Class HuffmanTree

java.lang.Object
    HuffmanTree

```
public class HuffmanTree
extends Object
```

Implementation of HuffmanTree by

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Field Summary

Fields

Modifier and Type	Field	Description
HNode	root	

Constructor Summary

Constructors

Constructor	Description
HuffmanTree(TreeMap <Character , Integer > frequencies)	builds a Huffman Tree from the given characters and their corresponding frequencies.

Method Summary

All Methods Instance Methods Concrete Methods

Modifier and Type	Method	Description
char	decode(String code)	Returns the symbol that corresponds to the given code
String	encode(char symbol)	returns the binary encoding of the given symbol as a string of '0' and '1' characters

String	encode(char symbol, HNode curr)	returns the binary encoding of the given symbol as a string of '0' and '1' characters
String	encodeLoop(char symbol)	returns the binary encoding of the given symbol as a string of '0' and '1' characters
char	readCode (BitInputStream stream)	Reads from the given stream the individual bits of the binary encoding of the next symbol
void	writeCode(char symbol, BitOutputStream stream)	Writes the individual bits of the binary encoding of the given symbol to the given bit stream

Methods inherited from class java.lang.Object

equals , getClass , hashCode , notify , notifyAll , toString , wait , wait , wait

Field Details

root

```
public HNode root
```

Constructor Details

HuffmanTree

```
public HuffmanTree(TreeMap <Character ,Integer > frequencies)
```

builds a Huffman Tree from the given characters and their corresponding frequencies.

Parameters:

`frequencies` - - given characters and frequencies to build Huffman Tree from

Method Details

encodeLoop

```
public String  encodeLoop(char symbol)
```

returns the binary encoding of the given symbol as a string of '0' and '1' characters

Parameters:

`symbol` - - the symbol to be encoded

Returns:

the binary encoding of the given symbol

encode

```
public String  encode(char symbol)
```

returns the binary encoding of the given symbol as a string of '0' and '1' characters

Parameters:

`symbol` - - the symbol to be encoded

Returns:

the binary encoding of the given symbol

encode

```
public String  encode(char symbol,
                      HNode curr)
```

returns the binary encoding of the given symbol as a string of '0' and '1' characters

Parameters:

`symbol` - - the symbol to be encoded

Returns:

the binary encoding of the given symbol

decode

```
public char decode(String  code)
```

Returns the symbol that corresponds to the given code

Parameters:

`code` - - the given code to be decoded

Returns:

the symbol that corresponds to the given code

writeCode

```
public void writeCode(char symbol,
                      BitOutputStream stream)
```

Writes the individual bits of the binary encoding of the given symbol to the given bit stream

Parameters:

`symbol` - - given symbol to write the code for

`stream` - - given stream to be written onto

readCode

```
public char readCode(BitInputStream stream)
```

Reads from the given stream the individual bits of the binary encoding of the next symbol

Parameters:

`stream` - - given stream to be read from

Returns:

the given stream the individual bits of the binary encoding