤ Compile

```
tim@MSI:~/HW4$ g++ -o main main.cpp
tim@MSI:~/HW4$
```

➤ Run

```
tim@MSI:~/HW4$ ./main
-------------------Huffman coding--------------------
Character: a b c d e
Probability: 0.05 0.1 0.2 0.25 0.4
e: 0
d: 10
a: 1100
b: 1101
c: 111
HuffmanCodes :9.8e-05sec


-------------------Arithmetic coding-------------------
Symbol  Probability     Range_from      Range_to
------------------------------------------------------
a        0.05            0              0.05
b        0.1             0.05           0.15
c        0.2             0.15           0.35
d        0.25            0.35           0.6
e        0.4             0.6            1


Encoding
Symbol  Low_v    High_v   diff
a       0        0.05     0.05
b       0.0025   0.0075   0.005
c       0.00325  0.00425  0.001
d       0.0036   0.00385  0.00025
e       0.00375  0.00385  0.0001
Code word for abcde is: 0.00375

Decoding:
Code     Output  Range_from      Range_to
0.00375  a       0              0.05
0.075    b       0.05           0.15
0.25     c       0.15           0.35
0.5      d       0.35           0.6
0.6      e       0.6            1
Text for 0.00375 is: abcde
Arithmetic coding:0.000149sec
```