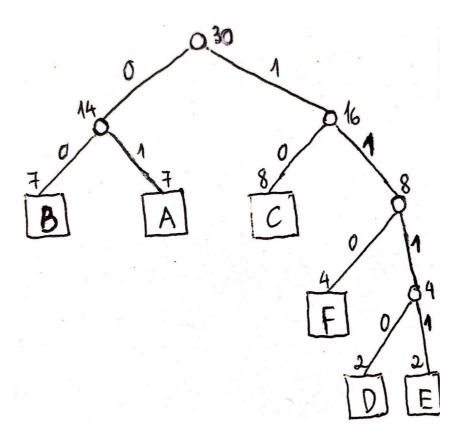
Exercise 7. Answer Sheet

Student's Name:	TRAN THI THOA	Student's ID:	s1242006
		-	

Problem 1. (20 point) Consider following sequence of letters:

ABBCACCEACBCCFABCDAFEABFFADBBC

a) (10 points) Construct Huffman encoding tree for the above sequence and show it below



b) (10 points) What is the code for each letter:

A: 01

B: 00

C: 10

D: 1110

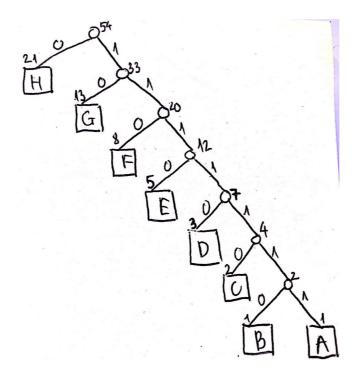
E: 1111

F: 110

Problem 2. (25 points) What is the Huffman code for the following set of frequencies, based on the first 8 Fibonacchi numbers?

A: 1, B: 1, C: 2, D: 3, E: 5, F: 8, G: 13, H: 21

The Huffman Tree for the above input is:



Therefore, the Huffman code will be:

A: 1111111

B: 1111110

C: 111110

D: 11110

E: 1110

F: 110

G: 10

H: 0

Problem 3. (15 points) Write your name in English letters and construct Huffman tree and code for it. Show your tree and code below.

My name in English letters: TRAN THI THOA

The frequency of letters in the input text:

' ': 2. (space)

'A': 2

'H': 2

'I':1

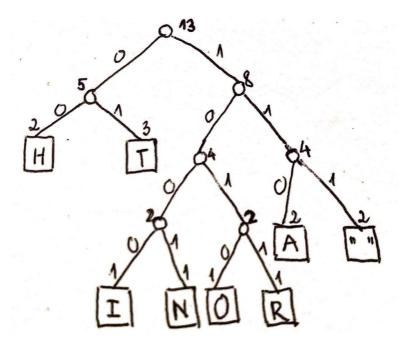
'N': 1

'0': 1

'R': 1

'T': 3

The Huffman tree for the input text will be:



Problem 4. (40 points) Make a program implementing Huffman encoding. Upload your code with usage

The Huffman encode list for the above input:

```
' ': 111 (space)
```

'A': 110

'H': 00

'I': 1000

'N': 1001

'0': 1010

'R': 1011

'T': 01

example.

The Huffman encode tree implemented in C++

Compile and run by the following command lines:

g++ -std=c++11 -o huffman.o huffman.cpp

./huffman.o

Input: the text to encode

Output: The Huffman coding list for the input text.

For example: Input a string that have the frequency of the letter like in the Problem 3:

The output will be: